Technology Student Association (TSA)

HIGH SCHOOL COMPETITIVE EVENTS GUIDE

for the 2019 and 2020 National TSA Conferences

with Correlations to
Science, Technology, Engineering, and
Mathematics (STEM) Standards

ACKNOWLEDGMENTS

TSA is grateful to many people for their advice and expertise in developing the competitive events program over the years. The organization especially appreciates the volunteer efforts of the members of the Competition Regulations Committee (CRC), noted below, who have written and refined the event specifications that appear in this guide.

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TSA MISSION

The Technology Student Association (TSA) enhances personal development, leadership, and career opportunities in STEM, whereby members apply and integrate these concepts through intra-curricular activities, competitions, and related programs.

WHO ARE TSA MEMBERS?

TSA is devoted exclusively to the needs of students engaged in science, technology, engineering, and mathematics (STEM). Open to those who are enrolled in or who have completed technology and engineering courses, TSA has 250,000 middle and high school student members across the country. TSA is supported by educators, parents, and business leaders who believe in the need for a technologically literate society. TSA members learn through exciting competitive events, leadership opportunities, and membership activities. It is the intent of TSA to involve as many different TSA members as possible in competitive events and provide recognition in a setting of fair play practices using TSA event guidelines.

Explore what TSA has to offer by using this guide and by visiting TSAweb.org for information. With competitive events that range from video game design to structural engineering and much more, there is something to capture the imagination of—and bring out the best in—all students. We hope that with teacher guidance, students will enjoy the challenge of TSA's competitive events at local, state, regional, and national TSA conferences.

The competitions in this guide support a broad spectrum of goals related to STEM curriculum. They also promote leadership skills and a focus on future career choices.

THE ROLE OF COMPETITIVE EVENTS

To follow its mission, TSA offers stimulating competitive events and recognition in both technology and leadership arenas. TSA believes that by participating in carefully designed competitions, students learn to do their best, thereby becoming "winners" whether or not they place in a competition. Many teachers find TSA's competitive events provide an excellent motivational tool in the academic environment.

Every two years, TSA's competitive events are reviewed and revised by the Competition Regulations Committee (CRC), a standing group of technology amd engineering educators with hands-on classroom experience. The *Technology Student Association (TSA) High School Competitive Events Guide for the 2019 & 2020 National TSA Conferences* is the result of the work of CRC managers, competitive event coordinators, teachers, proposals of numerous TSA state and chapter advisors, and students that make TSA competitive events current and dynamic. The guide presents rules and regulations for all National TSA Conference competitive events; a view of each event's connection to STEM standards; and suggested careers. Relevant for all levels of competition (state delegations may choose to adopt the national guidelines for state-level competitions), the guide provides an excellent motivational tool for curricular study and activities in the classroom.

ABOUT THIS GUIDE

With the publication of the *2019 & 2020 TSA High School Competitive Events Guide*, come the following changes:

1. The format of this guide has been streamlined to help competitors and advisors know and clearly understand the TSA Conference General Rules and Regulations, and the procedures, regulations, and evaluation criteria for each event.

2. General rules that apply to all participants across every competitive event are no longer identified in each competition's regulations. Therefore it is critical, and a personal responsibility of each competitive event participant and advisor, to read and fully adhere to the TSA Conference General Rules and Regulations. As an example, should a competitive event require a written test to be taken, there is no longer a specific reminder in the event guidelines for participants to bring their own pencil to the event.

3. Every event's guidelines have been revised in some form, whether in content or in format.

COMPETITIVE EVENTS PROGRAM

LEVELS OF COMPETITION

A. The breakdown of grades noted below is used to designate levels for competition entries. Each level has its own unique competitive events guide.
- Middle School/Junior High School level—Grades 5, 6, 7, 8, 9
- High School level—Grades 9, 10, 11, 12
- Ninth graders must compete at the level in which the chapter affiliates.
  - If the ninth grade is housed in a high school, grades 9-12, ninth grade students must compete in high school events.
  - If the ninth grade is housed in a school of grades 6-9 or 7-9, ninth grade students must compete in middle school events.

B. If the school has a K-12 configuration, or a configuration other than the examples above, national TSA should be contacted for clarification and approval regarding the appropriate school level designation.

GENERAL RULES AND REGULATIONS

NOTE: General rules and regulations apply to *all* competitive events and are *in addition* to each event's specific guidelines.

A. Affiliation and Membership
1. TSA members, advisors, and chapters must be currently affiliated with TSA to enter any competitive event.
2. TSA membership rights extend through the year of graduation.
3. Students who graduate mid-year may compete at the National TSA Conference that immediately follows their end-of-year graduation.

B. Conference Registration, Attendance, and Participation in Events
1. Anyone who wishes to attend the conference must complete conference registration.

2. Students must be registered and be in attendance with an adult chaperone at the National TSA Conference in order to enter and become a semifinalist or finalist in any event.
3. All adult advisors, chaperones, and student participants must be in attendance for the entire conference.
4. National TSA Conference registrants must wear conference identification badges at all times.
5. The TSA competitive event limit is six (6) events per conference participant—individual and team events combined.
6. Team events:
   a. All team members must be affiliated with the same chapter.
   b. To enter a team event, the chapter designates only that it is participating; names of the individual team members are not required.
   c. Unless otherwise designated in a competition's eligibility guideline, the maximum size of a team is six (6) members.

C. Student Responsibilities for Competitions
1. It is the individual responsibility of each participant to obtain all rules and guidelines for competitive events.
2. Lack of knowledge or understanding about a particular event is neither reason nor excuse for an individual to request an accommodating adjustment or change.
3. *Students and advisors must routinely check the TSA website,* TSAweb.org*, for updated information about TSA general rules and competitive event guidelines.*
4. Students who participate in any TSA competitive event are responsible for knowing all updates, changes, and clarifications related to that event.

D. Competition Entries
1. Entries must be started and completed during the current school year.
2. Entries may be submitted for one (1) year, and one (1) competition only. An infraction of this rule results in disqualification.

3. All entries requiring documentation materials (comprising a "portfolio") must be secured in a clear front report cover (visit this site for a sample report cover), unless otherwise indicated in an event's regulations.

4. All entries must be in English.

5. Students must check in and pick up their event entries at the times and places stated in the conference program, or as announced during the National TSA Conference.

6. For any competition that involves the use of a pencil (e.g., for taking a written test, for producing required sketches), participants must provide—and bring to the test site two (2) pencils, either:
   - sharpened standard #2/HB grade with an eraser, or
   - #2 mechanical with an eraser

7. Entry content:
   a. National TSA provides guidelines for individual and team entry content but does not bear responsibility for content choices made by participants.
   b. Entries are evaluated on the basis of an event's official rating form/rubric.

8. Projects and/or products:
   a. Unless otherwise specified in a specific event's regulations, no identifying information—other than a student or team identification number—is to be included on an entry.
      i. Events that require submission of a Plan of Work Log should include indication of student initials only.
   b. Unless otherwise noted, for all events that require a display, the size of the display may not exceed 15" deep x 3' wide x 4' high.

9. TSA may choose to keep National TSA Conference student entries.
   a. Such entries may be used by national TSA for promotional purposes. Should that occur, credit for any such entry would be noted by TSA.

E. Citations, References, and Copyrighted Material
   1. For all applicable competitive events, citations or references must follow Modern Language Association (MLA) style.
   2. All entries must be the original work of the student participant or student team.
   3. All ideas, text, images, and sound from other sources must be cited.
   4. If copyrighted material is used, written permission must be included.
      a. An internet search about copyrighted material and copyright fair use is recommended if ideas, text, images, or sound from other sources is incorporated into an event entry.
      b. For information about the use of the TSA logo, see TSAweb.org.
   5. Failure to follow any of the above procedures results in disqualification.

F. Prohibited Materials, References, and Images
   1. Hazardous materials, chemicals, lighted or open flames, combustibles, wet cell batteries, and other similar substances are not allowed at the National TSA Conference.
   2. Competition entries or presentations by participants must not include racial or ethnic slurs/symbols, reference to gang affiliation, or vulgar, violent, subversive, or sexually suggestive language or images.
   3. Entries or presentations may not promote products that students may not legally buy, such as tobacco, alcohol, or illegal drugs.
   4. Images of guns, knives, or other weapons are prohibited.
   5. Failure to follow any of the above procedures results in disqualification.

G. TSA Liability
   1. TSA is not responsible or liable for any personal property, equipment, or materials brought to the National TSA Conference for use by a participant or attendee.

H. Event Scheduling Conflicts

1. When an event scheduling conflict could prevent an individual from participating in an event, the individual has the right to decide which event is eliminated from their schedule.

I. Emergencies

1. Team member substitution may be allowed, if approved by the event manager and coordinator, should a documented emergency arise in team events that involves written and semifinalist segments.

2. Competitive Event Change Requests:

   a. Should a change be requested for any reason after the stated conference registration deadline, a $50 change fee will be charged per person per event, if the change is approved.

   b. Only competitors registered by the conference registration deadline will be eligible for change requests.

   c. TSA reserves the right to approve or not approve a requested change.

   d. Fees must be paid by credit card, check, or cash prior to any change being made.

   e. No changes will be made once competitions start.

J. Event Judging

1. All events are judged in accordance with the stated event criteria noted in this competitive events guide.

2. The decisions of judges related to competitive events are final.

3. Concern about any event during the National TSA Conference should be submitted in writing to the Rules Interpretation Panel (RIP) at the conference.

4. The RIP will render a decision at the conference.

5. The decisions of the RIP at the conference are final. (For more information, refer to the Rules Interpretation Panel section.)

K. Rules Violations and Disqualifications

1. A rules violation that gives a contestant an unfair advantage will result in a twenty percent (20%) deduction of the total possible points in either a preliminary or semifinalist round, as applicable.

2. The coordinator or manager of an event has the right to disqualify a contestant when this type of incident occurs.

3. The event coordinator and manager must sign off on both a twenty percent (20%) deduction and a disqualification.

L. Semifinalists

1. All competitive events will have a minimum of twelve (12) semifinalists.

2. Semifinalists (individuals or teams, as applicable) will compete against one another to determine the top ten (10) finalists in an event.

3. All members of a semifinalist team will participate in the semifinalist portion of an event, unless otherwise noted in the event's regulations.

M. Electronic Devices

1. Recording devices are not allowed in certain competitive events.

2. CRC manager and event coordinator approval is required before any event may be recorded.

3. All electronic devices—including but not limited to, cell phones, iPads/tablets, electronic readers, smart watches, etc.—*must* be turned off unless otherwise noted in specific event regulations.

4. No electronic communication devices of any kind are permitted during competition.

NATIONAL TSA CONFERENCE DRESS CODE AND OFFICIAL CONFERENCE ATTIRE GUIDELINES

A. Chapter and state advisors, parents, and chaperones are responsible for seeing that all TSA student members wear TSA competition, general session, or casual attire as occasions may require.

B. Everyone who is registered for the conference—including parents, guests, and children—must comply with the TSA Dress Code.*

C. TSA attire may be purchased online via the SHOP tab on the TSA website, or click on this link to the TSA Store.

D. TSA competition, general session, and casual attire are considered appropriate dress for conference activities and public appearances.

E. Because adults (advisors, parents, and guests) serve as role models at TSA conferences and activities, they are expected to dress appropriately for all TSA occasions they attend.

F. Students must adhere to the TSA Dress Code requirements as listed in this section and on the TSA website.

G. When students compete in any competitive event they must wear competition attire.

H. Students not in appropriate competition attire when they compete may be allowed to participate in an event, but they will lose twenty percent (20%) of the total possible points per round.

COMPETITION ATTIRE

1. **Shirt:** official royal blue TSA shirt

2. **Pants or skirt:** gray

3. **Shoes:** black dress shoes worn with black or dark blue socks, hosiery (optional);
    - open-toed shoes or sandals are acceptable
    - *unacceptable:* athletic shoes; flip-flops; military boots; or work boots

4. Also required for the middle school or high school level Chapter Team event only (but may be worn for other competitions if preferred by participants):
    - **Blazer:** navy blue with official TSA patch
    - **Tie:** official TSA tie (males)

      Females are not penalized for wearing the official TSA tie to Chapter Team or any other competitive event

GENERAL SESSION ATTIRE

1. **Shirt:** The official TSA shirt (royal blue) is preferred; button-down shirt; polo/golf shirt
    - *Unacceptable:* T-shirts; halter tops; tank tops

2. **Dress, skirt, or pants**
    - *Unacceptable:* jeans; baggy pants; exterior pocket pants; shorts

3. **Shoes:** dress shoes worn with dark socks or hosiery (optional); open-toed shoes or sandals are acceptable
    - Unacceptable: athletic shoes; flip-flops; military boots; or work boots

CASUAL ATTIRE

1. Appropriate t-shirts, shorts, or jeans

2. Casual attire **may not** be worn at competitions or general sessions

*Awards Ceremony

Registered parents, guests, and children who are not compliant with TSA General Session Attire and who wish to attend the Awards Ceremony, may be asked to sit in a designated section, if permitted entry.

COMPETITION REGULATIONS COMMITTEE

The Competition Regulations Committee (CRC) is charged with reviewing TSA's competitive events, updating them as necessary, and presiding over the competitive events at the annual National TSA Conference. The all-volunteer CRC is composed of dedicated STEM teachers and education professionals from across the country who have made major commitments to create and maintain the high quality of national TSA's competitive events.

- Questions about specific events may be addressed to event coordinators or event managers.
- Ideas and feedback regarding events are always welcome. Guidelines and forms can be found in the appendix of this guide for proposing a new event and for suggesting revisions to existing events.

RULES INTERPRETATION PANEL

The Rules Interpretation Panel (RIP)—a group of at least three (3) CRC members—monitors and oversees competitive events during the National TSA Conference. The panel provides a means by which chapter advisors may express grievances and concerns about conference situations that pertain to events, and ensures continuity from year to year for competitive event rules and regulations.

RIP GRIEVANCE PROCESS

1. Chapter or state advisors express concern about a rule to the CRC team.
2. The RIP panel will meet to discuss and analyze the advisor's concern; the advisor may be asked to submit a formal grievance in writing using the RIP Grievance form (see Forms Appendix).
3. The formal grievance is submitted by a chapter advisor, with approval from the state advisor.
4. It is the intent of the panel to resolve any grievances at the conference and provide a written response to the advisor.
5. All decisions made by the panel are final.

EVENT COORDINATOR REMINDERS

TSA is grateful for the support of its event coordinators, many of whom are advisors attending the conference with students from their chapters. The busy schedules of these individuals prompt the reminders that follow.

A. Competitive event coordinators must be present for a mandatory coordinator's meeting on the first day of the conference.
B. Competitive event coordinators must be present for conference event check-in and check-out if they are coordinating an event in which these activities take place.
   1. Generally speaking, "check-in" is on the evening of registration day, and "check-out" is held on the day before the awards ceremony.
   2. Tentative schedule information is available before the conference on TSAweb.org.
C. The CRC, which consists of all the event managers, is available throughout the conference to support coordinators as they supervise competitive events.

AWARDS

A. At the conference awards ceremony, the top ten (10) finalists in each event are identified in random order and called to the stage for recognition.
B. From those ten (10) finalists, first (1st), second (2nd), and third (3rd) place awards are presented to the individual or team representative, as determined for each event. Rankings beyond third (3rd) place are not announced at the awards ceremony.
C. A list of the top ten (10) finalists for each event is available on TSAweb.org shortly after the conference.

EVENT PROPOSAL INFORMATION

As technology changes and technology education attempts to keep pace and reflect these changes, new TSA events are added, some are revised, and others are dropped. TSA chapter advisors, state advisors, and others are encouraged to submit proposals for new events.

The following topics reflect potential areas for development:

- Lasers/satellites/radar
- Cloud computing
- Engineering
- Mobile apps
- 3D printing
- STEM
- Transportation technology
- Economic development
- Environmental technology
- Future technology
- Innovative power sources
- 21st-century technology
- Biotechnology problem solving
- Leadership development
- Electronic publishing
- Data management
- Social media marketing
- Green technology
- Manufacturing technology
- Cybersecurity
- Information Technology

An event proposal submitted for consideration must include these elements:

- Overview (description of the event and participant expectations)
- Eligibility for entry
- Limitations (such as time or entry submission requirements)
- Specific regulations
- Required personnel
- Standards alignment with STEM standards

Formative ideas are welcome, but the more complete the event proposal the less likely it will be misinterpreted. The CRC acknowledges all submissions, and each is given consideration for possible inclusion in a competitive events guide. Once submitted, ideas and events become the property of national TSA. Proposals must be submitted by August 15th, 2019 in order to be considered for the next high school guide.

Proposals must include the submitter's name and complete contact information. Proposals may be mailed to CRC, c/o National TSA, 1904 Association Drive, Reston, VA 20191-1540, or emailed in a Word file attachment to general@tsaweb.org.

L∙E∙A∙P

Leadership. Education. Achievement. Personal Growth.

The *2019 & 2020 TSA High School Competitive Events Guide* integrates TSA's leadership program, **Leadership. Education. Achievement. Personal Growth. (LEAP)**, at the high school level.

The purpose of LEAP is to encourage participants to be the best member they can be, as they seek knowledge about themselves, the organization, and their community, while demonstrating leadership. Based on the *Student Leadership Challenge** (SLC), high school participants are asked to learn the SLC Practices and Behaviors, apply what they have learned, and respond in written form.

During the course of preparing for, and participating in a TSA competitive event, participants will study the SLC Practices with their related Behaviors, and put them into practice. In addition, participants will be asked to apply the SLC Practices and Behaviors to a leadership activity unrelated to a competitive event, bringing real world applications to the SLC leadership principles.

To embrace the LEAP criteria and the impact that the SLC Practices and Behaviors can have on the development of student leadership, LEAP is integrated into each TSA competition as part of the official rules and rubric in the competitive events guide. Participants must use the SLC resources, in addition to other LEAP resources on the TSA website, as they complete the competitive event LEAP Report requirement for all TSA competitions.

TSA believes that acquiring leadership skills is critical to the success of young people in the 21st century. The SLC lesson plans found on the TSA website provide TSA advisors with a source for teaching, and students with an opportunity to practice these crucial skills.

LEAP REPORT

- The LEAP Report replaces the previous LEAP Leadership Resume requirement.
- Participants are required to learn the SLC Practices and Behaviors.
- Participants will apply what they have learned by demonstrating the behaviors of three (3) or more SLC Practices in relation to their competitive event(s) and non-competitive event leadership activities.
- All participants will complete a LEAP Report, and semifinalists will participate in a five (5) minute LEAP interview.
- A LEAP Report is required for all competitive events and must be submitted either 1) at event check-in, or 2) when participants arrive at an event at a designated time, whichever applies.
- The LEAP Report is a required document that must be submitted as part of the Go/No Go Specifications for every high school event.
- LEAP Reports will be judged as part of the semifinal round in each event, with some exceptions. Refer to each event's Procedure section to learn when LEAP Reports and interviews will be conducted and evaluated.

Find the LEAP Report form in the Forms Appendix of this guide or click on the link below:

LEAP Report Template

Click below for additional resources:

High School LEAP Report Competition Engagement Regulations

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L★E★A★P
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OVERVIEW

While working on competitive events, participants will learn and refer to *The Student Leadership Challenge Five Practices for Becoming an Exemplary Leader* (SLC)*. Then, participants will develop, demonstrate, and document leadership skills and behaviors related to the Five Practices. In addition, participants will repeat the same steps in developing, demonstrating, and documenting skills and behaviors for non-competitive event leadership activities and experiences.

REGULATIONS

A. LEAP Reports are required for all high school events as part of the "Go/No Go" Specifications.

B. *Participants who do not submit a LEAP Report for an event will not be eligible to compete in that event.*

C. LEAP Reports will be submitted based on each event's schedule and procedures.

D. Participants must use the official LEAP Report template provided on the TSA website.

E. Formatting

1. Reports must be typewritten using the official LEAP Report template.

2. The participant or team identification number may be typewritten or handwritten.

3. Reports must be submitted in a SINGLE sheet protector, with Page 1 facing out on the front side, and Page 2 facing out on the back side.

F. Documentation

1. A specific number of bullet points is not required; however, participants must be thorough in identifying and explaining the leadership behaviors and skills that they developed, demonstrated, and documented.

2. Participants must use the SLC Practices, Behaviors, and LEAP resources when developing and documenting activities and experiences.

3. Multiple competitive events (individual or team) may NOT be addressed in a single LEAP Report. Each event must have a separate and unique LEAP Report.

4. Participants must use student initials only in the documentation and may not use student names. Participants who use student names anywhere on the document will incur a rules violation, and a 20% point deduction will be assessed in the rubric.

5. Competitive Event Leadership Experiences

   a. Select three (3) or more of the SLC Practices (SLC resources).

   b. List bullet points of the actions, roles, and responsibilities and note how the SLC Behaviors were applied throughout the specific competitive event process.

   c. The information provided must be related only to a specific competitive event.

6. General Leadership Experiences

   a. Select three (3) or more leadership categories.

   b. List bullet points of the actions, roles, and responsibilities and note how the SLC Behaviors were applied throughout the leadership experience.

   c. The information provided must be related only to the selected leadership category.

G. LEAP Interview

1. Semifinalists will sign-up for an interview time at the time and place stated in the conference program.

2. Semifinalists will respond to questions about the content of the LEAP Report as part of the LEAP interview.

3. For events with an existing semifinalist section, the LEAP Interview will be conducted as part of the semifinal round of the event and will last a maximum of five (5) additional minutes.

4. For all other events, the LEAP Interview will be conducted in a separate LEAP semifinalist portion and will last a maximum of five (5) minutes.

    NOTE: There are some exceptions in which all participants will be interviewed. See event guidelines for the procedure followed.

EVALUATION

Semifinalists will be evaluated on the content and quality of both the LEAP Report and interview. Refer to the official rating form of each event for more information.

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OVERVIEW

LEAP Legacy Chapter is a comprehensive leadership recognition program offered to middle and high school chapters as an optional national TSA activity that includes a competition component. Chapters demonstrate—and are evaluated on—their involvement in LEAP activities related to *The Student Leadership Challenge-Five Practices for Becoming an Exemplary Leader* (SLC Practices)*.

REGULATIONS

A. Chapters complete a LEAP Legacy Portfolio that consists of a cover page, activities template, and supporting documents, which are submitted electronically by chapter advisors via www.submittable.com.

B. Portfolio submissions are evaluated by judges secured by national TSA.

C. Based on minimum qualifying scores, one (1) middle school and one (1) high school per state will be selected as semifinalists.

D. Ten (10) middle school chapters and ten (10) high school chapters will be selected to advance as national semifinalists.

E. National semifinalist chapters compete as participants in the TSA Meet and Greet event at the annual National TSA Conference.

F. First through third (1st - 3rd) place middle and high school chapters will receive $1,000, $500, and $250, respectively.

G. First through third (1st - 3rd) place chapter winners also will receive trophies on stage at the National TSA Conference awards ceremony.

Find the forms below in the Forms Appendix of this guide, or click on the links below:

LEAP Legacy Chapter Program Guidelines
LEAP Legacy Chapter Portfolio
LEAP Legacy Chapter Evaluation Rubric

Click on the links below for additional resources:

LEAP Legacy Chapter – Sample Activities
LEAP Legacy Chapter Activity Summary and Evidence Sample

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SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS (STEM) INTEGRATION

In recent years, not only educators, but also political, civic, and industry leaders have pushed for a greater emphasis on STEM education in schools. These groups feel that in order for our nation to be competitive and vibrant, our young people must have competency in the 21st century skills afforded through STEM fields. TSA promotes a vision of students literate in these fields and believes competitions within this guide help make that vision a reality.

STEM education is not just an isolated and discreet acquisition of STEM knowledge and skills. Rather, STEM education demands the interweaving and application of these academic fields for the purpose of comprehending, communicating, and solving problems. Indeed, it is now commonly accepted that to understand (and apply) any one of these STEM areas, one must, at the same time, have a grasp of and apply the others. For example, to design and engineer with any degree of complexity, one also must be familiar with technology, mathematics, and science. To practice science, one must have a firm knowledge of mathematics and technology.

Beyond necessity, there is another reason for STEM education in our schools and why the TSA program of activities inherently aligns with STEM goals. This reason revolves around teaching and learning, and what motivates students. STEM education is intrinsically exciting, rewarding, and meaningful for instructors and students alike. It is TSA's belief that, as with STEM education, TSA activities provide the same kind of stimulation, challenge, and relevancy for all involved.

Deserving of mention are two other essential areas imbedded in most of TSA's competitive events—art and ethics. It is difficult to design without considering aesthetics, and it is irresponsible to create without contemplating ethical consequences. When students participate in TSA competitions, they find they must not only embrace the value of design when they compete, they also must envision and assess the effects of what they develop.

The competitions found in this guide provide a hands-on venue for learning about STEM. By participating in TSA's competitive events, students gain a broader understanding of these content areas while experiencing the satisfaction that comes from applying them to real life, problem solving situations.

This section of the guide includes commonly accepted national standards for the areas of science, technology, and mathematics, as well as the Accreditation Board for Engineering and Technology (ABET, Inc.) criteria for accrediting higher education engineering programs. As you make use of these materials, keep in mind that their power and beauty lie in their synergistic nature.

SCIENCE CONTENT STANDARDS (GRADES 9–12)

A. Unifying concepts and processes

1. Systems, order, and organization
2. Evidence, models, and explanation
3. Change, constancy, and measurement
4. Evolution and equilibrium
5. Form and function

B. Science as inquiry

Students should develop:

1. Abilities necessary to do scientific inquiry
2. Understandings about scientific inquiry

C. Physical science

Students should develop an understanding of:

1. Structure of atoms
2. Structure and properties of matter
3. Chemical reactions
4. Motions and forces
5. Conservation of energy and the increase in disorder
6. Interactions of energy and matter

D. Life science

Students should develop an understanding of:

1. The cell
2. Molecular basis of heredity
3. Biological evolution
4. Independence of organisms
5. Matter, energy, and organization in living systems
6. Behavior of organisms

E. Earth and space science

Students should develop an understanding of:

1. Energy in the earth system
2. Geochemical cycles
3. Origin and evolution of the earth system
4. Origin and evolution of the universe

F. Science and technology

Students should develop:

1. Abilities of technological design
2. Understandings about science and technology

G. Science in personal and social perspectives

Students should develop an understanding of:

1. Personal and community health
2. Population growth
3. Natural resources
4. Environmental quality
5. Natural and human-induced hazards
6. Science and technology in local, national, and global challenges

H. History and nature of science

Students should develop an understanding of:

1. Science as a human endeavor
2. Nature of scientific knowledge
3. Historical perspectives

The standards listed above are reprinted with permission from *National Science Education Standards, 1996*, by the National Academy of Sciences, courtesy of the National Academies Press, Washington, D.C.

Technology Student Association (TSA) High School Competitive Events Guide for the 2019 and 2020 National TSA Conferences

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SCIENCE CONTENT STANDARDS

Event	Standard Number	A1	A2	A3	A4	A5	B1	B2	C1	C2	C3	C4	C5	C6	D1	D2	D3	D4	D5	D6	E1	E2	E3	E4	F1	F2	G1	G2	G3	G4	G5	G6	H1	H2	H3
3D Animation		X	X				X	X																	X	X							X		
Animatronics		X	X		X							X													X	X									
Architectural Design			X	X		X			X	X	X	X	X	X	X	X	X	X	X	X					X	X	X	X	X	X	X	X	X	X	X
Biotechnology Design		X	X		X		X	X							X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X			
Board Game Design		X	X																						X										
Chapter Team		X	X	X																															
Children's Stories																									X		X								
Coding		X				X																			X	X									
Computer-Aided Design (CAD), Architecture				X		X	X	X																	X						X				
Computer-Aided Design (CAD), Engineering				X		X	X	X																	X						X				
Computer Integrated Manufacturing (CIM)		X		X		X	X	X																	X	X									
Debating Technological Issues		X	X		X																				X	X	X	X	X	X	X	X	X	X	X
Digital Video Production			X			X																			X	X									
Dragster Design			X	X	X	X	X	X				X	X	X											X	X									
Engineering Design			X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Essays on Technology		X		X	X		X	X																		X					X				
Extemporaneous Speech		X	X	X	X																						X	X	X	X	X	X		X	X
Fashion Design and Technology			X	X	X	X																			X	X							X	X	X
Flight Endurance			X	X	X	X	X	X				X		X											X	X							X	X	X
Forensic Science		X		X			X	X																					X		X		X		
Future Technology and Engineering Teacher		X		X	X																				X	X									
Music Production		X	X			X																			X	X									
On Demand Video		X	X			X																			X						X				
Photographic Technology		X		X	X																				X	X									X
Prepared Presentation		X	X		X																					X					X				
Promotional Design			X	X		X																			X	X									
Scientific and Technical Visualization (SciVis)		X	X		X	X	X	X																	X	X									
Software Development		X		X	X		X	X																	X	X									
Structural Design and Engineering			X		X	X	X	X		X		X													X	X					X	X			
System Control Technology		X	X		X	X	X					X		X											X	X							X	X	X
Technology Bowl			X		X																					X					X				
Technology Problem Solving			X		X	X	X	X																	X	X									
Transportation Modeling			X	X	X	X	X	X				X	X	X											X	X									
Video Game Design		X			X	X																			X					X					
Webmaster		X				X																			X	X					X				

TECHNOLOGY CONTENT STANDARDS

Standard 1: Students will develop an understanding of the characteristics and scope of technology.

Standard 2: Students will develop an understanding of the core concepts of technology.

Standard 3: Students will develop an understanding of the relationships among technologies and the connections between technologies and other fields of study.

Standard 4: Students will develop an understanding of the cultural, social, economic, and political aspects of technology.

Standard 5: Students will develop an understanding of the effects of technology on the environment.

Standard 6: Students will develop an understanding of the role of society in the development and use of technology.

Standard 7: Students will develop an understanding of the influence of technology on history.

Standard 8: Students will develop an understanding of the attributes of design.

Standard 9: Students will develop an understanding of engineering design.

Standard 10: Students will develop an understanding of the role of troubleshooting, research and development, invention and innovation, and experimentation in problem solving.

Standard 11: Students will develop the abilities to apply the design process.

Standard 12: Students will develop the abilities to use and maintain technological products and systems.

Standard 13: Students will develop the abilities to assess the impact of products and systems.

Standard 14: Students will develop an understanding of and be able to select and use medical technologies.

Standard 15: Students will develop an understanding of and be able to select and use agricultural and related biotechnologies.

Standard 16: Students will develop an understanding of and be able to select and use energy and power technologies.

Standard 17: Students will develop an understanding of and be able to select and use information and communication technologies.

Standard 18: Students will develop an understanding of and be able to select and use transportation technologies.

Standard 19: Students will develop an understanding of and be able to select and use manufacturing technologies.

Standard 20: Students will develop an understanding of and be able to select and use construction technologies.

These technology content standards are noted in *Standards for Technological Literacy: Content for the Study of Technology* (ITEEA/ITEA, 2000/2002/2007) and are used with permission. (www.iteea.org)

SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS (STEM) INTEGRATION

SCIENCE CONTENT STANDARDS

Event	Standard Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
3D Animation		X		X					X				X					X			
Animatronics				X	X				X	X	X	X	X		X					X	
Architectural Design		X	X	X	X	X	X	X	X	X	X	X	X	X				X	X		X	X
Biotechnology Design					X	X	X			X	X	X		X	X						
Board Game Design							X		X			X	X	X				X			
Chapter Team													X								
Children's Stories									X			X						X			
Coding									X			X						X			
Computer-Aided Design (CAD), Architecture						X			X	X	X	X	X	X						X	X
Computer-Aided Design (CAD), Engineering						X			X	X	X	X	X	X						X	
Computer Integrated Manufacturing (CIM)		X	X	X			X	X	X	X	X	X	X								
Debating Technological Issues				X	X	X								X	X	X					
Digital Video Production				X					X		X	X	X	X				X			
Dragster Design		X	X	X					X	X	X	X	X					X		X	
Engineering Design		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Essays on Technology		X	X	X	X	X	X	X						X							
Extemporaneous Speech		X	X	X	X				X		X			X				X			
Fashion Design and Technology									X								X				
Flight Endurance				X					X	X	X	X								X	
Forensic Science				X							X				X						
Future Technology and Engineering Teacher		X	X	X	X	X	X	X	X	X	X	X									
Music Production									X				X					X			
On Demand Video											X	X		X				X			
Photographic Technology		X	X		X		X	X	X				X	X				X			
Prepared Presentation		X	X		X													X			
Promotional Design		X	X	X	X		X		X			X						X		X	
Scientific and Technical Visualization (SciVis)		X		X					X			X						X			
Software Development		X	X	X	X	X	X	X	X	X	X	X	X					X			
Structural Design and Engineering		X	X						X	X	X	X	X	X					X		X
System Control Technology				X					X	X	X	X	X					X	X	X	X
Technology Bowl														X	X	X	X	X	X	X	X
Technology Problem Solving									X		X	X									
Transportation Modeling		X	X	X					X	X	X	X	X					X		X	
Video Game Design									X	X	X	X	X					X			
Webmaster									X	X	X	X	X	X				X			

CRITERIA FOR ACCREDITING ENGINEERING PROGRAMS
(Accreditation Board for Engineering and Technology [ABET, Inc.])

Engineering programs must have documented student outcomes that prepare graduates to attain the program educational objectives.

Student outcomes are outcomes (a) through (k) plus any additional outcomes that may be articulated by the program.

A. An ability to apply knowledge of mathematics, science and engineering

B. An ability to design and conduct experiments, as well as to analyze and interpret data

C. An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability

D. An ability to function on multidisciplinary teams

E. An ability to identify, formulate and solve engineering problems

F. An understanding of professional and ethical responsibility

G. An ability to communicate effectively

H. The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and social context

I. A recognition of the need for, and an ability to engage in life-long learning

J. A knowledge of contemporary issues

K. An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice

The outcomes listed are found in the *2016-2017 Criteria for Accrediting Engineering Programs* and used with permission from the Engineering Accreditation Commission of ABET, Inc.

Access the *2018-2019 Criteria for Accrediting Engineering Programs* for the latest outcomes.

(The outcomes were designed for higher education engineering programs, but they are relevant for middle school and high school level engineering-related courses.)

SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS (STEM) INTEGRATION

CRITERIA FOR ACCREDITING ENGINEERING PROGRAMS (ABET, INC.)

Standard

A. An ability to apply knowledge of mathematics, science and engineering

B. An ability to design and conduct experiments, as well as to interpret data

C. An ability to design a system, component, or process to meet desired needs

D. An ability to function on multi-disciplinary teams

E. An ability to identify, formulate and solve engineering problems

F. An understanding of professional and ethical responsibility

G. An ability to communicate effectively

H. The broad education necessary to understand the impact of engineering in global and social contexts

I. A recognition of the need for and an ability to engage in life-long learning

J. A knowledge of contemporary issues

K. An ability to use the techniques, skills and modern engineering tools necessary for engineering practice.

Event	Standard Letter	A	B	C	D	E	F	G	H	I	J	K
3D Animation		X		X	X	X		X			X	X
Animatronics		X			X	X						X
Architectural Design		X		X	X	X	X	X	X	X	X	X
Biotechnology Design		X	X	X	X	X	X	X	X	X	X	X
Board Game Design		X		X		X		X		X	X	X
Chapter Team									X	X		
Children's Stories				X	X		X	X		X		
Coding		X		X	X			X				X
Computer-Aided Design (CAD), Architecture		X				X		X	X	X	X	X
Computer-Aided Design (CAD), Engineering		X				X		X	X	X	X	X
Computer Integrated Manufacturing (CIM)		X	X	X	X	X	X	X	X	X	X	X
Debating Technological Issues							X	X	X			
Digital Video Production							X	X		X		
Dragster Design		X	X	X		X	X	X				X
Engineering Design		X	X	X	X	X	X	X	X	X	X	X
Essays on Technology		X	X				X				X	
Extemporaneous Speech							X	X	X			
Fashion Design and Technology					X	X			X			
Flight Endurance		X	X	X		X	X	X		X		X
Forensic Science		X	X					X			X	
Future Technology and Engineering Teacher		X		X			X	X			X	
Music Production								X				
On Demand Video					X		X	X				
Photographic Technology		X					X	X		X	X	X
Prepared Presentation								X	X	X		
Promotional Design		X					X	X				
Scientific and Technical Visualization (SciVis)			X		X							X
Software Development		X	X	X	X	X	X	X	X	X	X	X
Structural Design and Engineering		X	X	X	X	X	X	X	X	X	X	X
System Control Technology		X	X	X	X	X	X	X	X	X	X	X
Technology Bowl		X	X	X		X			X		X	X
Technology Problem Solving		X		X								
Transportation Modeling		X	X	X		X	X	X				X
Video Game Design				X	X		X	X		X		
Webmaster				X	X			X				

PRINCIPLES AND STANDARDS FOR SCHOOL MATHEMATICS

A. Numbers and operations

1. Understand numbers, ways of representing numbers, relationships among numbers and number systems

2. Understand meanings of operations and how they relate to one another

3. Compute fluently and make reasonable estimates

B. Algebra

1. Understand patterns, relations, and functions

2. Represent and analyze mathematical situations and structures using algebraic symbols

3. Use mathematical models to represent and understand quantitative relationships

4. Analyze change in various contexts

C. Geometry

1. Analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships

2. Specify locations and describe spatial relationships using coordinate geometry and other representational systems

3. Apply transformations and use symmetry to analyze mathematical situations

4. Use visualization, spatial reasoning and geometric modeling to solve problems

D. Measurement

1. Understand measurable attributes of objects and the units, systems and processes of measurement

2. Apply appropriate techniques, tools and formulas to determine measurements

E. Data analysis and probability

1. Formulate questions that can be addressed with data and collect, organize and display relevant data to answer them

2. Select and use appropriate statistical methods to analyze data

3. Develop and evaluate inferences and predictions that are based on data

4. Understand and apply basic concepts of probability

F. Problem solving

1. Build new mathematical knowledge through problem solving

2. Solve problems that arise in mathematics and in other contexts

3. Apply and adapt a variety of appropriate strategies to solve problems

4. Monitor and reflect on the process of mathematical problem solving

G. Reasoning and proof

1. Recognize reasoning and proof as fundamental aspects of mathematics

2. Make and investigate mathematical conjectures

3. Develop and evaluate mathematical arguments and proofs

4. Select and use various types of reasoning and methods of proof

H. Communication

1. Organize and consolidate mathematical thinking through communication

2. Communicate mathematical thinking coherently and clearly to peers, teachers and others

3. Analyze and evaluate the mathematical thinking and strategies of others

4. Use the language of mathematics to express mathematical ideas precisely

I. Connections

    1. Recognize and use connections among mathematical ideas

    2. Understand how mathematical ideas interconnect and build on one another to produce a coherent whole

    3. Recognize and apply mathematics in contexts outside of mathematics

J. Representation

    1. Create and use representations to organize, record, and communicate mathematical ideas

    2. Select, apply, and translate among mathematical representations to solve problems

    3. Use representations to model and interpret physical, social and mathematical phenomena

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Technology Student Association (TSA) High School Competitive Events Guide for the 2019 and 2020 National TSA Conferences

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SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS (STEM) INTEGRATION

PRINCIPLES AND STANDARDS FOR SCHOOL MATHEMATICS

Event	Standard Number	A1	A2	A3	B1	B2	B3	B4	C1	C2	C3	C4	D1	D2	E1	E2	E3	E4	F1	F2	F3	F4	G1	G2	G3	G4	H1	H2	H3	H4	I1	I2	I3	J1	J2	J3
3D Animation																				X	X															
Animatronics													X	X						X	X												X			
Architectural Design		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					X	X	X	X						
Biotechnology Design		X	X	X	X	X	X	X					X	X	X	X	X	X	X	X	X	X					X	X	X							
Board Game Design		X	X	X	X	X	X	X																			X	X	X							
Chapter Team																																				
Children's Stories																																				
Coding		X	X																X		X				X								X		X	X
Computer-Aided Design (CAD), Architecture									X	X		X	X	X																				X		
Computer-Aided Design (CAD), Engineering									X	X		X	X	X																				X		
Computer Integrated Manufacturing (CIM)									X	X	X	X	X	X						X	X	X	X													
Debating Technological Issues			X																															X	X	X
Digital Video Production			X										X	X																			X			
Dragster Design			X				X	X				X	X							X	X											X	X		X	X
Engineering Design		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Essays on Technology			X												X	X	X	X																		
Extemporaneous Speech																																				
Fashion Design and Technology													X	X																						
Flight Endurance			X	X	X					X			X	X		X	X	X	X	X	X	X		X			X	X	X				X			
Forensic Science															X		X				X															
Future Technology and Engineering Teacher			X																	X	X				X								X		X	
Music Production													X	X																						
On Demand Video													X	X																			X			
Photographic Technology																					X						X		X							
Prepared Presentation																													X				X			
Promotional Design												X									X															
Scientific and Technical Visualization (SciVis)		X	X	X	X			X				X								X	X				X			X	X		X					X
Software Development																						X	X	X	X	X	X	X	X	X						
Structural Design and Engineering			X	X	X	X	X		X	X	X	X	X	X				X		X	X						X	X	X	X		X		X	X	
System Control Technology		X	X	X	X	X	X		X	X	X	X				X	X	X	X	X	X		X	X	X	X	X				X	X	X			
Technology Bowl									X	X		X	X	X						X	X								X					X	X	
Technology Problem Solving													X	X						X	X															
Transportation Modeling							X	X		X			X	X						X	X											X		X		X
Video Game Design			X									X	X	X																						
Webmaster																				X	X															

Choosing a career is one of the more important decisions made in life. This section of the guide may help students focus on career areas that appeal to them in the world of work, as well as show them how their involvement in TSA's program of activities has the ability to guide them toward those areas.

Career Clusters® are categories of similar occupations and industries. The Career Clusters® chart was developed by the U.S. Department of Education to organize career planning and help schools better prepare learners for their futures. The Career Clusters® chart offers general information about career categories and work opportunities prominent in those areas. The *TSA Competitions and the Career Clusters®* grid illustrates the interconnectedness between individual TSA competitions and the 16 Career Clusters®. Use these together as a starting point to help your students become informed about careers and develop a plan to reach their life goals.

The Career Clusters® brand logo and its extensions are the property of the National Career Technical Education Foundation, as managed by NASDCTEc.

16 CAREER CLUSTERS®

A. AGRICULTURE, FOOD & NATURAL RESOURCES
- Agribusiness Systems
- Animal Systems
- Environmental Service Systems
- Food Products & Processing Systems
- Natural Resources Systems
- Plant Systems
- Power, Structural & Technical Systems Architecture & Construction

B. ARCHITECTURE & CONSTRUCTION
- Construction
- Design/Pre-Construction
- Maintenance/Operations

C. ARTS, A/V TECHNOLOGY & COMMUNICATIONS
- A/V Technology & Film
- Journalism & Broadcasting
- Performing Arts
- Printing Technology
- Telecommunications
- Visual Arts

D. BUSINESS MANAGEMENT & ADMINISTRATION
- Administrative Support
- Business Information Management
- General Management
- Human Resources Management
- Operations Management

E. EDUCATION & TRAINING
- Administration & Administrative Support
- Professional Support Services
- Teaching/Training

F. FINANCE
- Accounting
- Banking Services
- Business Finance
- Insurance
- Securities & Investments

G. GOVERNMENT & PUBLIC ADMINISTRATION
- Foreign Service
- Governance
- National Security
- Planning
- Public Management & Administration
- Regulation
- Revenue & Taxation

H. HEALTH SCIENCES
- Biotechnology Research & Development
- Diagnostic Services
- Health Informatics
- Support Services
- Therapeutic Services

I. HOSPITALITY & TOURISM
- Lodging
- Recreation, Amusements & Attractions
- Restaurants & Food/Beverage Services
- Travel & Tourism

J. HUMAN SERVICES
- Consumer Services
- Counseling & Mental Health Services
- Early Childhood Development & Services
- Family & Community Services
- Personal Care Services

K. INFORMATION TECHNOLOGY
- Information Support & Services
- Network Systems
- Programming & Software Development
- Web & Digital Communications

L. LAW, PUBLIC SAFETY, CORRECTIONS & SECURITY
- Correction Services
- Emergency & Fire Management Services
- Law Enforcement Services
- Legal Services
- Security & Protective Services

M. MANUFACTURING
- Health, Safety & Environmental Assurance
- Logistics & Inventory Control
- Maintenance, Installation & Repair
- Manufacturing Production Process Dev.
- Production
- Quality Assurance

N. MARKETING
- Marketing Communications
- Marketing Management
- Marketing Research
- Merchandising
- Professional Sales

O. SCIENCE, TECHNOLOGY, ENGINEERING & MATHEMATICS
- Engineering & Technology
- Science & Mathematics

P. TRANSPORTATION, DISTRIBUTION & LOGISTICS
- Facility & Mobile Equipment Maintenance
- Health, Safety & Environmental Management
- Logistics Planning & Management Services
- Sales & Service
- Transportation Operations
- Transportation Systems/Infrastructure
- Planning, Management & Regulation
- Warehousing & Distribution Center Operations

More information on the Career Clusters® can be found at www.careertech.org.

TSA COMPETITIONS AND THE 16 CAREER CLUSTERS®

Event	Cluster letter	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
3D Animation												X				X	
Animatronics				X						X				X			
Architectural Design		X	X		X		X	X	X	X	X	X		X		X	
Biotechnology Design		X	X						X					X		X	X
Board Game Design			X	X		X					X			X	X	X	X
Chapter Team					X			X					X				
Children's Stories				X		X					X					X	
Coding												X				X	
Computer-Aided Design (CAD), Architecture			X	X								X	X				
Computer-Aided Design (CAD), Engineering			X	X								X	X				
Computer Integrated Manufacturing (CIM)					X			X				X		X		X	X
Debating Technological Issues									X						X	X	
Digital Video Production				X						X		X				X	
Dragster Design											X						
Engineering Design		X	X	X	X	X	X	X	X	X			X	X	X	X	X
Essays on Technology				X	X												
Extemporaneous Speech				X	X	X		X							X		
Fashion Design and Technology				X										X			
Flight Endurance																X	
Forensic Science													X			X	
Future Technology and Engineering Teacher						X						X					
Music Production				X								X			X		
On Demand Video				X								X			X		
Photographic Technology		X		X		X			X	X		X		X	X	X	
Prepared Presentation				X	X			X									
Promotional Design				X							X						
Scientific and Technical Visualization (SciVis)				X								X				X	
Software Development				X								X	X	X		X	X
Structural Design and Engineering			X					X		X			X	X		X	X
System Control Technology														X		X	
Technology Bowl		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Technology Problem Solving		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Transportation Modeling											X						
Video Game Design				X								X					
Webmaster				X								X					

Technology Student Association (TSA) High School Competitive Events Guide for the 2019 and 2020 National TSA Conferences

HIGH SCHOOL COMPETITIVE EVENTS

NEW EVENTS

- Board Game Design
- Forensic Science

REVISIONS

- Every event's guidelines have been revised in some form, whether in content or in format.

- In addition to specific event guidelines, all advisors and participants must read the General Rules and Regulations in this guide.

- Every two years the specifics of many events are changed, keeping the competitions dynamic!

3D Animation

Animatronics

Architectural Design

Biotechnology Design

Board Game Design

Chapter Team

Children's Stories

Coding

Computer-Aided Design (CAD), Architecture

Computer-Aided Design (CAD), Engineering

Computer Integrated Manufacturing (CIM)

Debating Technological Issues

Digital Video Production

Dragster Design

Engineering Design

Essays on Technology

Extemporaneous Speech

Fashion Design and Technology

Flight Endurance

Forensic Science

Future Technology and Engineering Teacher

Music Production

On Demand Video

Photographic Technology

Prepared Presentation

Promotional Design

Scientific and Technical Visualization (SciVis)

Software Development

Structural Design and Engineering

System Control Technology

Technology Bowl

Technology Problem Solving

Transportation Modeling

Video Game Design

Webmaster

COMPETITIVE EVENTS ELIGIBILITY

2019 & 2020 HIGH SCHOOL COMPETITIONS	ELIGIBILITY
3D Animation	three (3) teams of two to six (2-6) members per state
Animatronics	one (1) team per chapter
Architectural Design	one (1) team, or one (1) individual, per chapter
Biotechnology Design	three (3) teams per state, two to six (2-6) members per team
Board Game Design	one (1) team of two to six (2-6) members per chapter
Chapter Team	one (1) team of six (6) members per chapter
Children's Stories	one (1) team, or one (1) individual, per chapter
Coding	one (1) individual or one (1) team of two to three (2-3) members per chapter
CAD, Architecture	two (2) individuals per state
CAD, Engineering	two (2) individuals per state
Computer Integrated Manufacturing (CIM)	one (1) team of two (2) members per chapter
Debating Technological Issues	three (3) teams of two (2) members per state
Digital Video Production	three (3) teams per state; an individual may participate solo in this team event
Dragster Design	two (2) individuals per chapter, one (1) entry each
Engineering Design	three (3) teams of three (3) or more members per state
Essays on Technology	three (3) individuals per state
Extemporaneous Speech	three (3) individuals per state
Fashion Design and Technology	three (3) teams of two to four (2-4) members per state
Flight Endurance	two (2) individuals per chapter, one (1) entry each
Forensic Science	one (1) team of two (2) members per chapter
Future Technology and Engineering Teacher	three (3) individuals per chapter
Music Production	three (3) teams per state; an individual may participate solo in this team event
On Demand Video	one (1) team of two (2) or more members per chapter
Photographic Technology	one (1) individual per chapter
Prepared Presentation	three (3) individuals per state
Promotional Design	three (3) individuals per state, one (1) entry each
Scientific and Technical Visualization (SciVis)	three (3) teams per state; an individual may participate solo in this team event
Software Development	one (1) team per chapter
Structural Design and Engineering	one (1) team of two (2) members per chapter
System Control Technology	one (1) team of three (3) members per state, one (1) entry per team
Technology Bowl	one (1) team of three (3) members per chapter
Technology Problem Solving	one (1) team of two (2) members per chapter
Transportation Modeling	one (1) individual per chapter
Video Game Design	three (3) teams per state, with a minimum of two (2) members per team
Webmaster	one (1) team of three to five (3-5) members per chapter

Technology Student Association (TSA) High School Competitive Events Guide for the 2019 and 2020 National TSA Conferences

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The Technology Student Association (TSA) High School Competitive Events Guide for the 2019 & 2020 National TSA Conferences contains a rating form (rubric) for each competition. Rubrics are embraced by STEM educators because they provide a way to evaluate performance. The use of descriptors for each criterion being measured in a rubric increases consistency and a greater understanding of the evaluation process. The TSA rating form/rubric provides a way for TSA members to better prepare for competitions; for advisors to carefully assist them in the process; and for judges to effectively evaluate participants and their entries.

GO/NO GO SPECIFICATIONS

- Each competitive event has a Go/No Go Specifications checklist placed at the beginning of the official event rating form/rubric.
- Specifications in the checklist are required and must be met, or the individual or team will not be allowed to compete in the event.
- Refer to each competitive event's official rating form/rubric for details.

3D ANIMATION

OVERVIEW

Participants demonstrate their knowledge of 3D animation technology and design skills to creatively solve the challenge posted on the national TSA website under Competitions/Themes and Problems. Semifinalists participate in an onsite competition in which they further demonstrate their 3D design skills and proficiency in 3D animation technology.

ELIGIBILITY

Participants are limited to two (2) teams of two to six (2-6) members per state.

TIME LIMITS

PRELIMINARY ROUND

1. All components of the chapter's entry must be finished and accessible via the Internet by 11:59 pm Pacific Daylight Time (PDT) on May 15th.

2. Note: After 11:59 pm on May 15th changes must not be made to the video entry. Should changes or updates to the video be made after the deadline, those changes are not considered.

SEMIFINAL ROUND

1. Semifinalists will report to the time and place stated in the conference program to pick up the onsite problem.

2. Semifinalists will have 24-hours, beginning at the time the prompt is picked up, to complete the animation.

3. Each semifinalist team will participate in an interview about the team's entry and design process, with a duration of approximately five (5) minutes.

4. The LEAP interview will be conducted as part of the semifinalist presentation/interview and will last a maximum of five (5) additional minutes.

LEAP

A team LEAP Report is required for this event and must be submitted at event check-in (see LEAP Program).

ATTIRE

TSA competition attire is required.

PROCEDURE

PRE-CONFERENCE/PRELIMINARY ROUND

1. Teams submit their entire entry electronically via www.submittable.com as a single, multipage PDF document, including the LEAP Report, and the URL of the animation as an UNLISTED YouTube video. The URL must point to the unlisted YouTube video of the team's entry.

2. Teams must follow the SPECIFIC INSTRUCTIONS for online entry submission on the TSA website under Themes/Problems/3D Animation. Failure to follow these instructions may result in the entry not being judged.

3. Email verification of each team's entry is made immediately upon completion of the entry submission process.

4. Entries will be evaluated by judges, and a list of twelve (12) semifinalist teams (in random order) will be posted onsite at the National TSA Conference.

   NOTE: This procedure applies to the national TSA competition only — entry procedures for state conferences are handled by each state.

SEMIFINAL ROUND

1. Semifinalist teams will report to the location stated in the conference program to receive the onsite assignment.

2. The event coordinator distributes the materials, information, directions, and deadlines to each team.

3. At the time of pickup of the onsite assignment, teams will sign up for an interview time.

4. Participants supply any and all equipment necessary to perform the onsite task.

5. Participants will have 24 hours to complete the onsite assignment.

6. At the conclusion of the 24 hours, participants will turn in their final animation in video format (MP4, MOV, or AVI format, etc.) on a USB flash drive or external hard drive at the time and place stated in the conference program.

7. Semifinalist teams then report to the place stated in the conference program for their interview. Judges will interview each semifinalist team, for no more than five (5) minutes, about the team's entry and design process.

8. The LEAP interview will be conducted as part of the semifinalist presentation/interview and will last a maximum of five (5) additional minutes.

9. Semifinalist teams must NOT leave any equipment with the judges, other than the USB flash drive or external hard drive containing their assignment.

10. The top ten (10) finalists will be announced at the awards ceremony.

REGULATIONS

PRELIMINARY ROUND

A. Participants must submit their entry in a video format that is readable across multiple platforms (Apple, Windows, etc.) as an UNLISTED YouTube video, with corresponding documentation for preliminary judging.

B. Documentation materials (comprising "a portfolio") are required and submitted as a single, multipage PDF document including the LEAP Report, with pages in this order:

1. LEAP Report

2. Title page with the event title, the conference city and state, the year, and the team identification number; one (1) page

3. Table of contents; pages as needed

4. Description of final design; one (1) page

5. Storyboard; pages as needed

6. List of hardware and software used; one (1) page

7. Plan of Work log that indicates preparation for the event, as noted by date, task, time involved, team member responsible, and comments (see Forms Appendix or TSA website); one (1) page

8. References cited; pages as needed

9. Completed and signed Student Copyright Checklist; one (1) page

SEMIFINAL ROUND

A. Participants do not bring their equipment to the onsite assignment pick up.

B. Semifinalist teams will receive a design problem that must be completed within the allotted 24 hours.

C. Semifinalist teams will each have a five (5)-minute interview with the judges about their project with an additional five (5) minutes for a LEAP interview.

D. Semifinalist teams must transfer the final rendered animation in video format (MP4, MOV, AVI, etc.) onto a USB flash drive or external hard drive, and turn it in at the time and place stated in the conference program.

1. The judges will only view the final rendered animation from the USB flash drive or external hard drive.

2. Semifinalist teams must not bring their equipment to the onsite assignment pickup or leave their equipment with the judges after the interview.

3. Semifinalist teams may pick up their USB flash drive or external hard drive at the time and place stated in the conference program.

E. LEAP Requirements

1. Teams document the leadership skills the team has developed and demonstrated while working on this event, and on a non-competitive event leadership experience.

2. Semifinalists respond to questions about the content of their LEAP Report as part of their event-specific presentation/interview.

3. Specific LEAP Report regulations can be found in the LEAP Program section of this guide and on the TSA website.

EVALUATION

PRELIMINARY ROUND

1. The quality of the portfolio
2. The design quality of the 3D animation
3. The solution to the design problem

SEMIFINAL ROUND

1. The design quality of the team's solution to the onsite problem
2. The team's response to the event-specific interview
3. The content and quality of the LEAP Report and LEAP interview

Refer to the official rating form for more information.

STEM INTEGRATION

This event has connections to the STEM areas of Science, Technology, Engineering, and Mathematics.

CAREERS RELATED TO THIS EVENT

- Graphic designer
- Animator
- Art director
- Film and video editor

3D ANIMATION
2019 & 2020 OFFICIAL RATING FORM
HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

- ☐ Documentation is present in a single, multi-page PDF
- ☐ Video is viewable via an unlisted YouTube video
- ☐ Completed Student Copyright Checklist is present
- ☐ Completed LEAP Report is present
- ☐ ENTRY NOT EVALUATED

DOCUMENTATION (40 points)

Record scores in the column spaces below.

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Portfolio (X1)	The portfolio is unorganized and/or missing three or more components.	The portfolio includes most components and is generally organized.	All components of the portfolio are included, and content and organization are clearly evident.	
Description (X1)	The description of the final design is unclear.	The description of the final design is explained appropriately.	The description of the final design is clear and concisely written.	
Storyboarding and planning (X1)	The storyboard is present but it is sloppy; it is apparent the storyboard was not utilized in the creation of the animation.	The storyboard is drawn appropriately and generally correlates with the completed animation; there is some evidence the storyboard was referred to during the creation of the animation.	The storyboard is fully developed and includes camera/light directions; the storyboard is of exceptional aesthetic and artistic quality and clearly correlates to the animation; there is clear evidence the storyboard was used extensively during the project development for goal setting, organization, and task-assignment.	
Plan of Work log (X1)	The log is poorly organized and/or incomplete.	The log is adequately detailed and organized, and it contains most of the required components.	The log is well-documented, and it contains all of the required components.	
			DOCUMENTATION SUBTOTAL (40 points)	

ANIMATION (40 points)

Record scores in the column spaces below.

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Aesthetics and artisanship (X1)	Project lacks neatness; animation is extremely choppy; miscellaneous strands/strokes float around the project; parts are disconnected and/or are out of place; overall project is jumpy.	Project is mostly neat; there are one or two elements that are disconnected, free-floating, or out of place; project is mostly smooth, with a few jumpy parts.	Project is very neat; there are no elements that are disconnected or out of place; project moves smoothly and cleanly with little to no jumpy parts.	
Modeling and surfacing (X1)	There are errors in the overall object construction; objects are inappropriate for the assignment; appropriate surfacing is not used in the overall assignment.	Most objects are well formed with few mistakes; objects are mostly believable and appropriate for the assignment; most surfaces seem real and appropriate for the intended objects.	All objects are well formed, with no mistakes; objects and surfaces are believable and appropriate for the assignment.	
Camera and lighting techniques (X1)	Lighting or camera techniques are poorly used in the overall animation; shadows are non-existent or are distracting.	Camera techniques and lighting are used, but they may be minimal or may not enhance the overall animation; they adequately add to the 3D quality; shadows are mostly realistic, and camera movements are satisfactory.	There is evidence of advanced and effective camera movements; effective lighting techniques are used to enhance the overall look and mood of the animation.	
Creativity/originality (X1)	There is little original thought or creativity in the design and production to solve the challenge.	There is some evidence of creativity/originality in the animation.	There is strong evidence of an animation that is fresh and personally creative; project has its own look and feel, and it completely stands out as original.	
ANIMATION SUBTOTAL (40 points)				

Rules violations (a deduction of 20% of the total possible points in the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

PRELIMINARY SUBTOTAL (80 points)

SEMIFINAL PROJECT (80 points)

Record scores in the column spaces below.

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Sketches and planning (X2)	The sketches are present but they are sloppy; it is apparent that little planning was utilized in the creation of the animation.	The sketches are drawn appropriately and generally correlate with the completed animation; there is some evidence the sketches were referred to during the construction of the animation.	The sketches are fully developed, of good quality, and the final product closely represents the planning sketches.	
Modeling and surfacing (X2)	There are errors in the overall object construction; objects are inappropriate for the assignment; appropriate surfacing is not used in the overall assignment.	Most objects are well formed with few mistakes; objects are mostly believable and appropriate for the assignment; most surfaces seem real and appropriate for the intended objects.	All objects are well formed, with no mistakes; objects and surfaces are believable and appropriate for the assignment.	

3D ANIMATION

SEMIFINAL PROJECT (80 points) – continued

	Minimal	Adequate	Exemplary	
Camera and lighting techniques (X2)	Lighting or camera techniques are poorly used in the overall animation; shadows are non-existent or are distracting.	Camera techniques and lighting are used, but they may be minimal or may not enhance the overall animation; they adequately add to the 3D quality; shadows are mostly realistic, and camera movements are satisfactory.	There is evidence of advanced and effective camera movements; effective lighting techniques are used to enhance the overall look and mood of the animation.	
Creativity/originality (X2)	There is little original thought or creativity in the design and production to solve the challenge.	There is some evidence of creativity/originality in the animation.	There is strong evidence of an animation that is fresh and personally creative; project has its own look and feel, and it completely stands out as original.	
			SEMIFINAL PROJECT SUBTOTAL (80 points)	

SEMIFINAL INTERVIEW (38 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Interview (X2)	Team shows little knowledge of 3D design concepts or tools; only one team member participates in the interview.	Team shows adequate knowledge of 3D design concepts and tools; both team members participate in the interview.	Team shows exceptional knowledge of 3D animation and design tools; team members contribute equally during the interview.	
LEAP Report/ Interview (18 points; 10% of the total event points)	The team's efforts are not clearly communicated, lack detail, and/or are unconvincing; few, if any, attempts are made to identify and/or incorporate SLC Practices and Behaviors.	The team's efforts are adequately communicated, include some detail, are clear, and/or are generally convincing; identification and/or incorporation of SLC Practices and Behaviors is adequate.	The team's efforts are clearly communicated, fully-detailed, and convincing; identification and/or incorporation of the SLC Practices and Behaviors is excellent.	
			SEMIFINAL INTERVIEW SUBTOTAL (38 points)	

Rules violations (a deduction of 20% of the total possible points in the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary. **TOTAL (198 points)**

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____ Signature: _____

3D ANIMATION
EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Judges

1. Preliminary round: Two (2) or more to judge online entries

2. Semifinal round: Two (2) or more

MATERIALS

A. Coordinator's packet, containing:

1. Event guidelines, one (1) copy for the coordinator and for each judge

2. TSA Event Coordinator Report

3. List of judges/assistants

4. Pre-populated flash drives for judges

5. Stick-on labels for entries, as needed

6. Results envelope

7. Envelope for LEAP Reports

8. LEAP Interview Judging Protocol

B. Paper for the required sketching/planning, as needed

C. Tables for presentations

D. Table and chairs for judges

RESPONSIBILITIES

PRE-CONFERENCE/PRELIMINARY ROUND

1. Review entries as they are submitted to the designated online storage utility (Submittable).

2. Entry submission is allowed only until 11:59 p.m. (PDT) on May 15th.

3. Manage communication and pre-conference evaluation.

4. Judges independently assess the entries to determine the twelve (12) semifinalists.

5. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

a. To deduct twenty percent (20%) of the total possible points in this round or

b. To disqualify the entry

c. The event coordinator, judges and CRC manager must all initial either of these actions on the rating form.

6. Collect completed rating forms electronically and bring them to the conference on a flash drive.

AT THE CONFERENCE

1. Attend the mandatory coordinator's meeting at the designated time and location.

2. Report to the CRC room and obtain the coordinator's packet; check the contents.

3. Review the event guidelines and check to see that enough judges/ assistants have been scheduled.

4. Inspect the area or room in which the event is to be held for appropriate set-up, including room size, chairs, tables, outlets, etc. Notify the event manager of any potential problems.

5. On the first full day of competition, post a list of the twelve (12) semifinalists in random order.

SEMIFINAL ROUND

1. At least one (1) hour before the event is scheduled to begin, meet with judges and review the time limits, procedures, and regulations and clear up any questions or misunderstandings.

2. Meet with all the participants at the scheduled time and location to deliver the event-specific criteria. Ensure that all participants understand regulations regarding equipment allowed, behavior, deadlines, and submission requirements.

3. Each semifinalist team will sign up for a specific interview time at the onsite assignment pickup. Inform teams that they are to return fifteen (15) minutes before their scheduled interview time.

4. Judges independently assess each semifinalist team's project and interview.

    a. They may take notes, but evaluation occurs only after all team members have left the event room.

    b. The LEAP interview will be conducted as part of the semifinalist presentation/interview and will last a maximum of five (5) additional minutes.

5. Manage completion of the interviews.

6. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

    a. To deduct twenty percent (20%) of the total possible points in this round or

    b. To disqualify the entry

    c. The event coordinator, judges and CRC manager must all initial either of these actions on the rating form.

7. Judges determine the ten (10) finalists and discuss and break any ties that affect the top three (3) placements. (Determine the procedure for breaking ties before the onsite competition begins.)

8. Review and submit the finalist results and all related forms in the results envelope to the CRC room.

9. If necessary, manage security and the removal of materials from the area.

ANIMATRONICS

OVERVIEW

Animatronics refers to a robotic device that emulates a human or an animal, or brings an inanimate object "to life." Teams will produce an animatronics device complete with an appropriate display. The animatronics device must use control technology in its performance and fulfill the requirements of the theme to communicate, entertain, inform, demonstrate and/or illustrate a topic, idea, subject, or concept. Sound, lights, and surrounding environment are to accompany the device. The design problem for the current school year will be posted on the national TSA website under Competitions/Themes and Problems.

ELIGIBILITY

One (1) team per chapter may participate; one (1) entry per team.

TIME LIMITS

1. Participants are given five (5) minutes to set up their equipment prior to their presentation.
2. The presentation must last no longer than nine (9) minutes.
   a. The presentation time begins when students present background information about the project and must conclude on or before the nine (9)-minute time limit.
   b. Five (5) points will be deducted for every thirty (30) seconds over the time limit.
   c. The judges' interview is not considered part of the presentation time.
3. Semifinalists will participate in a LEAP interview that will last a maximum of five (5) additional minutes.

LEAP

A team LEAP Report is required for this event and must be submitted at event check-in (see LEAP Program).

ATTIRE

TSA competition attire is required for this event.

PROCEDURE

PRELIMINARY ROUND

1. Participants will check-in, sign up for a setup time, and submit a LEAP Report at the time and place stated in the conference program. No animatronics devices are required during signup/check-in.
2. At check-in, each team will select an initial presentation time from the available times posted. When selecting a demonstration time, teams should avoid conflicts with other events for which team members are registered.
3. Participants report for the presentation/interview at the selected demonstration time with the animatronics device and display. Only three (3) team members are allowed to set up equipment, present the project, and participate in the event-specific interview.
4. Judges independently assess the entries.
5. A list of twelve (12) semifinalist teams (in random order) will be posted.

SEMIFINAL ROUND

1. Semifinalist teams report to the event area at the time and place stated in the conference program to sign-up for an interview time.
2. Semifinalist teams may be represented by no more than three (3) team members.
3. Semifinalist teams will respond to interview questions related to their LEAP Report.
4. Judges independently evaluate each team's LEAP Report and interview.
5. The top ten (10) finalists will be announced during the awards ceremony.
6. No more than three (3) team members pick up their entry from the display area at the time and place stated in the conference program.

REGULATIONS

PRELIMINARY ROUND

A. The display may not exceed 15" deep x 3' wide x 4' high. The device may extend beyond the dimensions of the display during the demonstration.

B. The animatronics device must have three (3) or more separate movements.

   1. An exterior shell or skin is required. It must be removable in order to show the judges the internal components of the project.

   2. Fluid power, gearing systems, linkages, and/or cabling systems, etc., should be incorporated to aid in the movement of the device.

C. Sound, lights, and sensors must be used in the project model.

D. Control technology must be used during the performance.

E. Fluid power MUST be used to aid in the movement of the animatronics device. If no fluid power is used, a ten (10)-point deduction will be incurred.

F. A wet cell battery may not be used in the animatronics device.

G. The animatronics device may use AC power, but the team will only have access to an AC outlet during the demonstration/presentation.

H. **Should the device suggest anything that is inappropriate by language, sound, or movement, immediate disqualification will result.**

I. A team that fails to appear for its demonstration forfeits evaluation.

SEMIFINAL ROUND

A. The semifinalist LEAP interview may include no more than three (3) team members.

B. LEAP Requirements

   1. Team members document the leadership skills the team has developed and demonstrated while working on this event, and on a non-competitive event leadership experience.

2. Semifinalists will respond to questions about the content of their LEAP Report as part of their event-specific presentation/interview.

3. Specific LEAP Report regulations can be found in the LEAP Program section of this guide and on the TSA website.

EVALUATION

1. Device performance

2. Device artisanship

3. The team's presentation and response to the event-specific interview questions

4. The content and quality of the LEAP Report and interview

Refer to the official rating form for more information

NOTES

Learn more about animatronics by visiting the following:

www.roborobotics.com/Animatronics/Animatronics.html

www.animalmakers.com

www.garnerholt.com

www.dreamation.com/Animatronics.htm

STEM INTEGRATION

This event aligns with the STEM educational standards of Science, Technology, Engineering, and Mathematics.

CAREERS RELATED TO THIS EVENT

- Amusement park robotics maintenance engineer
- Electronics technician
- Film industry special effects engineer
- Industrial designer
- Toy developer

ANIMATRONICS
2019 & 2020 OFFICIAL RATING FORM
HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

☐ Skins/shells are removable.
☐ Interior skeleton and mechanism are accessible for inspection.
☐ Completed LEAP Report is present.
☐ ENTRY NOT EVALUATED

DEMONSTRATION INTERVIEW (50 points)

Record scores in the column spaces below.

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Organization (X1)	Team seems unprepared and unorganized for the presentation/interview, with an illogical explanation of the project.	Team is prepared for the interview and is somewhat organized in its presentation to judges; team's presentation thesis is, for the most part, logical and/or clear.	Team's presentation/interview with judges is well organized; the interview is concise and logical, with a clear explanation of the development of the project.	
Knowledge (X1)	Team members seem to have little understanding of the concepts in their project; vague interview answers are provided.	Team members have a generalized understanding of the concepts discussed and answer questions adequately.	Evidence is clear that team members have a thorough understanding of the concepts discussed; they answer questions thoroughly.	
Articulation (X1)	The presentation and interview provide an unclear, unorganized, and or illogical description of the project.	The presentation and interview offer a somewhat logical and easy-to-understand project description.	The presentation/interview provides a clear, concise, and easy-to-follow description of the project.	
Delivery (X1)	The team is verbose and/or uncertain in its presentation/interview; participants' posture, gestures, and lack of eye contact diminish the delivery.	The team is somewhat well-spoken and clear in its presentation/interview; participants' posture, gestures, and eye contact result in an acceptable delivery.	The team is well-spoken and distinct in its presentation/interview; participants' posture, gestures, and eye contact result in a polished, natural, and effective delivery.	
Team participation (X1)	Only one person in the group communicates with judges; there is little or no participation from other team members.	Team members all participate to some extent and seem to understand the concepts.	Team members seem to fully understand the concepts and share an equal role in the interview.	
DEMONSTRATION INTERVIEW SUBTOTAL (50 points)				

ANIMATRONICS

MODEL APPEARANCE (30 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance
	1-4 points	5-8 points	9-10 points
Creativity (X1)	Model lacks creativity; very few or no design principles are integrated in the model.	Some elements of creativity are evident, and most essential design principles are included and used somewhat effectively.	Model exudes creativity; essential design principles and elements are integrated.
Aesthetics and artisanship (X1)	Work is unorganized and/or sloppy; model seems to be an afterthought and/or thrown together.	Some layout and design principles are integrated into the model, and aesthetics are adequate.	There is exemplary use of layout and design principles; artistic and aesthetic values are incorporated.
Originality (X1)	Model lacks imagination, originality, and artistic detail.	Model is somewhat innovative.	Model is inspiring, inventive, and resourceful.
			MODEL APPEARANCE SUBTOTAL (30 points)

MODEL FUNCTION (60 points)

Skin and skeletal function: There is no point value for the skin and skeletal function of the animatronics model. The model's skin must be removable in order to reveal skeletal function and mechanics located beneath the skin. If the skin is not removable then the entry will not be evaluated.

CRITERIA	Minimal performance	Adequate performance	Exemplary performance
	1-4 points	5-8 points	9-10 points
Sound inclusion (X1)	There is little or no sound included, or the design suggests that the inclusion of sound was an afterthought to the model.	Sound is included, and it somewhat contributes to the overall function of the model.	The inclusion of sound is creative and effectively contributes to the design and performance of the model.
Light inclusion (X1)	Light is minimal, or the design suggests that the inclusion of lights was an afterthought to the model.	Light is included, and it somewhat contributes to the overall function of the model.	The inclusion of a light creatively and effectively contributes to the model's design and performance.
Sensor inclusion (X1)	Sensors are included minimally, or the design suggests that the inclusion of sensors was an afterthought to the model.	Sensors are included, and they somewhat contribute to the overall function of the model.	The inclusion of sensors (and the interactivity that sensors allow) in the model is creative and effectively contributes to its design and performance.
Control technology (X1)	Little control technology is used during the performance.	Some basic control technology is used during the performance.	Advanced control technology is used during the performance; the model is fully autonomous.
Fluid power system inclusion (X1)	A fluid power system is included, but it functions inadequately or not at all.	A fluid power system is included, and it contributes somewhat to the overall function of the model.	The inclusion of a fluid power system(s) and the fluidity of movement that this system(s) provides in an animatronics model creatively and effectively contribute to the model's design and performance.
Use of gears, linkages, cabling, etc. (X1)	The use of gears, linkages, cabling, etc. is minimally apparent or improperly incorporated into the model; the team shows little understanding of how to properly use these systems in the model.	Most gears, linkages, cabling systems, etc. are incorporated and used properly in the model; there is evidence of an adequate understanding of the systems.	Efficient and varied use of gears, linkages, cabling systems, etc. is apparent and properly incorporated in the model; there is evidence of a complete understanding of these systems.
			MODEL FUNCTION SUBTOTAL (60 points)

TIME DEDUCTIONS

A five-(5) point deduction will be incurred for every thirty (30)-second interval over the allotted time. Multiply the number of intervals by five (5) and record the total deduction in the column to the right.

# of intervals X 5 = _____ (total deduction)

Rules violations (a deduction of 20% of the total possible points in the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

PRELIMINARY SUBTOTAL (140 points)

SEMIFINAL INTERVIEW (14 points)

Record scores in the column spaces below.

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
LEAP Report/ Interview (10% of the total event points)	The team's efforts are not clearly communicated, lack detail, and/or are unconvincing; few, if any, attempts are made to identify and/or incorporate SLC Practices and Behaviors.	The team's efforts are adequately communicated, include some detail, are clear, and/or are generally convincing; identification and/or incorporation of SLC Practices and Behaviors is adequate.	The team's efforts are clearly communicated, fully-detailed, and convincing; identification and/or incorporation of the SLC Practices and Behaviors is excellent.	

SEMIFINAL INTERVIEW SUBTOTAL (14 points)

Rules violations (a deduction of 20% of the total possible points in the semifinalist sections above) must be initialed by the evaluator, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

SEMIFINAL SUBTOTAL (14 points)

To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary.　　**TOTAL (154 points)**

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____　　Signature: _____

ANIMATRONICS
EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Assistant for check-in, one (1)

C. Timekeeper, one (1)

D. Judges:

    1. Preliminary round, two (2) or more

    2. Semifinal round, two (2) or more

MATERIALS

A. Coordinator's packet, containing:

    1. Event guidelines, one (1) copy for the coordinator and for each judge

    2. TSA Event Coordinator Report

    3. List of judges/assistants

    4. Pre-populated flash drives for judges

    5. Stick-on labels for entries, as needed

    6. Results envelope

    7. Envelope for LEAP Reports

    8. LEAP Interview Judging Protocol

B. Tables for presentation

C. Table and chairs for judges

RESPONSIBILITIES

AT THE CONFERENCE

1. Attend the mandatory coordinator's meeting at the designated time and location.

2. Report to the CRC room and obtain the coordinator's packet; check the contents.

3. Review the event guidelines and check to see that enough judges/assistants have been scheduled.

4. Inspect the area or room in which the event is to be held for appropriate set-up, including room size, chairs, tables, outlets, etc. Notify the event manager of any potential problems.

5. At least one (1) hour before the event is scheduled to begin, meet with judges and review the time limits, procedures, and regulations and clear up any questions or misunderstandings. If questions arise that cannot be answered, speak to the CRC event manager before the event begins.

EVENT CHECK-IN

1. Check in entries and collect LEAP Reports at the time and place noted in the conference program.

2. Have each team sign up for a specific time for its presentation/interview (within the time frame designated for the event).

    a. Once each team has scheduled a presentation/interview time, make sure that the participants understand that they are to return fifteen (15) minutes before their scheduled presentation/interview time.

    b. Anyone reporting who is not on the entry list may check in only after official notification is received from the CRC.

    c. Late entries are considered on a case-by-case basis and only when the delay is caused by events beyond participant control.

PRELIMINARY ROUND

1. Conduct the event-specific interview.

2. Judges independently assess each team's demonstration presentation/interview.

3. Judges may take notes, but scoring occurs only after all team members have left the event room.

4. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

    a. To deduct twenty percent (20%) of the total possible points in this round or

    b. To disqualify the entry

    c. The event coordinator, judges and CRC manager must all initial either of these actions on the rating form.

5. Judges determine the ranking of the twelve (12) semifinalists.

6. Review and submit the semifinalist results and all related forms in the results envelope to the CRC room.

SEMIFINAL ROUND

1. At least one (1) hour before the event is scheduled to begin, meet with judges and review the time limits, procedures, and regulations and clear up any questions or misunderstandings.

2. Each semifinalist team will sign up for a specific time for its interview (within the time frame designated for the event). Inform teams that they are to return fifteen (15) minutes before their scheduled interview time.

3. Manage the LEAP interviews.

4. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

   a. To deduct twenty percent (20%) of the total possible points in this round or

   b. To disqualify the entry

   c. The event coordinator, judges and CRC manager must all initial either of these actions on the rating form.

5. Judges determine the ten (10) finalists and discuss and break any ties that affect the top three (3) placements. (Determine the procedure for breaking ties before the onsite competition begins.

6. Review and submit the finalist results and all related forms in the results envelope to the CRC room.

7. If necessary, manage security and the removal of materials from the area.

ARCHITECTURAL DESIGN

OVERVIEW

Participants develop a set of architectural plans and related materials in response to an annual architectural design challenge and construct a physical, as well as a computer-generated model, to accurately depict their design. Participants must demonstrate an understanding of and aptitude for architectural design, the development of plans, Leadership in Energy and Environmental Design (LEED) applications through construction and renovation, and modeling techniques and practices. The design problem for the current school year will be posted on the national TSA website under Competitions/Themes and Problems.

ELIGIBILITY

One (1) team, or one (1) individual, per chapter may participate; one (1) entry per team or individual.

TIME LIMITS

PRELIMINARY ROUND

1. The documentation portfolio of the entry must be finished and accessible via the Internet by 11:59 pm Pacific Daylight Time (PDT) on May 15th.

2. After 11:59 pm on May 15th changes must not be made to the portfolio. Should changes or updates to the portfolio be made after the deadline, those changes are not considered.

SEMIFINAL ROUND

1. The semifinalist presentation/interview time will be limited to ten (10) minutes.

2. The LEAP interview will be conducted as part of the semifinalist presentation/interview and will last a maximum of five (5) additional minutes.

LEAP

An individual or team LEAP Report is required for this event and must be submitted at event check-in (see LEAP Program).

ATTIRE

TSA competition attire is required for this event.

PROCEDURE

PRE-CONFERENCE/PRELIMINARY ROUND

1. Participants access the design problem for the specific year's challenge found on the national TSA website and work to complete their entry according to the event regulations.

2. Participants submit their documentation portfolio entry electronically via www.submittable.com as a single, multipage PDF document, including the LEAP Report.

3. Participants must follow the SPECIFIC INSTRUCTIONS for online entry submission on the TSA website under Themes/Problems/ Architectural Design. Failure to follow these instructions may result in the entry not being judged.

4. Email verification of each participant's entry is made immediately upon completion of the entry submission process.

5. Entries are evaluated by judges.

6. Onsite at the conference, participants submit their physical model at event check-in.

7. A list of twenty-four (24) participants will be posted on the first full day of the conference, whose models will be judged onsite at the conference to determine the twelve (12) semifinalists. No more than two (2) team members submit and place the model for judging.

8. Models are evaluated by judges. Neither students nor advisors are present at this time.

9. A list of twelve (12) semifinalists (in random order) will be posted.

NOTE: This procedure applies to the national TSA competition only — entry procedures for state conferences are handled by each state.

SEMIFINAL ROUND

1. Semifinalists will sign up for a presentation/ interview time and arrive at the time and place stated in the conference program.

2. The individual semifinalist or two (2) representatives from each semifinalist team report to the event area at the time and designated location.

3. Semifinalists will use their models and documentation for reference during the presentation/interview process.

4. The LEAP interview will be conducted as part of the semifinalist presentation/interview.

5. No more than two (2) team members pick up the team's entry from the display area at the time and place stated in the conference program.

6. The top ten (10) finalists will be announced at the awards ceremony.

REGULATIONS

PRELIMINARY ROUND

A. Documentation materials (comprising "an electronic/ digital portfolio") are required and must be submitted in a single, multipage PDF document.

1. Participants must turn in their documentation portfolio online for preliminary judging (see Procedures 2 and 3).

2. Participants must have a USB flash drive copy of their portfolio with them at the conference as a back-up and for use in the semifinalist presentation, should they advance to that level.

3. The documentation must include the following single 8½" x 11" pages, in this order:

    a. LEAP Report

    b. Title page with the event title, the conference city and state, and the year; one (1) page

    c. Table of contents; pages as needed

    d. A description of the individual/team's interpretation of the design challenge and an explanation of the style and merits of the design concepts; one (1) page

e. List and description of each of the construction systems (any and all that apply) and their incorporation and application to the solution: building codes, building permits, construction methods and materials, electrical wiring, plumbing, HVAC, and site requirements; maximum of six (6) pages.

f. A LEED assessment for the project, according to the USGBC standards for green building; one (1) or more pages

g. A schedule of finish materials for all exterior and interior surfaces of the architectural design (this is not a list of the model construction materials); one (1) page

h. A complete set of reproduction copies of the original hand drawings and printer/plotter- generated copies of CAD drawings (i-iii below) must be submitted with the model.

    i. Each drawing should be shown on maximum sheet cut size B (11" x 17"), with the appropriate scale noted on the drawing.

    ii. A copy of each drawing also must be included on the flash drive.

    iii. Drawings must be appropriately scaled to fit the PDF format required for submission.

        1. original floor plan/s

        2. sectional detail drawing

        3. foundation plan

        4. roof plan

        5. assembly plan with necessary onsite instructions

i. Plan of Work log that indicates preparation for the event, as noted by date, task, time involved, team member responsible, and comments (see Forms Appendix or TSA website); pages as needed

j. Mentorship Verification form; participants are required to seek the mentorship of an architect or other professional involved with construction and renovation (see Mentorship Verification form); one (1) page

k. A 3-D modeling/rendering drawing of the individual/team's final design with appropriate details included; drawing sheet size B, 11" x 17"; one (1) page. Drawing must be appropriately scaled to fit the PDF format required for submission.

l. List of resources/references; pages as needed

B. Model:

1. The architectural model must be placed on a site board, the size of which will be posted along with the annual problem each year on the TSA website.

2. Model construction concepts, materials, techniques, and applications:

   a. Balsa wood, illustration board, or similar materials are suggested (but not limited to) for use as interior walls, exterior walls, and roof construction.

   b. Foam core board that is ½" thick or greater is recommended for use as the site board for the model.

   c. Dowels may be used to represent columns or circular components.

3. Participants should pay close attention to the scale of all materials as they relate to the scale of the model.

4. The model may not include any electrical or battery-powered enhancements.

5. No glass or liquid may be used as part of any model.

SEMIFINAL ROUND

A. Semifinalists will answer event-specific questions about their design and solution to the yearly design challenge using both their documentation portfolio and model as illustrations.

B. LEAP Requirements

1. Participants document the leadership skills developed and demonstrated while working on this event, and on a non-competitive event leadership experience.

2. Semifinalists will respond to questions about the content of their LEAP Report as part of their event-specific presentation/interview.

3. Specific LEAP Report regulations can be found in the LEAP Program section of this guide and on the TSA website.

EVALUATION

PRELIMINARY ROUND

1. The digital portfolio

2. The design process

3. The architectural model

SEMIFINAL ROUND

1. The quality of the event-specific interview

2. The content and quality of the LEAP Report and semifinalist interview

Refer to the official rating form for more information.

STEM INTEGRATION

This event aligns with the STEM educational standards of Science, Technology, Engineering, and Mathematics.

CAREERS RELATED TO THIS EVENT

- Appraiser
- Architect
- Construction manager
- Interior designer
- Urban and regional planner

HIGH SCHOOL ARCHITECTURAL DESIGN
MENTORSHIP VERIFICATION

I certify that I have served as a mentor to the student(s) named below.

_____

Student(s) involved (please print)

_____

Signature of student(s)

_____

Date

_____

TSA chapter advisor (printed name and signature)

_____

Date

_____

Name of mentor (please print)

_____

Occupation (please print)

_____

Employer (please print)

_____

Signature of mentor

_____

Date

Participant/Team ID# _____

ARCHITECTURAL DESIGN

2019 & 2020 OFFICIAL RATING FORM

HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

☐ Online documentation is present.
☐ Model is present and submitted on a site board (specific only for the 24 pre-qualified entries).
☐ Drawings are present.
☐ Completed LEAP Report is present.
☐ ENTRY NOT EVALUATED

DOCUMENTATION (90 points)

Record scores in the column spaces below.

CRITERIA	Minimal performance 1-4 points	Adequate performance 5-8 points	Exemplary performance 9-10 points	
Portfolio components (X1)	Portfolio is unorganized and/or is missing three or more components.	Portfolio has most components and is generally organized; it has sufficient content.	All components are included in the portfolio; content and organization are excellent.	
Description of design interpretation (X1)	The description of the design and style is unclear or vague.	The description of the design and explanation of the style are included; they are adequately presented.	The description and merits of the design and explanation of the style are clear, effective, and convincing.	
Construction systems (X1)	There is little or no evidence of attention to the various construction systems.	Most, but not all, construction systems are addressed; they are generally well presented.	All applicable construction systems are addressed, clearly documented, and well presented.	
Schedule of finish materials (X1)	Many elements of the interior and exterior finish schedules are missing or incomplete.	Most, but not all, elements of the interior and exterior finish schedules are included.	All interior and exterior finish schedules/materials are detailed and explained clearly.	
LEED Assessment (X1)	Only a minor attempt has been made to incorporate a LEED assessment of the design.	Many, but not all, aspects of a LEED assessment of the design are provided and documented.	A complete and accurate LEED assessment of the design is included.	
Drawings (X2)	A few of the required drawings are present, but they are lacking in quality.	Most, but not all, of the required drawings are included and are in the proper format.	All required drawings are included and in the proper format.	
Resources/ references (X1)	There is little or no effort to provide resources and references.	Resources and references included are generally presented appropriately.	There is clear evidence of the appropriate use of applicable resources and references.	
Plan of Work log (X1)	The Plan of Work log lacks major elements of documentation.	The Plan of Work log is somewhat complete and generally reflects the time and work necessary for the project.	The Plan of Work log completely and accurately reflects the time and work necessary for the project.	
DOCUMENTATION SUBTOTAL (90 points)				

ARCHITECTURAL DESIGN

DESIGN CHALLENGE (50 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance
	1-4 points	5-8 points	9-10 points
Effectiveness of design (X2)	The design is ineffective in meeting the needs of the challenge.	The design is somewhat effective in meeting the needs of the challenge.	The design is clearly effective in meeting the needs of the challenge.
Access and flow (X1)	The design reflects an ineffective traffic flow pattern and/or use of space to gain access to the structure.	The design reflects a somewhat effective traffic flow pattern and use of space to access the structure.	The design presents a clear, effective traffic flow pattern and full consideration of the use of space.
Aesthetic appeal (X1)	There is little evidence of consideration of aesthetics and curb appeal in the design.	There is some evidence that aesthetics and curb appeal have been considered in the design.	There is clear evidence that aesthetics and curb appeal are fully and effectively integrated into the design.
Creativity and innovation (X1)	The design lacks originality and exhibits few, if any, creative and/or innovative applications.	Some unique, innovative, and creative concepts are incorporated in the overall design.	Unique, creative, and innovative approaches are fully incorporated into the design.
DESIGN CHALLENGE SUBTOTAL (50 points)			

MODEL (70 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance
	1-4 points	5-8 points	9-10 points
Quality of construction (X2)	Construction is of poor quality and appearance, with little or no attention to neatness.	Construction is somewhat neat and has appropriate quality and appearance.	Construction is of excellent quality and exemplary appearance.
Use of materials (X1)	The choice of materials is ineffective and inadequate for the type and scale needed.	There is effective choice of materials and some attention to scale.	There is effective and excellent use of materials and accurate choice of scale.
Design representation (X2)	The model is ineffective in depicting the requirements of the design challenge.	The model is somewhat effective in depicting the requirements of the design challenge.	The model clearly and effectively incorporates and depicts all aspects of the design challenge.
Assembly plan/site board (X2)	The assembly plan and site board are ineffective in portraying the assembly and set-up of the structure onsite.	The assembly plan and site board are somewhat effective in representing most aspects of the assembly and set-up of the structure onsite.	The assembly plan and site board effectively depict all elements of the onsite assembly and set-up.
MODEL SUBTOTAL (70 points)			

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

PRELIMINARY SUBTOTAL (210 points)

Record scores in the column spaces below.

SEMIFINAL PRESENTATION/INTERVIEW (87 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Organization (X1)	Participant(s) seems unorganized and unprepared for the presentation/interview.	Participant(s) is/are generally prepared/organized in the overall presentation/interview.	The presentation/interview is logical, well organized, and easy to follow.	
Knowledge (X2)	Participant(s) seems to have little understanding of the concepts of the design challenge; vague answers to interview questions are provided.	An understanding of the concepts of the design challenge, and answers to questions, are adequate.	There is clear evidence of a thorough understanding of the design challenge; questions are answered well.	
Articulation (X1)	The presentation and interview provide an unclear, unorganized, and or illogical description of the project.	The presentation and interview offer a somewhat logical and easy-to-understand project description.	The presentation/interview provides a clear, concise, and easy-to-follow description of the project.	
Delivery (X1)	The team/individual is verbose and/or uncertain in the presentation/interview; participant posture, gestures, and lack of eye contact diminish the delivery.	The team/individual is somewhat well-spoken and clear in the presentation/interview; participant posture, gestures, and eye contact result in an acceptable delivery.	The team/individual is well-spoken and distinct in the presentation/interview; participant posture, gestures, and eye contact result in a polished, natural, and effective delivery.	
Team participation (X1)	The full team/invidivual communicates with judges.	Most members of the team participate and generally seem to understand the event.	All team members participate with mutual understanding of the event and respond effectively to questions.	
LEAP Report/ Interview (27 points; 10% of total event points)	The individual's or team's efforts are not clearly communicated, lack detail, and/or are unconvincing; few, if any, attempts are made to identify and/or incorporate the SLC Practices and Behaviors.	The individual's or team's efforts are adequately communicated, include some detail, are clear, and/or are generally convincing; identification and/or incorporation of the SLC Practices and Behaviors is adequate.	The individual's or team's efforts are clearly communicated, fully-detailed, and convincing; identification and/or incorporation of the SLC Practices and Behaviors is excellent.	
SEMIFINAL PRESENTATION/INTERVIEW SUBTOTAL (87 points)				

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

SEMIFINAL SUBTOTAL (87 points)

To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary. **TOTAL (297 points)**

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____ Signature: _____

ARCHITECTURAL DESIGN
EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Assistants for check-in, two (2)

C. Judges:

　1. Pre-conference judges for portfolios remote judging, two (2) or more

　2. Onsite for second–half of the preliminary round for displays, two (2) or more

　3. Semifinalist interviews, two (2) or more

MATERIALS

A. Coordinator's packet, containing

　1. Event guidelines, one (1) copy for the coordinator and for each judge

　2. TSA Event Coordinator Report

　3. List of judges/assistants

　4. Pre-populated flash drives for judges

　5. Stick-on labels for entries, as needed

　6. Results envelope

　7. Envelope for LEAP Reports

　8. LEAP Interview Judging Protocol

B. Tables for entries

C. Tables and chairs for judges

RESPONSIBILITIES

PRE-CONFERENCE/PRELIMINARY ROUND, REMOTE

　1. Review entries as they are submitted to the designated online storage utility (Submittable).

　2. Entry submission is allowed only until 11:59 p.m. (PDT) on May 15th.

　3. Manage communication and pre-conference evaluation.

　4. Judges independently assess the entries to determine the twenty-four (24) participants for onsite model judging.

5. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

　a. To deduct twenty percent (20%) of the total possible points in this round or

　b. To disqualify the entry

　c. The event coordinator, judges and CRC manager must all initial either of these actions on the rating form.

6. Collect completed rating forms electronically and bring them to the conference on a flash drive.

AT THE CONFERENCE

1. Attend the mandatory coordinator's meeting at the designate time and location.

2. Report to the CRC room and obtain the coordinator's packet; check the contents.

3. Review the event guidelines and check to see that enough judges/assistants have been scheduled.

4. Inspect the area or room in which the event is being held for appropriate set-up, including room size, chairs, tables, outlets, etc. Notify the event manager of any potential problems.

5. At least one (1) hour before the event is scheduled to begin, meet with judges/assistants to review time limits, procedures, and regulations. If questions arise that cannot be answered, speak to the event manager before the event begins.

EVENT CHECK-IN

1. Check in the entries at the time stated in the conference program.

2. Anyone reporting who is not on the coordinator's report may check in only after official notification is received from the CRC.

3. Late entries are considered on a case-by-case basis and only when the delay is caused by events beyond participant control.

4. Place an entry number label in the upper right-hand corner of each display and around the documentation flash drive.

PRELIMINARY ROUND, ONSITE

1. Judges independently evaluate the entries (top 24 models) to determine the twelve (12) semifinalists.

2. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

   a. To deduct twenty percent (20%) of the total possible points in this round or

   b. To disqualify the entry

   c. The event coordinator, judges and CRC manager must all initial either of these actions on the rating form.

3. Judges determine the twelve (12) semifinalists.

4. Review and submit the semifinalist results and all related items/forms to the CRC for posting.

SEMIFINAL ROUND

1. Conduct semifinalist interviews.

2. The LEAP interview will be conducted as part of the semifinalist presentation/interview and will last a maximum of five (5) additional minutes.

3. Judges evaluate the entries.

4. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

   a. To deduct twenty percent (20%) of the total possible points in this round or

   b. To disqualify the entry

   c. The event coordinator, judges and CRC manager must all initial either of these actions on the rating form.

5. Judges determine the ranking of the ten (10) finalists and discuss and break any ties. (Determine the procedure for breaking ties before the onsite competition begins.)

6. Review and submit the finalist results and all items/forms in the results envelope to the CRC room.

BIOTECHNOLOGY DESIGN

OVERVIEW

Participants will create a display to teach a biotechnology topic and demonstrate understanding of it through documented research, the development of a solution, a display (including a model or prototype [optiona]), and an effective multimedia presentation. Participants may choose to recreate or simulate research that previously has been performed within the scientific community. The display must be presented in a fashion that teaches the topic to an elementary school audience.

The topic for the current school year will be posted on the TSA website under Competitions/Themes and Problems.

ELIGIBILITY

One (1) team, or one (1) individual per chapter may participate.

TIME LIMITS

1. Semifinalists are allowed up to ten (10) minutes to give a presentation, which is followed questions from judges.
2. The LEAP interview will be conducted as part of the semifinalist presentation/interview and will last a maximum of five (5) additional minutes.

LEAP REPORT

A team LEAP Report is required for this event and must be submitted at event check-in (see LEAP Report).

ATTIRE

TSA competition attire is required for this event.

PROCEDURE

PRELIMINARY ROUND

1. Team members select and research a contemporary biotechnology issue related to the current year's designated topic. Resources may include but are not limited to books, interviews, websites, magazines, professional journals, etc.
2. Team members then prepare their documentation, display, and multimedia presentation according to the event regulations.
3. Participants check in their entries and submit a LEAP Report at the time and place stated in the conference program. No more than two (2) team members set up the display.
4. Entries are reviewed by judges. Neither students nor advisors are present at this time.
5. A list of twelve (12) semifinalists (in random order) is posted.

SEMIFINAL ROUND

1. Two (2) representatives from each semifinalist team, with their multimedia presentation, report to the event area at the time and place stated in the conference program.
2. Semifinalist team representatives give a brief presentation and answer questions from judges. Up to ten (10) minutes will be provided for the presentation; with a few minutes more for questions from judges.
3. The LEAP interview will be conducted as part of the semifinalist presentation/interview.
4. The top ten (10) finalists will be announced at the awards ceremony.

Technology Student Association (TSA) High School Competitive Events Guide for the 2019 and 2020 National TSA Conferences

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REGULATIONS

PRELIMINARY ROUND

A. Students must understand the fundamental concepts and principles of the contemporary biotechnology topic. Research on a problem within that topic should focus on significant impacts (opportunities and risks) on the environment, economy, and society, as well as any important ethical considerations.

B. Documentation materials (comprising "a portfolio") are required and should be secured in a clear front report cover. The report cover must include the following single-sided, 8½" x 11" pages, in this order:

1. LEAP Report

2. Title page with the event title, the conference city and state, and the year; one (1) page

3. Table of contents; pages as needed

4. Definition and explanation of the problem; one (1) page

5. An explanation of the chosen solution, and other possible solutions and why they were rejected; maximum three (3) pages

6. A scenario of possible real-life applications; one (1) page

7. Supplementary information such as logs, graphs, sketches, drawings, illustrations, photographs, etc.; maximum four (4) pages

8. A print-out of the accompanying multimedia presentation (printed with three [3] slides per page, recommended); pages as needed

9. Plan of Work log that indicates preparation for the event, as noted by date, task, time involved, team member responsible, and comments (see Forms Appendix or TSA website); one (1) page

10. A minimum of three (3) different types of resources, such as books, interviews, professional journals, websites, magazines, etc. All must be cited using Modern Language Association (MLA) format; pages as needed.

11. A USB flash drive of the team's multimedia presentation. The USB flash drive and the multimedia presentation become the property of TSA.

C. Display guidelines are as follows:

1. The size of the display may not exceed 15" deep x 3' wide x 4' high.

2. A model or prototype is optional.

3. Power

   a. AC electricity may not be used.

   b. Dry cell or photo-voltaic cells may be used for power, if desired.

   c. Any power source used must fit within the maximum display area.

4. If operating instructions are necessary, they must be clearly displayed.

5. No harmful or illegal substances, viruses, live plants, or animals may be used as a part of the display. No potentially dangerous processes may be demonstrated or included as part of the display.

6. The display must be presented as if it were in a children's museum that is geared towards educating children in the 5th grade or younger.

SEMIFINAL ROUND

A. Each team must be prepared to send two (2) representatives to the semifinalist portion of the event, in which the representatives give a multimedia presentation.

B. The presentation explains the team's selection of the problem and its solution and is not to exceed ten (10) minutes. Judges then ask questions.

1. The two (2) semifinalist team representatives MUST bring a laptop computer for their multimedia presentation.

2. Projection equipment will not be permitted.

3. Only power will be provided.

C. The LEAP Report

1. Teams document the leadership skills the team has developed and demonstrated while working on this event, and on a non-competitive event leadership experience.

2. Teams will respond to questions about the content of the LEAP Report as part of the LEAP interview, which will be conducted as part of the semifinalist presentation/interview.

3. Specific LEAP Report regulations can be found in the LEAP Program section of this guide and on the TSA website.

EVALUATION

PRELIMINARY ROUND

1. The portfolio
2. The display

SEMIFINAL ROUND

1. The event-specific presentation/interview
2. The content and quality of the LEAP Report and interview

Refer to the official rating form for more information.

STEM INTEGRATION

This event has connections to the STEM standards of Science, Technology, Engineering, and Mathematics.

CAREERS RELATED TO THIS EVENT

- Bioinformatics processor
- Food scientist
- Microbiologist
- Radiographer
- Quality control analyst

BIOTECHNOLOGY DESIGN

2019 & 2020 OFFICIAL RATING FORM

HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

- ☐ Documentation is present.
- ☐ Display is present.
- ☐ Multimedia presentation is present.
- ☐ Completed LEAP Report is present.
- ☐ ENTRY NOT EVALUATED

DOCUMENTATION (50 points)				Record scores in the column spaces below.
CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Portfolio components (X1)	Portfolio is unorganized and/or missing three (3) or more components.	Portfolio has most components and is generally organized.	Portfolio is missing no components and is clearly well organized.	
Definition and explanation of problem and solution(s) (X1)	The definition and explanation of the problem and/or solution(s) to the problem are unclear.	The definition and explanation of the problem and/or solution(s) to the problem are generally clear.	A clear and concise definition and explanation of the problem and solution(s) to the problem are evident.	
Research base (X1)	The research is inadequate, and/or very few credible sources are referenced.	The research has been conducted appropriately, with some credible sources cited.	There is a comprehensive research base with credible sources cited.	
Supplementary information (X1)	Supplementary information does not help clarify documentation, or it is of little significance to the problem.	Supplementary information is appropriate and adds to the documentation by providing clarity to the problem.	Supplementary information is of excellent quality and clarifies the problem and solution(s).	
Quality and effectiveness (X1)	The work is sloppy and disorganized, as if thrown together.	The work is mostly organized and of sufficient quality.	The work is well organized and of exceptional quality.	
DOCUMENTATION SUBTOTAL (50 points)				

DISPLAY (60 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Communication of problem (X1)	The problem is difficult to understand as communicated and is presented in an illogical manner.	The problem is communicated adequately, and thoughts are somewhat organized and/or concise.	The problem is communicated in an organized, clear, and concise manner.	
Communication of solution (X2)	The solution is difficult to understand as communicated, is presented in an illogical manner and is not focused on an audience of a 5th grade level or younger.	The solution is communicated adequately, thoughts are somewhat organized and/or concise, and the solution is somewhat focused on an audience of a 5th grade level or younger.	The solution is communicated in an organized, clear, and concise manner and is clearly focused on an audience of a 5th grade level or younger.	
Creativity (X1)	The work lacks creativity, with little or no integration of design principles.	Some creative elements are included, and essential design principles and elements are used somewhat effectively.	The work exudes creativity, and essential design principles and elements are integrated.	
Aesthetics and artisanship (X2)	The work is unorganized and sloppy, and the display seems to be an afterthought.	The work is organized, with essential design principles presented in a logical format.	The work reflects an exemplary use of layout and design principles to logically communicate important data.	
			DISPLAY SUBTOTAL (60 points)	

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

| | | | **PRELIMINARY SUBTOTAL (110 points)** | |

SEMIFINAL PRESENTATION (77 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Organization (X1)	Participants seem unorganized and unprepared for the presentation/interview, with an illogical explanation of the problem and solution.	Participants are generally prepared for the presentation/interview; explanation of problem and solution are communicated and generally organized.	The presentation/interview is logical, well organized, and easy to follow; the problem and solution are communicated in an organized and concise manner.	
Articulation (X1)	The presentation/interview is full of illogical thoughts that lack clarity, and/or there is insufficient information provided describing the project.	The presentation/interview is somewhat logical, generally easy to follow, and/or there is sufficient information provided describing the project.	The presentation/interview is clear, concise, and there is ample information provided describing the project.	
Delivery (X1)	The team is verbose and/or uncertain in its presentation/interview; participants' posture, gestures, and lack of eye contact diminish the delivery.	The team is somewhat well-spoken and clear in its presentation/interview; participants' posture, gestures, and eye contact result in an acceptable delivery.	The team is well-spoken and distinct in its presentation/interview; participants' posture, gestures, and eye contact result in a polished, natural, and effective delivery.	

SEMIFINAL PRESENTATION (77 points) – continued				
Knowledge (X2)	Participants seem to have little understanding of the concepts in their project; answers to questions may be vague.	Participants exhibit an understanding of the concepts in their project.	Participants show clear evidence of a thorough understanding of the project.	
Team participation (X1)	The majority of the presentation/interview is made by one member of the team; the partner(s) may be disengaged.	Team members generally are engaged in the process, though one member may take on more responsibility than the other(s).	All team members are actively involved in the presentation/interview and responses to questions.	
LEAP Report/ Interview (17 points; 10% of total event points)	The team's efforts are not clearly communicated, lack detail, and/or are unconvincing; few, if any, attempts are made to identify and/or incorporate the SLC Practices and Behaviors.	The team's efforts are adequately communicated, include some detail, are clear, and/or are generally convincing; identification and/or incorporation of the SLC Practices and Behaviors is adequate.	The team's efforts are clearly communicated, fully-detailed, and convincing; identification and/or incorporation of the SLC Practices and Behaviors is excellent	
		SEMIFINAL PRESENTATION/INTERVIEW SUBTOTAL (77 points)		

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary.　　　**TOTAL (187 points)**

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____　　　Signature: _____

BIOTECHNOLOGY DESIGN
EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Assistants for check-in, two (2)

C. Judges:

    1. Preliminary round, two (2) or more

    2. Semifinal round, two (2) or more

MATERIALS

A. Coordinator's packet, containing:

    1. Event guidelines, one (1) copy for the coordinator and for each judge

    2. TSA Event Coordinator Report

    3. List of judges/assistants

    4. Pre-populated flash drives for judges

    5. Stick-on labels for entries, as needed

    6. Results envelope

    7. Envelope for LEAP Reports

    8. LEAP Interview Judging Protocol

B. Tape measure for judges

C. Stopwatch

D. Display tables for entries (minimum width 18")

E. Table and chairs for judges and two (2) semifinalist team representatives

F. A 50' extension cord AND a power strip (for semifinalist interviews)

RESPONSIBILITIES

AT THE CONFERENCE

1. Attend the mandatory coordinator's meeting at the designated time and location.

2. Report to the CRC room to obtain the coordinator's packet; check the contents.

3. Review the event guidelines and check to see that enough judges/assistants have been scheduled.

4. Inspect the area in which the displays are being placed for appropriate set-up, including appropriate number and size of tables.

5. At least one hour before the event is scheduled to begin, meet with judges to review time limits, procedures, and regulations. If questions arise that cannot be answered, speak to the event manager before the event begins.

EVENT CHECK-IN

1. Check in the entries and collect LEAP Reports at the time stated in the conference program.

2. Anyone reporting who is not on the coordinator's report may check in only after official notification is received from the CRC.

3. Late entries are considered on a case-by-case basis and only when the delay is caused by events beyond participant control.

4. Place an entry number in the upper right-hand corner of each portfolio and display.

5. Position entries for evaluation and viewing.

6. Secure the entries in the designated area.

PRELIMINARY ROUND

1. Judges independently assess the entries to determine the twelve (12) semifinalists.

2. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

    a. To deduct twenty percent (20%) of the total possible points or

    b. To disqualify the entry

    c. The event coordinator, judges and CRC manager must initial either of these actions on the rating form.

3. Review and submit semifinalist results and all related items/forms to the CRC room for posting.

SEMIFINAL ROUND

1. Inspect the area in which the presentations are to take place. Ensure that there is a table and seating for participants and judges.

2. Meet with semifinalist judges to review time limits, procedures, and regulations. If questions arise that cannot be answered, speak to the event manager before the semifinalist presentations begin.

3. Conduct semifinalist presentations/interviews.

    a. Judges should be sure to ask questions.

    b. The LEAP interview will be conducted as part of the semifinalist presentation/interview and will last a maximum of five (5) additional minutes.

4. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

    a. To deduct twenty percent (20%) of the total possible points or

    b. To disqualify the entry

    c. The event coordinator, judges and CRC manager must initial either of these actions on the rating form.

5. Judges determine the ten (10) finalists and discuss and break any ties. (Determine the procedure for breaking ties before the onsite competition begins.)

6. Review and submit the finalist results and all items/forms in the results envelope to the CRC room.

7. If necessary, manage security and the removal of materials from the event area.

BOARD GAME DESIGN

OVERVIEW

Participants develop, build, and package a board game that focuses on the subject of their choice. The game should be interesting, exciting, visually appealing, and intellectually challenging. Each team will have to design the packaging, instructions, pieces, and/or cards associated with creating and piloting a new board game. Semifinalists for the event will set up the game, demonstrate how the game is played, and explain the game's features.

ELIGIBILITY

One (1) team per chapter may participate, one (1) entry each.

TIME LIMITS

1. Semifinalists are allowed five (5) minutes to setup the game and five (5) minutes to repackage the game.
2. Semifinalists participate in an event-specific interview that lasts approximately five to ten (5-10) minutes.
3. Semifinalists participate in a LEAP interview that lasts an additional five (5) minutes.

LEAP

A team LEAP Report is required for this event and must be submitted at event check-in (see LEAP Program).

ATTIRE

TSA competition attire is required for this event.

PROCEDURE

PRELIMINARY ROUND

1. In preparation for the event (and throughout the game development), teams design, create, and document the game entry.
2. Teams submit the completed board game, documentation, and team LEAP Report at the time and place stated in the conference program. No more than two (2) team members may drop off the team's entry.

3. Entries are evaluated by the judges. Neither students nor advisors are present at this time.
4. A list of twelve (12) semifinalist teams (in random order) will be posted.

SEMIFINAL ROUND

1. Semifinalist teams report to the event area at the time and place stated in the conference program to sign-up for an interview time.
2. Semifinalist teams may be represented by no more than three (3) members.
3. Semifinalist teams will answer questions about the documentation, the game's purpose, value, design, rules, and development process.
4. The LEAP interview will be conducted as part of the semifinalist interview.
5. Judges independently assess the entries, including each team's LEAP Report.
6. The top ten (10) finalists will be announced during the awards ceremony.
7. No more than three (3) team members pick up their entry from the display area at the time and place stated in the conference program.

REGULATIONS

PRELIMINARY ROUND

A. Participants design, create and package an entirely original board game, complete with instructions on how to play, including all parts, pieces and/or cards needed to play the game.
B. Board game:
   1. The physical board game should be of high quality and designed for the intended age group.
   2. The packaged game must be no larger than 12" x 18" x 3".
      a. The game must be designed, engineered, created, and packaged solely by the team.
      b. The materials used in packaging and manufacturing the game are to be determined by the team.

3. Game instructions

   a. must be clear, understandable, and age-appropriate

   b. must be included in both the packaged game and in the documentation portfolio

   c. must explain the rules in explicit detail

   d. The team must determine which format best presents the game's instructions.

4. The game must be able to be set up within five (5) minutes of opening the package.

5. Once evaluation of the game is complete, a player (judge) must be able to repackage it within five (5) minutes.

6. The game must include original work of the team. Work that is not created by the team must have proper documentation, showing copyright permissions and/or license for usage in the game segment.

C. Documentation/Portfolio:

1. Documentation materials (comprising "a portfolio") are required and must be submitted as a single, multi-page PDF document on a USB flash drive and submitted with the board game.

2. The USB flash drive and its contents become the property of TSA for communication purposes only. Publishing rights remain with the authors and illustrators.

3. No identifying information other than a team identification number is to appear anywhere on the portfolio and board game.

4. The portfolio must include the following pages in a single, multi-page PDF document in this order:

   a. LEAP Report

   b. Title page with the name of the board game, the event title, the conference city and state, the year; and the team identification number; one (1) page

   c. Table of Contents; one (1 page)

   d. Overview of the game; one (1 page)

   e. Intended audience (age range and number of players) and a game description/reasoning behind the choice of audience; one (1 page)

   f. Game Instructions (pages as needed)

   g. Description of the processes used to create the game and components; two (2 pages)

   h. Engineered drawings of parts/game/packaging (pages as needed)

   i. Cost summary for created game; one (1)

   j. A completed Plan of Work Log (see Forms Appendix); pages as needed

   k. A completed Student Copyright Checklist (see Forms Appendix)

   l. References/research sources; one (1) page

SEMIFINAL ROUND

A. Two to three (2-3) members of each semifinalist team will report to the event area at the time and place stated in the conference program.

B. Team members will demonstrate set up and playing of the game, and explain the game's features.

C. Team members will participate in an event-specific interview following the game's demonstration.

D. The LEAP Report

1. Teams document the leadership skills the team has developed and demonstrated while working on this event, and on a non-competitive event leadership experience.

2. Teams will respond to questions about the content of the LEAP Report as part of the LEAP interview, which will be conducted as part of semifinalist presentation/interview.

3. Specific LEAP Report regulations can be found in the LEAP Program section of this guide and on the TSA website.

EVALUATION

PRELIMINARY ROUND

1. The portfolio
2. The game and packaging aesthetics, quality of the game components, ease of setup/take down, quality of the packaging, and ease of understanding the rules

SEMIFINAL ROUND

1. The demonstration of the rules, game features, and playing of the game
2. The event-specific interview
3. The content and quality of the LEAP Report and interview

Refer to the official rating form for more information.

STEM INTEGRATION

This event has connections to the STEM areas of Science, Technology, Engineering, and Mathematics.

CAREERS RELATED TO THIS EVENT

This competition has connections to one or more of the career areas:

- Product/packaging design
- Board game designer
- Electronic game designer
- Electronic game technician
- Technical writer

BOARD GAME DESIGN

2019 & 2020 OFFICIAL RATING FORM

HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

☐ USB Portfolio is present
☐ Packaged board game is present
☐ Completed LEAP Report is present
☐ ENTRY NOT EVALUATED

DOCUMENTATION (70 points)				Record scores in the column spaces below.
CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Portfolio components (X1)	Portfolio is unorganized and/or missing three or more components.	Portfolio is organized adequately, with most, if not all, components present.	No components are missing in the portfolio, and content and organization are clearly evident.	
Overview of the game (X1)	The overview and purpose of the game are unclear.	The overview and purpose of the game are generally clear.	The overview clearly explains the purpose of the game and how the game is played.	
Intended Audience (X1)	The intended audience and reasoning behind the game are not clear and/or are poorly supported.	The intended audience and reasoning behind the game are clear and generally supported.	The intended audience is clearly expressed and reasoning behind game play is well supported.	
Game Instructions (X1)	The instructions for the game are not clear for the intended age range.	The instructions for the game are generally clear for the intended age range.	The instructions for the game are clearly understandable for the age range intended.	
Description of Processes (X1)	The processes used to create the game are not clearly described and/or are missing four (4) or more aspects of the creation of the game.	The description for the creation of the game and the aspects of the game creation are generally clear.	The processes used to create the game are clearly described and explain all aspects of the game creation.	
Engineering Drawings (X1)	Four (4) or more engineered drawings for all parts, game boards, and packaging are missing and/or are of poor quality.	One to three (1-3) engineered drawings for all parts, game boards, and packaging are missing or are of adequate quality.	Engineered drawings for all parts, game boards, and packaging are present and are of excellent quality.	
Cost Summary (X1)	Cost breakdown for the game is missing or two (2) or more of the following categories are incomplete: quantity of materials used, cost of materials, and/or total cost of the project.	Cost breakdown for the game is present and generally clear with minor information missing for the following categories: quantity of materials used, cost of materials, and/or total cost of the project.	Complete cost breakdown for the game, including the quantity of the materials used, cost of the materials, and total cost of the project are present, complete, and clearly identified.	
		DOCUMENTATION SUBTOTAL (70 points)		

PACKAGING (30 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	Record scores in the column spaces below.
	1-4 points	5-8 points	9-10 points	
Appearance (X1)	Three (3) or more elements of the packaging look unfinished, are not aesthetically appealing, and are not retail ready.	One to two (1-2) elements of the packaging look unfinished, are not aesthetically appealing, and are not retail ready.	Packaging appearance is retail ready and aesthetically pleasing.	
Functionality/ Durability (X1)	Packaging is missing three (3) or more necessary components for game play, and/or one to five (1-5) necessary parts are not reusable or sturdy.	Packaging is missing one to two (1-2) necessary components for game play, and/or one to two (1-2) necessary parts are not reusable or sturdy.	Packaging is reusable and meets all needs for the game. Construction of the packaging is complete and sturdy.	
Incorporation of Rules (X1)	Rules of the game are not integrated as part of the packaging, and/or the rules are lacking in durability and quality.	Rules of the game are not fully integrated as part of the packaging design; rules are adequate in durability and quality.	Rules are an integrated part of the packaging and are of exceptional durability and quality.	
PACKAGING SUBTOTAL (30 points)				

BOARD GAME (30 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	Record scores in the column spaces below.
	1-4 points	5-8 points	9-10 points	
Appearance (X1)	Three (3) or more elements of the game look unfinished; game is not aesthetically appealing or retail ready	One to two (1-2) elements of the game look unfinished; game is adequately aesthetically appealing and retail ready.	Game looks finished, is aesthetically appealing, and is retail ready.	
Functionality/ Durability (X1)	Game is missing three (3) or more necessary components for game play, and/or one to five (1-5) necessary parts are not reusable or sturdy.	Game is missing one to two (1-2) necessary components for game play, and/or one to two (1-2) necessary parts are not reusable or sturdy.	Game has all necessary components for game play, and game pieces are all reusable and sturdy.	
Game Set up (X1)	Total game setup time is over 11 minutes, and/or game setup and/or take down is longer than 6:01 minutes.	Total game setup time is 10-11 minutes, and/or game setup and/or take down is five to six (5-6) minutes.	Total game setup and total game take down are under five (5) minutes.	
BOARD GAME SUBTOTAL (30 points)				

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right. Indicate the rule violated: _____	

PRELIMINARY SUBTOTAL (130 points)	

BOARD GAME DESIGN

SEMIFINAL DEMONSTRATION/INTERVIEW (68 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Theme of game (X1)	The theme of the game is not addressed and/or was unclear.	The theme of the game is adequately addressed.	The theme of the game is clearly expressed and easily interpreted.	
Age of audience (X1)	The intended age range of the game is not addressed and the description of the audience was not appropriate.	The intended age range of the game is addressed but one to three (1-3) elements of the description did not match the game.	The age range of the intended audience is clearly addressed and the description of the audience matched the game.	
Presentation of Rules (X1)	Rules are confusing and difficult for the audience to understand; more than five (5) questions clarifying the rules are asked in order to start the game play.	Rules are somewhat clear for the audience to understand; game play requires less than four (4) questions to clarify the rules.	Rule are clearly explained and game play is easily started after presentation of rules, with no clarifying questions needed.	
Demonstration of game play (X1)	Game play is confusing and unorganized. How players win or lose is not addressed.	Game play is somewhat confusing but organized. How players win or lose is somewhat addressed.	Various scenarios of the game are addressed and explained. How players win or lose is clearly explained.	
Engagement and participation (X1)	The team must be prompted to provide answers and information; a clear team leader dominates the interview, while other team members are unresponsive.	Team members generally answer questions with responses of acceptable length and depth; most team members participate adequately in the interview and engage the judges when answering questions.	All team members contribute in the interview; while there may be a clear team leader, all members provide appropriate substantive material to the conversation; the team engages the judges in the interview, which becomes less of a question and answer session and more of a conversation about the topic and solution.	
LEAP Report/ Interview (18 points; 10% of total event points)	The team's efforts are not clearly communicated, lack detail, and/ or are unconvincing; few, if any, attempts are made to identify and/or incorporate the SLC Practices.	The team's efforts are adequately communicated, include some detail, are clear, and/or are generally convincing; identification and/or incorporation of the SLC Practices is adequate.	The team's efforts are clearly communicated, fully-detailed, and convincing; identification and/ or incorporation of the SLC Practices is excellent.	
SEMIFINAL DEMONSTRATION/INTERVIEW SUBTOTAL (68 points)				

Rules violations (a deduction of 20% of the total possible points in the semifinalist sections above) must be initialed by the evaluator, coordinator, and manager of the event. Record the deduction in the space to the right. Indicate the rule violated: _____	

SEMIFINAL SUBTOTAL (68 points)	

To arrive at the TOTAL score, add the PRELIMINARY SUBTOTAL and the SEMIFINAL SUBTOTAL. **TOTAL (198 points)**	

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____   Signature: _____

BOARD GAME DESIGN
EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Judges:

    1. Preliminary round, two (2) or more

    2. Semifinal Round, two (2) or more

C. Assistants for check-in, one (1)

MATERIALS

A. Coordinator's packet, containing:

    1. Event guidelines, one (1) copy for the coordinator and each judge

    2. TSA Event Coordinator Report

    3. List of judges/assistants

    4. Pre-populated flash drives for judges

    5. Stick-on labels for identifying entries

    6. Results envelope with coordinator forms

    7. Envelopes for LEAP Reports

    8. LEAP Interview Judging Protocol

B. Stopwatch

C. Display tables for entries (minimum width 18")

D. Tables and chairs for event coordinator, semifinalist judges, and participants

RESPONSIBILITIES

AT THE CONFERENCE

1. Attend the mandatory coordinator's meeting at the designated time and location.

2. Report to the CRC room and obtain the coordinator's packet; check the contents.

3. Review the event guidelines and check to see that enough judges and assistants have been scheduled.

4. Inspect the area in which the portfolios are being placed for appropriate set-up including sufficient number and size of tables.

5. At least one (1) hour before the event is scheduled to begin, meet with judges/assistants to review time limits, procedures, and regulations. If questions arise that cannot be answered, speak to the event manager before the event begins.

EVENT CHECK-IN

1. Check in the entries at the time stated in the conference program.

2. Anyone reporting who is not on the entry list may check in only after official notification is received from the CRC.

3. Late entries are considered on a case-by-case basis and only when the delay is caused by events beyond participant control.

4. Each entry must include the participants' identification number in the upper right-hand corner of the entry.

5. Position the entries for evaluation and viewing.

6. Secure the entries in the designated area.

PRELIMINARY ROUND

1. Judges independently assess the entries.

2. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

    a. To deduct twenty percent (20%) of the total possible points in this round or

    b. To disqualify the entry

    c. The event coordinator, judges and CRC manager must all initial either of these actions on the rating form.

3. Judges determine the twelve (12) semifinalists.

4. Review and submit the semifinalist results and all related items/forms in the results envelope to the CRC room for posting.

5. Create semifinalist sign-up sheet for each team's final presentation.

SEMIFINAL ROUND

1. Inspect the area in which the demonstrations/ interviews are to take place. Ensure that there is a table and seating for the interviews.

2. At least one (1) hour before the event is to begin, meet with semifinalist judges to review time limits, procedures, and regulations. If questions arise that cannot be answered, speak to the event manager before the event begins.

3. Conduct semifinalist demonstrations/interviews using the same official rating form used for the preliminary round.

4. Judges should be sure to ask event-specific interview questions. The LEAP interview will be conducted as part of this interview and will last a maximum of five (5) additional minutes.

5. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

   a. To deduct twenty percent (20%) of the total possible points in this round or

   b. To disqualify the entry

   c. The event coordinator, judges and CRC manager must all initial either of these actions on the rating form.

6. Judges determine the ten (10) finalists and discuss and break any ties. (Determine the procedure for breaking ties before the onsite competition begins.)

7. Review and submit the finalist results and all related forms in the results envelope to the CRC room.

8. If necessary, manage security and the removal of materials from the event area.

CHAPTER TEAM

OVERVIEW

Teams take a written parliamentary procedures test in order to qualify for the semifinals, in which they complete an opening ceremony, items of business, parliamentary actions, and a closing ceremony within a specified time period.

ELIGIBILITY

1. One (1) team of six (6) members per chapter may participate.
2. Team members do not have to be elected officers of the local chapter.
3. Team members who take the written test and advance to the semifinalist portion of the event must be the same six (6) members.

TIME LIMITS

PRELIMINARY ROUND: All teams are allowed one (1) hour to complete a written parliamentary procedures test.

SEMIFINAL ROUND

1. Semifinalist teams have fifteen (15) minutes with no penalty and up to seventeen (17) minutes with penalty (see below) to complete required parliamentary actions, items of business, set-up time, and a presentation.

   a. The time begins when the team is handed the prompt; the time ends when the gavel is rapped to close the meeting, or at seventeen (17) minutes.

   b. At that point the LEAP interview will be conducted for a maximum of five (5) minutes.

   c. The secretary will then have five (5) additional minutes to complete the minutes of the meeting.

      i. After the five (5) minutes is over, the secretary must turn in their team's minutes, regardless if they are completed.

      ii. No team may go beyond seventeen (17) minutes.

iii. Teams are penalized five (5) points per thirty (30) seconds by each judge for going over the time allotted for the oral performance, based on the following scale:

Time over fifteen (15) minutes	Penalty
15:01 to 15:30	five (5) points per evaluator
15:31 to 16:00	ten (10) points per evaluator
16:01 to 16:30	fifteen (15) points per evaluator
16:31 to 17:00	twenty (20) points per evaluator

2. The LEAP interview will last a maximum of five (5) additional minutes and will be conducted immediately following the semifinalist performance and prior to the time when the secretary completes the minutes of the meeting.

LEAP

A team LEAP Report is required for this event and must be submitted at event check-in (see LEAP Program).

ATTIRE

TSA competition attire, with additional requirements that apply for the Chapter Team event, is required. Refer to the National TSA Dress Code section of this guide or the TSA website.

PROCEDURE

PRELIMINARY ROUND

1. Teams report for the written test at the time and place stated in the conference program.
2. Teams must submit a LEAP Report prior to taking the test.

3. A written parliamentary procedures test is administered at the same time to all team members.

    a. Each individual on the team will take the written test. All six (6) members must be present to take the test.

    b. All six (6) of the individual written test scores will be averaged together to determine the team's score.

4. Twelve (12) teams with the highest averaged scores are selected as semifinalists for the oral presentation.

5. A semifinalist list in random order is posted.

SEMIFINAL ROUND

1. Semifinalist teams report for oral presentations at the time and place stated in the conference program.

2. Each team follows the procedure for opening and closing a local chapter meeting.

3. Each team follows an order of business to dispose of five (5) given parliamentary actions provided by the event coordinator and then closes the meeting according to the prescribed procedure.

4. There is a possibility for three (3) additional actions to be demonstrated for bonus points. If the actions are demonstrated correctly, then bonus points will be awarded.

5. The LEAP interview will be conducted immediately following the semifinalist performance.

6. The top ten (10) finalists will be announced at the awards ceremony.

REGULATIONS

PRELIMINARY ROUND

A. Teams consist of a president, vice president, secretary, treasurer, reporter, and sergeant-at-arms.

B. Team members take the written test individually. These same six (6) team members will compete in the semifinalist portion of the event, should the team qualify.

SEMIFINAL ROUND

A. The semifinalist portion of the event includes the call to order, pledge to the flag, roll call, order of business, and closing ceremony.

1. Written materials, other than those provided by national TSA, may not be taken to the event room.

2. A set of secretary's minutes, a treasurer's report, a copy of the TSA creed, and a list of five (5) parliamentary actions are provided by the event coordinator when the team members enter the performance room.

3. The event coordinator also will supply each team with paper, six (6) pens, a calculator, and six (6) 3" x 5" notecards.

4. A timepiece may be used by the team, if desired.

B. Meeting Setup

1. Officer symbols and a gavel are placed on a long table with the United States flag standing to the right of the president's rostrum and the host state flag to the left.

2. The president's rostrum should be centered between the two (2) flags.

3. The symbols of the officers should be placed in front of the respective officers.

4. The host state banners are optional and do not add to or subtract from a team's scores.

C. For the parliamentary actions, the Sergeant-at-Arms will receive and distribute six (6) index cards, each with the name of an office on one side and the five (5) actions of parliamentary procedure on the other side, with each office responsible for the required action indicated on the card.

1. Official timing begins as soon as the parliamentary actions are provided and will stop at the team's final gavel to end the meeting.

2. Five (5) points will be deducted for every thirty (30)-second interval over the allotted time (see TIME LIMITS).

3. Concerning the reading of the TSA creed by the secretary during the closing ceremony, a chapter has the option to recite the creed using one (1) or more of its team members.

D. Bonus points will be awarded for additional motions and parliamentary actions by the officers, other than the president.

E. At the conclusion of the oral presentation, and after the LEAP interview, each team secretary has five (5) minutes to write a copy of chapter minutes that will be submitted to a judge. The coordinator will begin timing the five (5) minutes when the secretary is seated at the area designated for the writing of the minutes.

F. All materials given to team members, as well as the chapter minutes and a completed treasurer's report, must be handed to the judges before the team leaves the room.

   1. No reference should be made to a team's school, chapter name, city, or state.

   2. The state name on a TSA patch is acceptable.

G. Any semifinalist team that fails to appear at the designated time is placed at the end of the list and allowed to participate at the discretion of the judges and event coordinator if time permits.

H. The LEAP Report

   1. Teams document the leadership skills the team has developed and demonstrated while working on this event, and on a non-competitive event leadership experience.

   2. Teams will respond to questions about the content of the LEAP Report as part of the LEAP interview, which will be conducted as part of semifinalist presentation/interview.

   3. Specific LEAP Report regulations can be found in the LEAP Program section of this guide and on the TSA website.

EVALUATION

PRELIMINARY ROUND

1. Scores on a test of fifty (50) questions determine the semifinalist teams for the oral presentation.

   a. Each team's average written test score is used to determine the twelve (12) semifinalist teams.

   b. A team's average test score is included in the final results.

SEMIFINAL ROUND

1. The demonstration of a chapter business meeting

2. The content and quality of the LEAP Report and interview

Refer to the official rating form for more information.

NOTE

There are a number of ways to learn about parliamentary procedure. The standard reference is Robert's Rules of Order, Newly Revised. Information about parliamentary procedure websites may be found online at www.rulesonline.com/parliamentary_procedure_websites.htm.

For writing proper minutes, also refer to *Robert's Rules of Order, Newly Revised*.

STEM INTEGRATION

This event aligns with the STEM educational standards of Science, Technology, and Engineering.

CAREERS RELATED TO THIS EVENT

Careers will vary, based on the student's area of interest.

CHAPTER TEAM OFFICIAL MINUTES

Team ID number_____

Date_____

Location of conference_____

Use the back of this page, if necessary.

Secretary's signature _____ **Date** _____

CHAPTER TEAM TREASURER'S REPORT

Team ID number_____

Date_____

Location of conference_____

Balance as of _____ $_____

Receipts:

Total receipts $_____

Expenditures:

Total expenses $_____

Balance as of _____ , 2018 $_____

Submitted by _____

CHAPTER OPENING AND CLOSING CEREMONIES

OPENING CEREMONY

At the prescribed time for meetings, the president assumes his/her position behind the rostrum in the front center of the room. Other officers are seated to the left and right of the president. They are seated in the following order from stage left to right: vice president, treasurer, secretary, president, reporter, and sergeant-at-arms.

<div align="center">

HOST STATE BANNER (OPTIONAL)

U.S. FLAG SGT.-AT-ARMS REPORTER PRESIDENT SECRETARY TREASURER VICE PRES. STATE FLAG

(OFFICERS FACING AUDIENCE)

AUDIENCE

</div>

President:	(raps gavel twice) Will the meeting please come to order. Mr./Ms. Sergeant-at-Arms, are all the officers in their places?
Sergeant-at-Arms:	They are, Mr./Ms. President.
President:	(raps gavel three [3] times for assembly to rise) Mr./Ms. Sergeant-at-Arms, please lead the assembly in the Pledge to the Flag of the United States of America.
Sergeant-at-Arms:	(leads Pledge to the Flag)
President:	(raps once and assembly is seated) Mr./Ms. Secretary, will you please call the roll.
Secretary:	Mr./Ms. Sergeant-at-Arms.
Sergeant-at-Arms:	Present. The symbol of my office is the "hearty handshake" (officer points to symbol), and it is my responsibility to see that the assembly is comfortable and properly welcomed. It is also my duty to serve as doorkeeper for this organization.
Secretary:	Mr./Ms. Reporter.
Reporter:	Present. The symbol of my office is the beacon tower (officer points to symbol), and it is my duty to see that our school, community, and national association have a complete report of our organization's activities.
Secretary:	Mr./Ms. President.
President:	Present. The symbol of my office is the gavel (officer points to symbol). The duties vested in me by my office are to preside at all regular and special meetings of this organization and to promote cooperation in carrying out the activities and work of our organization. Mr./Ms. Secretary.
Secretary:	Present. The symbol of my office is the pen (officer points to symbol), and it is my responsibility to see that accurate and proper records are kept of all business and correspondence of this association. Mr./Ms. Treasurer.
Treasurer:	Present. The symbol of my office is a balanced budget (officer points to symbol), and it is the duty of my office to keep accurate records of all funds and see that our financial obligations are met promptly.

Secretary: Mr./Ms. Vice President.

Vice President: Present. The symbol of my office is a star (officer points to symbol), and it is the duty of my office to see that we always have a strong membership, a good work program, and are alert to the welfare of our chapter.

Secretary: Mr./Ms. President, all officers are present and in their place.

President: Mr./Ms. Sergeant-at-Arms, do we have guests present?

Sergeant-at-Arms: (If so, introduce guest[s]. If not, state the following:) No, Mr./Ms. President.

President: Mr./Ms. Secretary, we are ready to transact our business.

Teams dispose of the assigned business following the suggested order of business.

CLOSING CEREMONY

President: (raps three [3] times; assembly rises) Mr./Ms. Secretary, will you please (read) or (lead us in) the TSA Creed.

Secretary: (recites the TSA Creed) (When presented at state and national competitions, the creed may be presented using a more original method.)

President: Will the assembly repeat the TSA Motto after me. (motto is spoken) Does anyone know of any reason why this assembly should not adjourn? If not, I will entertain a motion to adjourn. (following motion to adjourn, a second, and a vote) I now declare this meeting adjourned until a special meeting is called or until our next regular meeting. (raps once with gavel)

SUGGESTED ORDER OF BUSINESS FOR CHAPTER MEETINGS

1. The president calls the meeting to order with opening ceremonies.
2. Roll call is taken and a quorum is established.
3. The secretary reads the minutes of the previous meeting. Any necessary corrections and/or additions are made and the minutes are approved as read or corrected.
4. The treasurer's report is received as read and placed on file, subject for audit.
5. The chairperson calls for committee and officer reports, as necessary. If a committee has no report, it should so state.
6. Unfinished business is addressed.
7. New business is addressed.
8. The program, if any, is held at this time. The chairperson presides with the assistance of the program chairperson or the committee chairperson.
9. Announcements.
10. Adjournment with closing ceremonies.

CHAPTER TEAM
2019 & 2020 OFFICIAL RATING FORM
HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

☐ Completed LEAP Report is present.
☐ ENTRY NOT EVALUATED

TEAM WRITTEN TEST (10 points)

Record scores in the column spaces below.

Record the scores of the six (6) team members in the boxes below. Calculate the average of their scores. Divide the average by five (5) for the score that the team will receive out of ten (10) points. Record the score in the column space to the right.

#1	#2	#3	#4	#5	#6

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

TEAM WRITTEN TEST SUBTOTAL (10 points)

BUSINESS MEETING DEMONSTRATION (190 points)

Record scores in the column spaces below.

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
PREPARATION FOR MEETING (30 points)				
Official attire/poise (X2)	Appearance is untidy; grooming is lacking; clothing is not consistent in coloration and visual appearance; shoes are the wrong color; poise and confidence are missing.	Overall appearance is neat and consistent; grooming is good, and professional appearance is adequate.	Overall appearance is cohesive, polished, and businesslike.	
Placement of flags and officer symbols; officer seating (X1)	Flags are not placed in the correct order; and/or officer symbols are not in the correct order; and/or are not aligned properly on the table; and/or not all officers are seated in the proper arrangement, resulting in a sloppy and haphazard appearance.	Placements and seating are generally businesslike and professional, with some inconsistencies (e.g., flags are in the correct order but are not aligned with other aspects of the officer gear; and/or several of the officer symbols are in proper order, but some are misaligned; and/or officers are seated properly, but some chairs are misaligned, etc.).	Flags are completely aligned and in proper order and placement; officer gear is placed in the correct order and in proper alignment on the table; the seating arrangement is precise, businesslike, and professional.	

BUSINESS MEETING DEMONSTRATION (190 points) – continued

KNOWLEDGE OF TSA (20 points)

Opening ceremony (X1)	Many items of sequence and order are incorrect and officers make several mistakes.	Officers make few, if any, sequence and order mistakes, resulting in a fairly smooth opening ceremony.	The opening is smooth and efficient; the opening ceremony progresses as it should.	
Closing ceremony (X1)	Officers make several mistakes; creed recitation is sloppy, and the overall effort is unpolished.	Appropriate procedures are followed, with some mistakes made (e.g., creed recitation).	The closing is outstanding, with no mistakes; the presentation is highly polished.	

KNOWLEDGE OF PARLIAMENTARY PROCEDURE (140 points)

Voting procedures (X1)	Several obvious mistakes are made in voting procedures.	Few mistakes are made in voting procedures.	All voting procedures are correct, smooth, and efficient.	
Debate (exclude president) (X3)	Only a few officers participate effectively in the debate, which is loosely presented.	Most officers participate in the debate process and are somewhat convincing.	All officers participate in and present a highly cohesive debate.	
Parliamentary actions (X5)	Only one of the required actions is completed correctly.	At least three of the actions are completed correctly, with adequate effort.	All five actions are completed correctly, with notable and inspiring effort.	
Communication (X2)	Communication is unclear; some mumbling occurs and/or voices are too loud or too soft; and/or problems occur with verbal expression (e.g., grammar, sentence structure).	Communication is generally clear, with appropriate volume of voices and only minor problems with articulation or verbal expression.	Communication is clear, concise, and easy to understand; voices are well modulated, and speakers are articulate.	
Treasurer's report (X1)	The report is incorrect or not complete; math and spelling errors are evident.	The report generally is correct and complete, with few math and/or spelling errors.	The report is correct and complete, with no math or spelling errors.	
Chapter minutes (X2)	The format of the minutes is incorrect or not complete; grammar and spelling errors are evident.	The format of the minutes is generally correct and complete, with few grammar and/or spelling errors.	The minutes are formatted correctly, are complete, and have no grammar or spelling errors.	
		BUSINESS MEETING DEMONSTRATION SUBTOTAL (190 points)		

BONUS

For additional motions and parliamentary actions (by officers other than the president) (X2)	One (1) additional action is completed correctly.	Two (2) additional actions are completed correctly.	Three (3) additional actions are completed correctly.	

TIME DEDUCTIONS (NO TEAM MAY GO BEYOND 17 MINUTES)

A five-(5) point deduction will be incurred for every thirty (30)-second interval over the allotted time. Multiply the number of intervals by five (5) and record the total deduction in the column to the right.

# of intervals X 5 = _____ (total deduction)

Record scores in the column spaces below.

SEMIFINAL INTERVIEW (22 points)				
CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
LEAP Report/ Interview (10% of total event points)	The team's efforts are not clearly communicated, lack detail, and/ or are unconvincing; few, if any, attempts are made to identify and/ or incorporate SLC Practices and Behaviors.	The team's efforts are adequately communicated, include some detail, are clear, and/or are generally convincing; identification and/or incorporation of the SLC Practices and Behaviors is adequate.	The team's efforts are clearly communicated, fully-detailed, and convincing; identification and/ or incorporation of the SLC Practices and Behaviors is excellent.	
			SEMIFINAL INTERVIEW SUBTOTAL (22 points)	

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right. Indicate the rule violated: _____	

SEMIFINAL SUBTOTAL (22 points)	

To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary. **TOTAL (242 points)**	

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____   Signature: _____

CHAPTER TEAM
EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Judges, two (2) or more

C. Assistants, two (2) or more for the written test and two (2) or more for the oral presentations

D. Timekeeper

MATERIALS

A. Coordinator's packet, containing:

1. Event guidelines, one (1) copy for the coordinator and each judge

2. TSA Event Coordinator Report

3. List of judges/assistants

4. Copies of parliamentary procedures written test

5. Opening and closing ceremonies script

6. List of parliamentary actions; one (1) copy for each semifinalist team and copies for the judges

7. Copies of secretary's minutes

8. Copies of treasurer's report template

9. Copies of the Chapter Team Official Minutes template

10. Paper, pens, one (1) calculator, and six (6) 3" x 5" note cards, per team

11. Results envelope with coordinator forms

12. Envelopes for LEAP Reports

13. LEAP Interview Judging Protocol

B. Officer's symbols and gavel

C. United States flag

D. State flag (optional)

E. Stopwatches

F. Table rostrum, if available

G. One (1) long table or two (2) tables, and six (6) chairs for team members

H. One (1) table and three (3) chairs for judges

RESPONSIBILITIES

AT THE CONFERENCE

1. Attend the mandatory coordinator's meeting at the designated time and location.

2. Report to the CRC room and obtain the coordinator's packet; check the contents.

3. Review the event guidelines and check to see that enough judges/assistants have been scheduled.

4. Inspect the area or room in which the event is to be held for appropriate set-up, including room size, chairs, tables, outlets, etc. Notify the event manager of any potential problems.

5. At least one (1) hour before the event is scheduled to begin, meet with judges/assistants to review time limits, procedures, and regulations. If questions arise that cannot be answered, speak to the event manager before the event begins.

PRELIMINARY ROUND

1. Begin the event at the scheduled time by closing the doors and checking the entry list.

2. All participants and judges should be in the room at this time.

3. Anyone reporting who is not on the coordinator's report may check in only after official notification is received from the CRC.

4. Late entries are considered on a case-by-case basis and only when the delay is caused by events beyond participant control.

5. Administer the written test.

6. Determine team scores.

7. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

   a. To deduct twenty percent (20%) of the total possible points in this round or

   b. To disqualify the entry

   c. The event coordinator, judges, and CRC manager must all initial either of these actions on the rating form.

8. Review and submit semifinalist results and all related items/forms in the results envelope to the CRC room.

SEMIFINAL ROUND

1. Check in semifinalists at the time stated in the conference program. Inform the teams of their order of performance and review the procedure to be followed.

2. When the team enters the oral performance room, the materials (secretary's minutes, copy of Chapter Team Official Minutes form for secretary's minutes, a treasurer's report, a copy of the TSA creed, and a list of parliamentary actions) are provided to the president. At this point, begin the allotted time.

3. The event coordinator or an assistant is responsible for introducing each team by entry number only when the previous team has finished its presentation.

4. Teams may take chapter paraphernalia (officer symbols and gavel only) into the performance room if desired, or they may use what is provided by the event coordinator.

5. Conduct the LEAP interview.

    a. The LEAP interview will be conducted immediately following the semifinalist performance and will last a maximum of five (5) additional minutes.

    b. After the LEAP interview the secretary will have five (5) additional minutes to complete the minutes from the meeting.

6. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

    a. To deduct twenty percent (20%) of the total possible points in this round or

    b. To disqualify the entry

    c. The event coordinator, judges, and CRC manager must all initial either of these actions on the rating form.

7. Judges determine the ten (10) finalists. Any ties should be broken by using the teams' written test scores.

8. Complete and submit the finalist results and all related forms in the results envelope to the CRC room.

9. If necessary, manage security and the removal of materials from the area.

CHILDREN'S STORIES

OVERVIEW

Participants create an illustrated children's story of high artistic, instructional, and social value. The narrative may be written in prose or poetry and take the form of a fable, adventure story, or other structure. The physical story book should be of high quality, designed to meet the year's given theme, which will be posted on the national TSA website under Competitions/Themes and Problems.

The story must have a Science, Technology, Engineering, and Mathematics (STEM) focus. There are many themes to consider. For example, from the sciences one could create a story about dinosaurs, the oceans or their extraordinary sea life, a single cell animal, or our solar system and beyond. From technology and engineering one could concentrate on the impacts of technology in our lives, or the environment, the building of ancient and contemporary monuments, or how something works. From mathematics one could write about numbers and shapes and the many mathematical designs found in nature and the industrial world.

ELIGIBILITY

Three (3) teams or three (3) individuals per state may participate.

TIME LIMITS

SEMIFINAL ROUND

1. Twelve (12) minutes per team are allowed to read the story and share the illustrations with judges.

2. An additional five (5) minutes is allotted to answer judges' questions.

3. Semifinalists will participate in a LEAP interview that will last a maximum of five (5) additional minutes and will be conducted immediately following the semifinalist reading/interview.

LEAP

An individual or team LEAP Report is required for this event and must be submitted at event check-in (see LEAP Program).

ATTIRE

TSA competition attire is required for this event.

PROCEDURE

PRE-CONFERENCE

1. In preparation for the event (and throughout the story development), participants research writing and illustrating children's books and literature, as well as the creation of storybooks similar to the annual design challenge (e.g., pop-ups, interactive books, etc.).

2. Participants develop a high-quality children's storybook with illustrations.

3. Participants "field test" their storybook and document outcomes and findings.

PRELIMINARY ROUND

1. Participants check in their storybooks, USB drive, and a LEAP Report at the time and place stated in the conference program.

    a. NOTE: A documentation portfolio and storybook must be submitted together in order for the entry to be judged.

    b. No more than two (2) team members drop off the team's entry.

2. Storybooks and portfolios are reviewed by judges. Neither students nor advisors are present at this time.

3. A list of twelve (12) semifinalist teams (in random order) will be posted.

SEMIFINAL ROUND

1. Semifinalist teams report to the event area at the time and place stated in the conference program to sign-up for a reading and interview time. Teams must arrive on time for the semifinal round, according to their sign-up time.

2. Semifinalist teams will be represented by no more than two (2) members.

3. One (1) member will be the team's reader, who will read the story to the judges.

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4. Both members will participate in the interview process following the reading of the story, as well as, the LEAP interview.

5. No more than two (2) team members pick up the team's entry from the display area at the time and place stated in the conference program.

6. The top ten (10) finalists will be announced during the conference award ceremony.

REGULATIONS

PRELIMINARY ROUND

A. The team will submit a portfolio as a single, multi-page PDF document on a USB flash drive, along with a hard copy of the storybook, at the time and place designated in the conference program.

B. Storybook:

1. Participants design and create an entirely original storybook, complete with narrative and illustrations to meet the annual design challenge.

2. The physical storybook should be of high quality, designed to meet the age group for which it is intended.

3. Together with the storybook, the narrative and accompanying illustrations should result in an experience that delights, enlightens, and contributes to the wholesome development of a child.

4. The storybook and narrative with accompanying illustrations should take between five (5) and ten (10) minutes to read and view.

5. The maximum reading time is twelve (12) minutes. There is not a minimum length assigned to the reading time.

6. The physical storybook must not exceed 12" x 12" when closed.

7. There is no limit on the number of inside pages (may be one or two-sided).

8. The team must determine which format best presents the team's narrative and illustrations.

9. There must be a minimum of seven (7) illustrations that enhance the story and deepen the child's understanding and enjoyment of the reading experience.

   a. An illustration on the book's cover may count as one (1) of the required seven (7) illustrations. The team may use the cover illustration within the story as well.

   b. All illustrations MUST be original, freehand, and/or computer-generated drawings made by the team member(s).

   c. All computer-generated work MUST be developed from primitive lines and shapes and be the sole work of the team members(s).

   d. Physical or computer templates, previously existing drawings, characters, backgrounds, etc., are NOT PERMITTED.

10. Copyrighted material is NOT permitted.

11. The physical storybook must be the original work of the team members. The book must be designed, engineered, created, and bound together solely by the team.

12. Pre-manufactured parts/kits for special interactive features (e.g. lights/sounds, finger puppets, etc.) may be included in the construction of the book.

13. **If narrative or illustrations appear in the story and they are not authored by one of the team members, the team will be disqualified.**

14. Photographs used as illustrations are not permitted.

15. No professional binding is allowed.

16. Photographic verification of the book construction process must be included in the portfolio.

17. The story must be no more than fifteen hundred (1500) words.

   a. There will be a five (5)-point deduction for every one hundred (100) words over the fifteen hundred (1500) word limit.

   b. Stories containing two thousand (2000) or more words will be disqualified.

   c. There is no minimum number of words required.

C. Documentation/Portfolio:

1. Documentation materials (comprising "a portfolio") are required and must be submitted as a single, multi-page PDF document on a USB flash drive and submitted with the hard copy storybook.

2. The USB flash drive and its contents become the property of TSA for communication purposes only. Publishing rights remain with the authors and illustrators.

3. No identifying information other than a team/student identification number is to appear anywhere on the portfolio or storybook.

4. The portfolio must include the following pages in a single, multi-page PDF document in this order:

   a. LEAP Report

   b. Title page with the title of the story, the event title, the conference city and state, the year; and the team/individual chapter identification number; one (1) page

   c. Table of contents; pages as needed

   d. Purpose of story; one (1) page, to include:

      i. Story's intent

      ii. Summary of story line and theme

      iii. Intended audience (age, gender, demographics, and special disabilities, if any)

      iv. Word count—number of words comprising the story's narrative

   e. A summary indicating the academic, as well as ITEEA standards, used in the creation of the final project; one (1) page.

   f. Photographic verification of book construction and binding; pages as needed

   g. A Plan of Work log (see Forms Appendix) that describes the development of the narrative, illustrations, and physical storybook; pages as needed

      i. The Plan of Work log must include a summary of the storybook's assessment during a "field test" with a group of children within the age group specified in the current year's theme which is posted on the TSA website under Competitions\Themes and Problems.

      ii. A "field test" is a reading of the storybook to a group of children in the intended target age range, similar to the process outlined in the semifinal round.

      iii. A minimum of two (2) "field tests" must be conducted.

      iv. As part of evaluation, the storybook's "field tests" will be measured to ensure that the book will meet the physical demands of the age group for which it was intended, and assess the quality and impact of the story, illustrations, and the book overall.

      v. Participants must document each field test and record outcomes and findings.

      vi. Each field test must also be documented through photographs (recognizable individuals must sign a release and consent form, or have their faces obscured).

      vii. Each "field test" must be signed off on by the chapter advisor.

      viii. The Plan of Work Log must be signed off on by the chapter advisor.

   h. Research summary: A written summary of the research, writing strategies, problems encountered, and solutions developed in the writing and illustrating of the story; one (1) page

   i. Project summary: A written summary of the research regarding the creation of storybooks similar to the annual design challenge (e.g. paper folding, interactive features in books, etc.). The summary must include the process and challenges the team encountered and the solutions developed in overcoming them; one (1) page

   j. A list of tools, software (if any), and techniques used in the creation of the physical storybook and illustrations, not to exceed one (1) page

   k. References/research sources; one (1) page

SEMIFINAL ROUND

A. Two (2) members of each semifinalist team will report to the event area at the time and place stated in the conference program to sign up for a reading and interview time.

B. The team's reader will be given up to twelve (12) minutes to read the story to the judges.

C. The other team member must be prepared to discuss illustrations included in the story.

D. Both team members will participate in the interview process (lasting up to five [5] minutes) following the reading of the story.

E. The LEAP Report

1. Teams document the leadership skills they have developed and demonstrated while working on this event, and on a non-competitive event leadership experience.

2. Teams will respond to questions about the content of the LEAP Report as part of the LEAP interview, which will be conducted as part of the semifinalist presentation/interview.

3. Specific LEAP Report regulations can be found in the LEAP Program section of this guide and on the TSA website.

EVALUATION

PRELIMINARY ROUND

1. The portfolio
2. The story (narrative and illustrations)
3. The physical storybook

SEMIFINAL ROUND

1. The reading of the book and interview
2. The LEAP requirements and interview

Refer to the official rating form for more information.

STEM INTEGRATION

Depending upon the subject written about, this event may align to one or more STEM areas. Please refer to the STEM Integration section of this guide for more information.

CAREERS RELATED TO THIS EVENT

- Writer
- Illustrator
- Educator
- Editor
- Publisher
- Graphic artist

CHILDREN'S STORIES
2019 & 2020 OFFICIAL RATING FORM
HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

☐ Portfolio (a single [multi-page] document in PDF format) is present on a flash drive.
☐ Storybook is present.
☐ The story is no more than 2,000 words (verified in documentation).
☐ Completed LEAP Report is present.
☐ ENTRY NOT EVALUATED

DOCUMENTATION (90 points)				
CRITERIA	Minimal performance	Adequate performance	Exemplary performance	Record scores in the column spaces below.
	1-4 points	5-8 points	9-10 points	
Purpose of story (X1)	The story's intent, story-line, and theme are poorly explained, and/or the intended audience is not identified.	The story's intent, story-line, and theme are adequately explained; the target audience is identified.	The story's intent, storyline, and theme, are complete and well explained; the target audience is identified along with additional information, including age, demographics, gender, special abilities, etc.	
Word Count (X1)	Word count is not provided.	Word count is provided.	Word count is provided.	
Standards summary (X1)	A summary indicating the academic and ITEEA standards is not complete or is not included.	A summary indicating the academic and ITEEA standards is included.	A detailed summary of academic and ITEEA standards is included along with a description of how they are addressed through the project.	
Photographic verification of the book's construction (X2)	Photographic verification of book construction and binding is not provided or does not fully illustrate the process.	Photographic verification of book construction and binding is provided.	Photographic verification of book construction and binding is provided; photos are captioned and illustrate the entire process.	
Field test documentation and photographic verification (X2)	Photographic verification of field tests of the book are not included; there is little or no documentation regarding outcome of field tests; fewer than two field tests were conducted.	Photographic verification of field tests of the book are included; there is adequate information included regarding outcome of tests; two field tests were conducted.	Photographic verification of field tests of the book are included; multiple field tests are documented; photos are captioned; there is detailed information regarding the outcome of field tests; two or more field tests were conducted.	
Plan of Work log (X1)	The log is poorly organized and/or incomplete.	The log is adequately detailed and organized and contains all the required components, including a recording of the periodic readings to children.	The log is well documented and contains all the required components, with special attention given to periodic readings to children.	

DOCUMENTATION (90 points) – continued

Summary of Research (X1)	The summary of the research, design, and writing process is poorly done and/or is incomplete; there are few references listed and/or the references listed show little relevance to the books goals/objectives.	The summary of the research, design, and writing process is generally clear and complete; there are a sufficient number of references listed; the quality is good.	The summary of the research, design, and writing process is extremely well written, detailed, clear, and complete; there are many high quality references listed and they reflect research in writing and illustrating for children and child development.

DOCUMENTATION SUBTOTAL (90 points)

Record scores in the column spaces below.

STORYBOOK (100 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance
	1-4 points	5-8 points	9-10 points
Story narrative (X3)	The narrative is poorly written; there is little apparent purpose; it is lacking a coherent theme and storyline.	The narrative's purpose is generally clear, with a focused theme and storyline; the narrative has good pacing and development of characters and/or events.	The narrative is extremely well written, with a clear purpose; the storyline is fast paced and exciting; the details are rich and enchanting.
Illustrations (X3)	Artisanship of the illustrations reflects little technical skill and/or adds little value to the story's narrative, storyline, and/or theme.	Artisanship of most illustrations reflects good technical skill; illustrations add to the story's narrative, story-line, and theme.	Artisanship of illustrations is excellent, reflecting sophisticated technical skills; illustrations enhance the story's narrative, story-line, and theme, and they are of high aesthetic quality.
Impact (X4)	The story (narrative, with the illustrations) is lacking in purpose and coherence; it is not very interesting; the story lacks artistic, and/or instructional, and/or social value.	The story (narrative, with the illustrations) reflects a purpose and coherence throughout most of the work; the story reflects artistic, instructional, and social value; it is generally compelling and entertaining.	The story (narrative, with the illustrations) is beautifully told; it is compelling, entertaining, and purposeful, and it reflects high artistic, instructional, and social value.

STORYBOOK SUBTOTAL (100 points)

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

Story length violation: For stories exceeding 1,500 words, a deduction of 5 points will be incurred for every 100 words more than 1,500 up to 2,000. Stories of 2000 words or greater will be disqualified. Example: 1600 – 1699 words - 5 points; 1700 – 1799 words - 10 points; 1800 – 1899 words - 15 points; 1900 – 1999 words - 20 points; 2000 words and above, disqualified.

PRELIMINARY SUBTOTAL (190 points)

SEMIFINAL READING AND INTERVIEW (52 points)				Record scores in the column spaces below.
CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Story's reading (X1)	The story's reading is lackluster; the reader shows little enthusiasm; the delivery is halting and difficult to understand; the story is read too quickly to permit viewing of the illustrations.	The story's reading is generally good; the reading is clear and usually well paced and enthusiastic; sufficient time is given for reflection on the illustrations.	The story's reading is exemplary; the reading is clear, well paced, and enthusiastic; sufficient time is given to reflect upon and appreciate the illustrations.	
Interview (X2)	Responses to the judges' questions are incomplete and/or poorly articulated; responses show little understanding of the research or development of the project.	Most of the judges' questions are answered with articulation and show some understanding of most of the concepts addressed.	Responses to judges' questions are detailed and articulate; the answers reflect a high degree of understanding of the development of children's literature, including the artistic and technical concepts in both writing and illustrating for children.	
LEAP Report/ Interview (22 points; 10% of the total event points)	The individual's or team's efforts are not clearly communicated, lack detail, and/or are unconvincing; few, if any, attempts are made to identify and/or incorporate the SLC Practices and Behaviors.	The team's efforts are adequately communicated, include some detail, are clear, and/or are generally convincing; identification and/or incorporation of the SLC Practices and Behaviors is adequate.	The team's efforts are clearly communicated, fully-detailed, and convincing; identification and/ or incorporation of the SLC Practices and Behaviors is excellent.	
SEMIFINAL READING AND INTERVIEW SUBTOTAL (52 points)				

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

SEMIFINAL SUBTOTAL (52 points)	

To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary. **TOTAL (242 points)**	

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____   Signature: _____

CHILDREN'S STORIES
EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Judges:

1. Preliminary round, two (2) or more for portfolio judging

2. Semifinal round, two (2) or more for semifinalist readings/interviews

C. Assistants for check-in, two (2)

MATERIALS

A. Coordinator's packet, containing:

1. Event guidelines, one (1) copy for the coordinator and for each judge

2. TSA Event Coordinator Report

3. List of judges/assistants

4. Pre-populated flash drives for judges

5. Stick-on labels for identifying entries

6. Results envelope with coordinator forms

7. Envelopes for LEAP Reports

8. LEAP Interview Judging Protocol

B. Stopwatch

C. Display tables for entries (minimum width 18")

D. Table and chairs for judges and two (2) semifinalist team representatives

RESPONSIBILITIES

AT THE CONFERENCE

1. Attend the mandatory coordinator's meeting at the designated time and location.

2. Report to the CRC room and obtain the coordinator's packet; check the contents.

3. Review the event guidelines and check to see that enough judges and assistants have been scheduled.

4. Inspect the area in which the portfolios are being placed for appropriate set-up, including sufficient number and size of tables.

5. At least one (1) hour before the event is scheduled to begin, meet with judges/assistants to review time limits, procedures, and regulations. If questions arise that cannot be answered, speak to the event manager before the event begins.

EVENT CHECK-IN

1. Check in the entries at the time stated in the conference program.

2. Anyone reporting who is not on the entry list may check in only after official notification is received from the CRC.

3. Late entries are considered on a case-by-case basis and only when the delay is caused by events beyond participant control.

4. Each entry must include the participant's identification number in the upper right-hand corner of the entry.

5. Position the entries for evaluation and viewing.

6. Secure the entries in the designated area.

PRELIMINARY ROUND

1. Judges independently assess the entries.

2. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

   a. To deduct twenty percent (20%) of the total possible points in this round or

   b. To disqualify the entry

   c. The event coordinator, judges, and CRC manager must all initial either of these on the rating form.

3. Judges determine the twelve (12) semifinalists.

4. Review and submit the semifinalist results and all related items/forms in the results envelope to the CRC room for posting.

5. Create semifinalist sign-up sheet for each team's semifinal presentation.

SEMIFINAL ROUND

1. Inspect the area in which the readings/interviews are to take place. Ensure that there is a table and seating for the interviews.

2. At least one (1) hour before the event is to begin, meet with semifinalist judges to review time limits, procedures, and regulations. If questions arise that cannot be answered, speak to the event manager before the event begins.

3. Conduct semifinalist readings/interviews using the same official rating form used for the preliminary round. Judges should be sure to ask interview questions.

4. Conduct the LEAP interview. The LEAP interview will be conducted immediately following the semifinalist reading/interview and will last a maximum of five (5) additional minutes.

5. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

    a. To deduct twenty percent (20%) of the total possible points in this round or

    b. To disqualify the entry

    c. The event coordinator, judges, and CRC manager must all initial either of these on the rating form.

6. Judges determine the ten (10) finalists and discuss and break any ties. (Determine the procedure for breaking ties before the onsite competition begins.

7. Review and submit the finalist results and all related forms in the results envelope to the CRC room.

8. If necessary, manage security and the removal of materials from the event area.

CODING

OVERVIEW

Participants respond to an annual coding-related design challenge by developing a software program that will accurately address an onsite problem in a specified, limited amount of time. Specific elements to be used, such as the programming language, operating system, or application programming interface (API), will be released onsite. Every effort will be made to support a wide variety of programming languages, and the specific languages that will be allowed each year will be posted on the TSA website under Competitions/Themes and Problems. Completed solutions will be objectively measured to determine the best and most effective solution for the stated problem.

ELIGIBILITY

One (1) individual, or one (1) team of two (2) members per chapter may participate; one (1) entry per individual or team.

TIME LIMITS

1. The allotted time for the design and construction of the solution is two (2) hours.
2. Semifinalists will participate in a LEAP interview that will last a maximum of five (5) minutes.

LEAP

An individual or team LEAP Report is required for this event and must be submitted at event check-in (see LEAP Program).

ATTIRE

TSA competition attire is required for this event.

PROCEDURE

PRELIMINARY ROUND

1. Participants report to the event area at the time and place stated in the conference program. Participants must submit a LEAP Report prior to receiving the onsite problem.
2. The problem, evaluation criteria, and materials are distributed.

3. Participants design and present a solution to the problem.
4. Each solution is tested and presented to the judges as soon as possible after the coding phase is completed.
5. Judges independently assess the entries.
6. A list of twelve (12) semifinalists (in random order) will be posted.

SEMIFINAL ROUND

1. Semifinalists will report at the time and place stated in the conference program to sign up for, and participate in, a semifinalist LEAP interview.
2. The top ten (10) finalists will be announced at the awards ceremony.

REGULATIONS

PRELIMINARY ROUND

A. Participants in this event should concentrate their efforts prior to the competition on researching, understanding, and practicing all aspects of the coding process, software development, operating systems, programming languages, etc.

B. The specific languages permitted in the onsite competition will be posted each year on the TSA website under Competitions/Themes and Problems.

C. All work must be completed in the event area during the time specified for the event.

D. Individual participants, or each team, must bring
   1. one (1) laptop or other device (ex: Microsoft Surface Pro), capable of networking via Wi-Fi, and running solely on battery power for up to two (2) consecutive hours
   2. one (1) spare battery
   3. pencils and paper

E. External keyboards, monitors, and mice are not permitted.

F. Printed reference materials are not allowed.

G. Participants will NOT have access to the Internet during the event.

H. Participants do NOT have access to electrical power/outlets during the event.

I. Participants must have all software development tools needed for the competition downloaded and accessible on their laptop or other device.

J. Participants may only use the permissible programming language's standard library during the onsite competition. No third-party libraries may be used.

K. Participants will be presented with a series of coding problems that must be completed onsite at the conference.

L. All solutions must be tested, demonstrated, and presented by participants in front of the judges exclusively through electronic submission and evaluation.

SEMIFINAL ROUND

A. The LEAP Report

1. Participants document the leadership skills they have developed and demonstrated while working on this event, and on a non-competitive event leadership experience.

2. Participants will respond to questions about the content of the LEAP Report as part of the LEAP interview.

3. Specific LEAP Report regulations can be found in the LEAP Program section of this guide and on the TSA website.

EVALUATION

PRELIMINARY ROUND

1. The successful completion of the problems and the time in which it takes individuals or teams to complete all the challenges.

2. A finite measure will be defined in the problem and will be used to determine the best solution.

   a. Second-best attempts or other objective criteria are used to break ties when possible.

   b. Only as a last resort will subjective criteria, such as originality, be used to evaluate solutions.

SEMIFINAL ROUND

The content and quality of the LEAP Report and interview will be evaluated.

Refer to the official rating form for more information.

RESOURCES

The USA Computing Olympiad website and the ACM-ICPC International website are helpful resources for the Coding event. Additional resources that can be used to prepare for the event are listed below:

icpc.baylor.edu/compete/preparation

www.codechef.com

www.usaco.org/index.php?page=contests

blog.hackerearth.com/2013/09/competitive-programming-getting-started_11.html

www.quora.com/What-is-the-best-strategy-to-improve-my-skills-in-competitive-programming-in-2-3-months

STEM INTEGRATION

Depending upon the subject of the problem, this event may align to one or more STEM areas.

CAREERS RELATED TO THIS EVENT

• Computer software engineer
• Mathematician

CODING

2019 & 2020 OFFICIAL RATING FORM

HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

_____

☐ Battery powered computer/device is present.
☐ Completed LEAP Report is present.
☐ ENTRY NOT EVALUATED

SOLUTION DEVELOPMENT (30 points)

Record scores in the column spaces below.

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Code Quality (X2)	The logic of the code cannot be followed or is difficult to follow; no comments or very few comments are present in the code.	The logic of the code is sometimes easy to follow by reading through submitted source files; some comments are present, but comments are not always present where necessary	The logic of the code is easy to follow by reading through the submitted source files; sections where logic may be unavoidably difficult to follow are commented appropriately.	
Use of Standard Libraries (X1)	The solutions do not appropriately use standard libraries for the language in which they are written; solutions attempt to use or import third party libraries	The solutions attempt to use standard libraries available or sometimes use standard libraries available for the language in which they are written.	The solutions make appropriate use of the standard libraries available for the language in which they are written; no attempt is made to use or import a third-party library.	
SOLUTION DEVELOPMENT SUBTOTAL (30 points)				

TESTING OF SOLUTION (60 points)

Evaluation: A finite unit of measure, such as elapsed time, linear distance, and/or strength, etc., is used to determine ranking.

1st: 60 Points	2nd: 55 Points	3rd: 50 Points	4th: 45 Points	5th: 40 Points	6th: 35 Points	
7th: 30 Points	8th: 25 Points	9th: 20 Points	10th: 15 Points	11th: 10 Points	12th: 5 Points	
TESTING OF SOLUTION SUBTOTAL (60 points)						

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

PRELIMINARY SUBTOTAL (90 points)

SEMIFINAL LEAP INTERVIEW (9 points)				
CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
LEAP Report/ Interview (10% of the total event points)	The individual's or team's efforts are not clearly communicated, lack detail, and/or are unconvincing; few, if any, attempts are made to identify and/or incorporate the SLC Practices and Behaviors.	The individual's or team's efforts are adequately communicated, include some detail, are clear, and/or are generally convincing; identification and/or incorporation of the SLC Practices and Behaviors is adequate.	The individual's or team's efforts are clearly communicated, fully-detailed, and convincing; identification and/or incorporation of the SLC Practices and Behaviors is excellent.	
			SEMIFINAL LEAP INTERVIEW SUBTOTAL (9 points)	

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

SEMIFINAL SUBTOTAL (9 points)	

To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary.　　**TOTAL (99 points)**	

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____　　　Signature: _____

CODING EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Judges:

    a. Preliminary round, two (2) or more

    b. Semifinal round, two (2) or more

    c. Assistants for set-up, monitoring, and clean-up of onsite activity, two (2) or more

MATERIALS

A. Coordinator's packet, containing:

    1. Event guidelines, one (1) copy for the coordinator and each judge

    2. TSA Event Coordinator Report

    3. List of judges/assistants

    4. Pre-populated flash drives for judges

    5. Stick-on labels for entries, as needed

    6. Results envelope with coordinator forms

    7. Envelopes for LEAP Reports

    8. LEAP Interview Judging Protocol

B. Tables and chairs for participants

C. Tables and chairs for judges, to be used for information distribution and evaluation

D. A copy of a well-written, technologically appropriate problem for each participant/team that can be objectively measured

E. Adequate conditions, tools, materials, monitoring, and testing devices for the problem

F. Stopwatch or clock for timekeeper

RESPONSIBILITIES

AT THE CONFERENCE

1. Attend the mandatory coordinator's meeting at the designated time and location.

2. Report to the CRC room and obtain the coordinator's packet; check the contents.

3. Review the event guidelines and check to see that enough judges/assistants have been scheduled.

4. Inspect the area(s) in which the event is to be held for appropriate set-up, including room size, chairs, tables, outlets, etc. Notify the event manager of any potential problems.

5. At least one (1) hour before the event is to begin, meet with judges to review time limits, procedures, and regulations. If questions arise that cannot be answered, speak to the event manager before the event begins.

PRELIMINARY ROUND

1. Begin the event at the scheduled time by closing the doors and checking the entry list.

2. Collect LEAP Reports.

3. All participants and judges should be in the room at this time.

4. Participants registered but not present may be disqualified.

5. Anyone reporting who is not on the entry list may check in only after official notification is received from the CRC.

6. Late entries are considered on a case-by-case basis and only when the delay is caused by events beyond participant control.

7. Check tools, materials, and monitoring and testing devices.

8. Once participants/teams are seated and general announcements have been given, distribute and review the problem and start the time.

9. Judges and monitors observe the entire development phase, with judges measuring solutions as soon as appropriate.

10. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

    a. To deduct twenty percent (20%) of the total possible points in this round or

    b. To disqualify the entry

    c. The event coordinator, judges and CRC manager must all initial either of these actions on the rating form.

11. Judges determine the twelve (12) semifinalists and discuss and break any ties. (Determine the procedure for breaking ties before the onsite competition begins.)

12. Submit semifinalist results and all related forms in the results envelope to the CRC room.

SEMIFINAL ROUND

1. Meet with semifinalists at the time and place stated in the conference program to allow them to sign up for a LEAP interview time.

2. Inspect the area in which the LEAP interviews will take place. Ensure that there is a table and seating for participants and judges.

3. Meet with semifinalist judges to review the LEAP Judging Protocol. If questions arise that cannot be answered, speak to the event manager before the semifinalist interviews begin.

4. Conduct semifinalist LEAP interviews. Interviews should be a maximum of five (5) minutes in length.

5. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

   a. To deduct twenty percent (20%) of the total possible points in this round or

   b. To disqualify the entry

   c. The event coordinator, judges and CRC manager must all initial either of these actions on the rating form.

6. Judges determine the ranking of the ten (10) finalists and discuss and break any ties. (Determine the procedure for breaking ties before the onsite competition begins.)

7. Review and submit the finalist results and all related items/forms in the results envelope to the CRC room.

8. If necessary, manage security and the removal of materials from the area.

COMPUTER-AIDED DESIGN (CAD), ARCHITECTURE

OVERVIEW

Participants have the opportunity to use complex computer graphic skills, tools, and processes to develop representations of architectural subjects such as foundation and/or floor plans, and/or elevation drawings, and/or details of architectural ornamentation or cabinetry.

ELIGIBILITY

Two (2) individuals per state may participate. Participants may compete in either CAD, Architecture or CAD, Engineering, not both events.

TIME LIMITS

1. Forty-five (45) minutes is allowed for set-up time.
2. Four (4) hours is allowed for participants to develop drawing(s).
3. One (1) hour is allotted for the final evaluation.
4. All individuals will participate in a LEAP interview that will last a maximum of five (5) minutes.

LEAP

An individual LEAP Report is required for this event and must be submitted at event check-in (see LEAP Program).

ATTIRE

TSA competition attire is required for this event.

PROCEDURE

1. Participants bring their own computer systems (see Regulation A) to the event area at the time and place stated in the conference program.
2. Participants must submit a LEAP Report prior to receiving the design problem.
3. Each participant, with one (1) assistant (an instructor, fellow student, or adult chaperone), is allowed to set up and test the equipment. At the end of the forty-five (45)-minute set-up period, assistants are required to leave the area.
4. Participants are given a design problem to solve in a four (4)-hour work session.

5. Participants work independently, without assistance from judges, teachers, fellow participants, other students, or observers.
6. Participants are advised to save their work on their hard drives every fifteen (15) minutes.
7. At the end of the session, participants save their work on their hard drives and on a USB flash drive.
8. One (1) additional hour is spent interviewing the participants and evaluating the entries from each participant's computer monitor.
9. The LEAP interview will be conducted as part of the event-specific interview.
10. A list of twelve (12) semifinalist teams (in random order) will be posted.
11. Participants report to the event area at the time and place stated by in the conference program to pick up their equipment.
12. The top ten (10) finalists will be announced during the award ceremony.

REGULATIONS

A. Participants provide their own systems, including
   1. hardware (only one [1] CPU and one [1] monitor), capable of reading a USB flash drive; laptops are recommended
   2. software
   3. one (1) USB flash drive
   4. power strip/surge protector
   5. reference materials

B. A table, chair, sketching paper, and electricity will be supplied for each participant.
C. Participants are required to provide their own pencils.
D. Participants are not permitted to share solutions to problems, reference materials, hardware, or software.
E. Participants identify their work using only their student identification number.
F. USB flash drives, and the work they contain, become the property of TSA.

G. The LEAP Report

1. Participants document the leadership skills developed and demonstrated while working on this event, and on a non-competitive event leadership experience.

2. Participants will respond to questions about the content of the LEAP Report as part of the LEAP interview, which will be conducted as part of event-specific interview.

3. Specific LEAP Report regulations can be found in the LEAP Program section of this guide and on the TSA website.

EVALUATION

1. Entries are evaluated on screen according to the criteria on the official rating form.

2. The LEAP requirements and interview will also be evaluated.

Refer to the official rating form for more information.

STEM INTEGRATION

This event aligns with the STEM educational standards of Science, Technology, Engineering, and Mathematics.

CAREERS RELATED TO THIS EVENT

- Architect
- Automobile designer
- CAD professional
- Machine designer

CAD, ARCHITECTURE
2019 & 2020 OFFICIAL RATING FORM
HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

☐ Completed LEAP Report is present.
☐ ENTRY NOT EVALUATED

SOLUTION TO PROBLEM (40 points)

Record scores in the column spaces below.

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Design (X1)	The layout and design of the drawing as presented do not create an effective model for the problem assigned.	The layout and design of the drawing as presented create a somewhat effective model for the problem assigned.	The layout and design of the drawing completely and effectively model the problem assigned.	
Functionality (X1)	The design as drawn is impractical, disorganized, and lacks directional flow.	The design is somewhat practical in directional flow and organization.	The design is clearly effective, practical, and functional.	
Originality (X1)	The design drawing provides few, if any, attempts at originality or deviation from the traditional.	The design drawing attempts to be somewhat creative and shows some evidence of being non-traditional.	The design drawing provides a unique and creative quality of newness that departs from tradition.	
Aesthetics (X1)	The design is unappealing and fails to capture the observer's attention.	The design is somewhat pleasing and appealing and attempts to capture the observer's attention.	The overall design is pleasing and appealing and effectively draws attention to its appearance/beauty.	
SOLUTION TO PROBLEM SUBTOTAL (40 points)				

LAYOUT (60 points)

Record scores in the column spaces below.

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Views (X2)	The correct views have not been selected and/or used throughout the drawing process and final layout.	Most of the views that have been selected and used are correct and in the proper layout format.	All of the views that have been selected and used are correct and in the proper layout.	
Detailing (X1)	Many of the details are missing or incorrectly placed.	Most of the details are included and correctly placed.	All the necessary details are included and placed correctly.	

LAYOUT (60 points) – continued

	Minimal performance	Adequate performance	Exemplary performance	
Lettering (X1)	The choice of font style, size, color, and application is inappropriate for the drawing assignment.	The choice of font style, size, color, and application is appropriate, with few inconsistencies/variations.	The choice of appropriate font style, size, color, and application is clearly evident and applied consistently.	
Dimensioning (X1)	Many of the necessary dimensions are missing and/or are incorrectly placed.	Most of the necessary dimensions are included and/or are correctly placed.	All necessary dimensions are included and correctly placed.	
Scale (X1)	The scale selected for the drawings is incorrect and improperly noted.	The scale selected for most aspects of the drawings is correct and properly noted.	The scale selected for all aspects of the drawings is correct and properly noted.	
			LAYOUT SUBTOTAL (60 points)	

Record scores in the column spaces below.

ARCHITECTURAL APPLICATION (20 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Use of symbols (X1)	Many, if not most, of the symbols selected and used are incorrect.	Most of the symbols selected and used are correct and/or appropriately placed.	All of the symbols selected and used are correct and appropriately placed.	
Appropriate standards (X1)	There is little or no evidence of an appropriate application of architectural standards in the completed design and drawings.	There is some evidence of an appropriate application of architectural standards in the completed design and drawings.	There is clear evidence of an effective and appropriate application of architectural standards in the completed design and drawings.	
			ARCHITECTURAL APPLICATION SUBTOTAL (20 points)	

SOFTWARE UTILIZATION (20 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
CAD functions (X1)	There is little evidence of an understanding and application of CAD functions.	There is evidence of a general understanding and effective application of CAD functions.	A complete and effective understanding and application of CAD functions is evident.	
CAD features (X1)	There is little evidence of an understanding and application of CAD special features.	There is a general understanding and application of CAD special features.	There is a complete understanding and application of the various special features of CAD.	
			SOFTWARE UTILIZATION SUBTOTAL (20 points)	

Record scores in the column spaces below.

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

SEMIFINAL LEAP INTERVIEW (14 points)				Record scores in the column spaces below.
CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
LEAP Report/ Interview (10% of the total event points)	The individual's efforts are not clearly communicated, lack detail, and/or are unconvincing; few, if any, attempts are made to identify and/or incorporate the SLC Practices and Behaviors.	The individual's efforts are adequately communicated, include some detail, are clear, and/or are generally convincing; identification and/or incorporation of the SLC Practices and Behaviors is adequate.	The individual's efforts are clearly communicated, fully-detailed, and convincing; identification and/or incorporation of the SLC Practices and Behaviors is excellent.	
			SEMIFINAL LEAP INTERVIEW SUBTOTAL (14 points)	

To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary.	**TOTAL (154 points)**	

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____   Signature: _____

COMPUTER-AIDED DESIGN (CAD), ARCHITECTURE EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Judges, two (2) or more

C. Assistants, one (1)

MATERIALS

A. Coordinator's packet, containing:

1. Event guidelines, one (1) copy for the coordinator and for each judge

2. TSA Event Coordinator Report

3. List of judges/assistants

4. Pre-populated flash drives for judges

5. Stick-on labels for entries, as needed

6. Results envelope

7. Envelope for LEAP Reports

8. LEAP Interview Judging Protocol

B. Tables and chairs for participants and judges

C. One (1) ream of 8½" x 11" white copier paper

D. Statement of problem as a hard-copy sketch, pages as needed.

RESPONSIBILITIES

AT THE CONFERENCE

1. Attend the mandatory coordinator's meeting at the designated time and location.

2. Report to the CRC room and check the contents of the coordinator's packet.

3. Review the event guidelines and check to see that enough judges/assistants have been scheduled.

4. Inspect the area(s) in which the event is to be held for appropriate set-up, including room size, chairs, tables, outlets, etc. Notify the event manager of any potential problems.

5. At least one (1) hour before the event is to begin, meet with judges to review time limits, procedures, and regulations. If questions arise that cannot be answered, speak to the event manager before the event begins.

PRELIMINARY/SEMIFINAL ROUND

1. As participants arrive, check the coordinator's report and assign participants to work stations.

2. Collect LEAP Reports.

3. All participants and judges should be in the room at this time.

4. Anyone reporting who is not on the coordinator's report may check in only after official notification is received from the CRC.

5. Late entries are considered on a case-by-case basis and only when the delay is caused by events beyond participant control.

6. Allow forty-five (45) minutes for participants and their assistants (no more than one [1] per participant) to set up equipment.

7. At the end of the forty-five (45)-minute set-up time, non-participants are required to leave the event area.

8. Review with the participants the time limits, procedures, regulations, and protocol of the event.

9. Remind participants to save their work at regular time intervals.

10. Distribute copies of the CAD problem. Answer any appropriate questions concerning the problem.

11. Begin the event and announce the ending time.

12. During the event, the judges and assistants monitor and evaluate participant progress and work.

13. Announce the time remaining to work at one (1) hour, thirty (30) minutes, fifteen (15) minutes, and five (5) minutes before time is called.

14. When time is called, participants stop and save their work on their hard drives and on their USB flash drives.

15. Collect the entries, checking to be sure each one is labeled with the student's identification number.

16. Participants remain at their computers for up to one (1) hour as evaluation of the entries is completed.

17. Conduct semifinalist LEAP interviews. Interviews should be a maximum of five (5) minutes in length.

18. Judges independently assess the entries.

19. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

    a. To deduct twenty percent (20%) of the total possible points in this round or

    b. To disqualify the entry

    c. The event coordinator, judges and CRC manager must all initial either of these actions on the rating form.

20. Judges determine the twelve (12) semifinalists and ten (10) finalists, and discuss and break any ties. (Determine the procedure for breaking ties before the onsite competition begins.)

21. Submit semifinalist and finalist results and all related forms in the results envelope to the CRC room.

22. If necessary, manage security and the removal of materials from the area.

COMPUTER-AIDED DESIGN (CAD), ENGINEERING

OVERVIEW

Participants have the opportunity to use complex computer graphic skills, tools, and processes to develop three (3)-dimensional representations of engineering subjects such as a machine part, tool, device, or manufactured product.

ELIGIBILITY

Two (2) individuals per state may participate. Participants may compete in either CAD, Architecture or CAD, Engineering, not both events.

TIME LIMITS

1. Forty-five (45) minutes is allowed for set-up time.
2. Four (4) hours is allowed for participants to develop drawing(s).
3. One (1) hour is allotted for the final evaluation.
4. All individuals will participate in a LEAP interview that will last a maximum of five (5) minutes.

LEAP

An individual LEAP Report is required for this event and must be submitted at event check-in (see LEAP Program).

ATTIRE

TSA competition attire is required for this event.

PROCEDURE

1. Participants bring their own computer systems (see Regulation A) to the event area at the time and place stated in the conference program.
2. Participants must submit a LEAP Report prior to receiving the design problem.
3. Each participant, with one (1) assistant (an instructor, fellow student, or adult chaperone), is allowed to set up and test the equipment. At the end of the forty-five (45)-minute set-up period, assistants are required to leave the area.
4. Participants are given a design problem to solve in a four (4)-hour work session.

5. Participants work independently, without assistance from judges, teachers, fellow participants, other students, or observers.
6. Participants are advised to save their work on their hard drives every fifteen (15) minutes.
7. At the end of the session, participants save their work on their hard drives and on a USB flash drive.
8. One (1) additional hour is spent interviewing the participants and evaluating the entries from each participant's computer monitor.
9. The LEAP interview will be conducted as part of the event-specific interview.
10. A list of twelve (12) semifinalist teams (in random order) will be posted.
11. Participants report to the event area at the time and place stated by in the conference program to pick up their equipment.
12. The top ten (10) finalists will be announced during the award ceremony.

REGULATIONS

A. Participants provide their own systems, including
   1. hardware (only one [1] CPU and one [1] monitor), capable of reading a USB flash drive; laptops are recommended
   2. software
   3. one (1) USB flash drive
   4. power strip/surge protector
   5. reference materials

B. A table, chair, sketching paper, and electricity will be supplied for each participant.
C. Participants are required to provide their own pencils.
D. Participants are not permitted to share solutions to problems, reference materials, hardware, or software.
E. Participants identify their work using only their student identification number.
F. USB flash drives, and the work they contain, become the property of TSA.

G. The LEAP Report

1. Participants document the leadership skills developed and demonstrated while working on this event, and on a non-competitive event leadership experience.

2. Participants will respond to questions about the content of the LEAP Report as part of the LEAP interview, which will be conducted as part of event-specific interview.

3. Specific LEAP Report regulations can be found in the LEAP Program section of this guide and on the TSA website.

EVALUATION

1. Entries are evaluated on screen according to the criteria on the official rating form.

2. The LEAP requirements and interview will also be evaluated.

Refer to the official rating form for more information.

STEM INTEGRATION

This event aligns with the STEM educational standards of Science, Technology, Engineering, and Mathematics.

CAREERS RELATED TO THIS EVENT

- Engineer
- Automobile designer
- CAD professional
- Machine designer

CAD, ENGINEERING
2019 & 2020 OFFICIAL RATING FORM
HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

☐ Completed LEAP Report is present.
☐ ENTRY NOT EVALUATED

SOLUTION TO PROBLEM (40 points)

Record scores in the column spaces below.

CRITERIA	Minimal performance 1-4 points	Adequate performance 5-8 points	Exemplary performance 9-10 points	
Design (X1)	The layout and design of the drawing as presented do not create an effective model for the problem assigned.	The layout and design of the drawing as presented are somewhat effective in modeling the problem assigned.	The layout and design of the drawing completely and effectively model the problem assigned.	
Functionality (X1)	The design as drawn lacks order of direction and is impractical.	The design is somewhat practical in directional flow and overall organization.	The design is completely effective, practical, and functional.	
Originality (X1)	The design drawing provides no quality of newness or deviation from tradition.	The design drawing shows some attempt to be creative and less non-traditional.	The design drawing provides a unique and creative quality of newness that departs from tradition.	
Aesthetics (X1)	The design is unappealing and fails to capture the observer's attention.	The design is somewhat pleasing and appealing and attempts to capture the observer's attention.	The design as drawn is pleasing and appealing and effectively draws attention to its appearance/beauty.	
SOLUTION TO PROBLEM SUBTOTAL (40 points)				

LAYOUT (60 points)

Record scores in the column spaces below.

CRITERIA	Minimal performance 1-4 points	Adequate performance 5-8 points	Exemplary performance 9-10 points	
Correct geometry (X2)	The correct views and orientation have not been selected or used throughout the drawing process and final layout.	Most of the views and orientation selected and used are correct and in the proper layout format.	All of the views and orientation that have been selected and used are correct and in the proper layout.	
Detailing (X1)	Many of the details are missing or placed incorrectly.	Most of the details are included and are correctly placed.	All necessary details are included and are placed correctly.	

COMPUTER-AIDED DESIGN (CAD), ENGINEERING

LAYOUT (60 points) – continued				
Lettering (X1)	The choice of font style, size, color, and application is inappropriate for the drawing assignment.	The choice of font style, size, color, and application is appropriate, with few inconsistencies/variations.	The choice of appropriate font style, size, color, and application is clearly evident and applied consistently.	
Dimensioning (X1)	Many of the necessary dimensions are missing and/or placed incorrectly.	Most of the required dimensions are included and placed correctly.	All of the necessary dimensions are included and correctly placed.	
Scale (X1)	The scale selected for the drawings is incorrect and not properly noted.	The scale selected for most aspects of the drawings is correct and properly noted.	The scale selected for all aspects of the drawings is correct and properly noted.	
LAYOUT SUBTOTAL (60 points)				

ENGINEERING APPLICATION (20 points)				
CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Application of practices (X1)	Many, if not most, of the engineering practices selected and used are incorrectly applied.	Most of the engineering practices selected and used are correctly applied.	All of the engineering practices selected and used are correctly and appropriately applied.	
Appropriate use of conventions (X1)	There is little or no evidence of an effective application of engineering conventions in the completed design and drawings.	There is some evidence of an effective application of engineering conventions in the completed design and drawings.	There is clear evidence of an effective and knowledgeable application of engineering conventions in the completed design and drawings.	
ENGINEERING APPLICATION SUBTOTAL (20 points)				

SOFTWARE UTILIZATION (20 points)				
CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
CAD functions (X1)	There is little evidence of an understanding and application of CAD functions.	There is evidence of a general understanding and effective application of CAD functions.	A complete and effective understanding and application of CAD functions is evident.	
CAD features (X1)	There is little evidence of understanding and application of CAD special features.	There is a general understanding and application of CAD special features.	There is complete understanding and application of the various special features of CAD.	
SOFTWARE UTILIZATION SUBTOTAL (20 points)				

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right. Indicate the rule violated: _____	

SEMIFINAL LEAP INTERVIEW (14 points)				Record scores in the column spaces below.
CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
LEAP Report/ Interview (10% of the total event points)	The individual's efforts are not clearly communicated, lack detail, and/or are unconvincing; few, if any, attempts are made to identify and/or incorporate the SLC Practices and Behaviors.	The individual's efforts are adequately communicated, include some detail, are clear, and/or are generally convincing; identification and/or incorporation of the SLC Practices and Behaviors is adequate.	The individual's efforts are clearly communicated, fully-detailed, and convincing; identification and/or incorporation of the SLC Practices and Behaviors is excellent.	
			SEMIFINAL LEAP INTERVIEW SUBTOTAL (14 points)	

To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary.	**TOTAL (154 points)**	

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____   Signature: _____

COMPUTER-AIDED DESIGN (CAD), ENGINEERING EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Judges, two (2) or more

C. Assistants, one (1)

MATERIALS

A. Coordinator's packet, containing:

1. Event guidelines, one (1) copy for the coordinator and for each judge

2. TSA Event Coordinator Report

3. List of judges/assistants

4. Pre-populated flash drives for judges

5. Stick-on labels for entries, as needed

6. Results envelope

7. Envelope for LEAP Reports

8. LEAP Interview Judging Protocol

B. Tables and chairs for competitors and judges

C. One (1) ream of 8½" x 11" white copier paper

D. Statement of problem as a hard-copy sketch, pages as needed.

RESPONSIBILITIES

AT THE CONFERENCE

1. Attend the mandatory coordinator's meeting at the designated time and location.

2. Report to the CRC room and check the contents of the coordinator's packet.

3. Review the event guidelines and check to see that enough judges/assistants have been scheduled.

4. Inspect the area(s) in which the event is to be held for appropriate set-up, including room size, chairs, tables, outlets, etc. Notify the event manager of any potential problems.

5. At least one (1) hour before the event is to begin, meet with judges to review time limits, procedures, and regulations. If questions arise that cannot be answered, speak to the event manager before the event begins.

PRELIMINARY/SEMIFINAL ROUND

1. As participants arrive, check the coordinator's report and assign participants to work stations.

2. Collect LEAP Reports.

3. All participants and judges should be in the room at this time.

4. Anyone reporting who is not on the coordinator's report may check in only after official notification is received from the CRC.

5. Late entries are considered on a case-by-case basis and only when the delay is caused by events beyond participant control.

6. Allow forty-five (45) minutes for participants and their assistants (no more than one [1] per participant) to set up equipment.

7. At the end of the forty-five (45)-minute set-up time, non-participants are required to leave the event area.

8. Review with the participants the time limits, procedures, regulations, and protocol of the event.

9. Remind participants to save their work at regular time intervals.

10. Distribute copies of the CAD problem. Answer any appropriate questions concerning the problem.

11. Begin the event and announce the ending time.

12. During the event, the judges and assistants monitor and evaluate participant progress and work.

13. Announce the time remaining to work at one (1) hour, thirty (30) minutes, fifteen (15) minutes, and five (5) minutes before time is called.

14. When time is called, participants stop and save their work on their hard drives and on their USB flash drives.

15. Collect the entries, checking to be sure each one is labeled with the student's identification number.

16. Participants remain at their computers for up to one (1) hour as evaluation of the entries is completed.

17. Conduct semifinalist LEAP interviews. Interviews should be a maximum of five (5) minutes in length.

18. Judges independently assess the entries.

19. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

   a. To deduct twenty percent (20%) of the total possible points in this round or

   b. To disqualify the entry

   c. The event coordinator, judges and CRC manager must all initial either of these actions on the rating form.

20. Judges determine the twelve (12) semifinalists and ten (10) finalists, and discuss and break any ties. (Determine the procedure for breaking ties before the onsite competition begins.)

21. Submit semifinalist and finalist results and all related forms in the results envelope to the CRC room.

22. If necessary, manage security and the removal of materials from the area.

COMPUTER INTEGRATED MANUFACTURING (CIM)

OVERVIEW

Participants design, fabricate, and use Computer Integrated Manufacturing (CIM) to create a product that will showcase the current year's theme found on the national TSA website under Competitions/Themes and Problems. The product may use additive and/or subtractive manufacturing of any traditional, Computer Numerical Control (CNC), 3D printing, or laser technology available. Documentation, one (1) completed sample, and one (1) set of manufactured parts are checked in and evaluated. Semifinalist teams assemble their entry and give a live promotional sales pitch to judges.

ELIGIBILITY

One (1) team of two to six (2-6) individuals per chapter may participate, one (1) entry per team.

TIME LIMITS

1. Semifinalists will deliver a sales pitch lasting up to two (2) minutes, during which time each team member will demonstrate the product.

   Note: Exceeding the two (2)-minute time limit results in a deduction of five (5) points for every fifteen (15) seconds over the limit.

2. The LEAP interview will be conducted as part of the semifinalist demonstration and will last a maximum of five (5) additional minutes.

LEAP

A team LEAP Report is required for this event and must be submitted at event check-in (see LEAP Program).

ATTIRE

TSA competition attire is required for this event.

PROCEDURE

PRELIMINARY ROUND

1. Teams check in their documentation, product, manufactured pieces of their entry, and a LEAP Report for evaluation during check-in at the time and place stated in the conference program.

2. Entries are evaluated and semifinalist teams are determined.

3. A list of twelve (12) semifinalists, in random order, will be posted.

SEMIFINAL ROUND

1. Semifinalist teams report at the time and place stated in the conference program.

2. Each team will make a sales pitch about their product to "potential buyers" (judges and the audience) in the room.

3. The sales pitch will begin on the timekeeper's signal.

4. The LEAP interview will be conducted as part of the semifinalist demonstration (sales pitch).

5. The top ten (10) finalists will announced at the awards ceremony.

REGULATIONS

PRELIMINARY ROUND

A. Documentation materials (comprising "a portfolio") are required and should be secured in a clear front report cover. The report cover must include the following single-sided, 8½" x 11" pages, in this order:

1. LEAP Report

2. Title page with the event title, the conference city and state, and the year; one (1) page

3. Table of contents; one (1) page

4. A working drawing of the parts manufactured.

   a. The parts must be clearly labeled and include dimensions, with an identifying leader and a label, as shown in a parts list.

   b. A bill of materials also must be included on the working drawing.

   c. The paper size is 11" x 17", folded, with the drawing facing out and placed in the portfolio; one(1) page

5. An isometric assembly drawing showing the promotional product and all its parts; the paper size is 11" x 17", folded, with the drawing facing out and placed in the portfolio; one (1) page

6. Detail drawings of each part manufactured should be labeled to match the items in the parts list (from the working drawing). The paper size is 8½" x 11"; pages as needed (to show all machined parts)

7. Photographic images (actual photographs, not renderings) of designs tested, with a three (3)-sentence descriptive caption per image of what was improved or proved by the testing of the design; two (2) pages maximum

8. Plan of Work log that indicates preparation for the event, as noted by date, task, time involved, team member responsible, and comments (see Forms Appendix or TSA website); pages as needed

9. Proof (receipts) that the material cost for fabricated parts is no more than five dollars ($5.00)

B. Materials

1. The sample work pieces will contain the subtractive and/or additive (CNC/3D printing) machined parts of the promotional product.

2. The major and minor parts of the entry must fit into an 11" x 17" x 3" frame, with no stacking of parts. Parts may not be connected.

3. The assembled product must be accurate and within tolerances + or - .0625 or 1⁄16" of the dimensions provided in the documentation drawings and in the fabricated parts.

4. Fabricated parts

   a. The finished product must not exceed the dimensions 7" x 7" x 7".

   b. Three (3) major parts are required; major parts are those with drawings that have been manufactured.

   c. Plastic, wood, or metal may be used for any of the parts for the promotional product.

   d. Machined parts submitted for judging must be removed from the waste stock.

   e. Parts may be finished (i.e., painted or sanded), if necessary.

5. Stock fasteners may be used, provided they can be installed with the tools in the tool box; they may include, but are not limited to:

   a. Nuts

   b. Washers

   c. Screws

   d. Wing nuts

   e. Other fasteners that can be attached with the tools in the tool box

SEMIFINAL ROUND

A. Sales pitch session

1. Team members will present a two (2)-minute sales pitch about their promotional product.

2. The team will explain the production cost per unit, the materials used to make the product, and price breaks of units based on purchase.

3. No electronic devices may be used in the sales pitch.

4. A promotional flyer or brochure may be given to judges as part of the sales pitch; the brochure size is limited to one double-sided page on 8½" x 11" paper.

5. Exceeding the two (2)-minute limit results in a deduction of five (5) points for every fifteen (15) seconds over the limit.

B. Failure to meet the guidelines

1. A 20% deduction of the total possible points will be made for failure to meet one (1) qualification.

2. If an entry fails to meet two (2) qualification regulations, it will be removed from competition.

3. The coordinator may stop a demonstration if a safety issue becomes evident.

C. The LEAP Report

1. Teams document the leadership skills they have developed and demonstrated while working on this event, and on a non-competitive event leadership experience.

2. Teams will respond to questions about the content of the LEAP Report as part of the LEAP interview, which will be conducted as part of the semifinalist presentation/interview and will last a maximum of five (5) additional minutes.

3. Specific LEAP Report regulations can be found in the LEAP Program section of this guide and on the TSA website.

EVALUATION

1. The documentation
2. The component analysis
3. The LEAP requirements
4. The sales pitch/demonstration (semifinalists only)

Refer to the official rating form for more information.

STEM INTEGRATION

This event aligns with the STEM educational standards of Science, Technology, Engineering, and Mathematics.

CAREERS RELATED TO THIS EVENT

- Commercial and industrial designer
- Engineer
- Mechanical engineer
- CNC programmer or operator

Technology Student Association (TSA) High School Competitive Events Guide for the 2019 and 2020 National TSA Conferences

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COMPUTER INTEGRATED MANUFACTURING (CIM)

2019 & 2020 OFFICIAL RATING FORM

HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

☐ Sample product is present.
☐ Manufactured parts are present.
☐ Documentation is present.
☐ Completed LEAP Report is present.
☐ ENTRY NOT EVALUATED

DOCUMENTATION (100 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	Record scores in the column spaces below.
	1-4 points	5-8 points	9-10 points	
Portfolio components (X1)	The portfolio is unorganized and three or more components or sections are missing.	The portfolio is generally well organized and may be missing only one or two components or sections.	The portfolio is exceptionally well organized and contains all required components or sections.	
Work piece layout drawing (X2)	The work piece layout drawing is poorly executed, with key elements missing.	The work piece layout drawing is included but missing some elements.	The work piece layout drawing is complete and correctly executed, with all elements included.	
Isometric assembly drawing (X1)	The isometric assembly drawing is not complete, with many of the required elements missing.	The isometric assembly drawing is present, but it is missing several required key elements.	The isometric assembly drawing is complete and correct, with all required elements included.	
Detail drawings (X1)	The detail drawings are not complete, with many of the required elements missing.	The detail drawings are present but may be missing several required key elements.	The detail drawings are complete and correct, with all required elements included.	
Design photographs (X1)	Only one photograph of designs tested is included.	Two photographs of designs tested are included.	More than two photographs of designs tested are included.	
Descriptions/analysis (X2)	There is little description of the design testing process and analysis.	One description of design testing and analysis is included.	Several descriptions of design testing and analysis are included.	
Plan of Work log (X1)	The Plan of Work log is not complete.	The Plan of Work log is included and mostly complete.	The Plan of Work log is complete and fully documents project work.	
Theme (X1)	The effort is basic, with only a loose association to the product theme.	The effort adequately addresses the product theme.	The effort to address the product theme exceeds expectations.	
DOCUMENTATION SUBTOTAL (100 points)				

COMPONENT ANALYSIS (40 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	Record scores in the column spaces below.
	1-4 points	5-8 points	9-10 points	
Additive or subtractive manufacturing piece (X3)	The overall dimensions are .25(¼) inches greater or less than the size specified on the layout drawing.	The overall dimensions are .125(⅛) inches greater or less than the size specified on the layout drawing.	The overall dimensions are the correct size, as specified on the layout drawing.	
Product cost sheet (X1)	The product cost sheet has few parts of the finished product broken down individually; the cost is more than $5 per product.	The product cost sheet has most parts of the finished product broken down individually; the cost is $5 or less per product.	The product cost sheet has each part of the finished product broken down individually with material amount and the amount used; the cost is $5 or less per product.	
			COMPONENT ANALYSIS SUBTOTAL (40 points)	

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

	PRELIMINARY SUBTOTAL (140 points)	

SEMIFINAL QUALIFICATION REGULATIONS

Place an x in the noncompliant or compliant box, as appropriate for each regulation. If one regulation is noncompliant, a deduction of 20% of the total possible points will apply (see rules violations box).

Regulation	Noncompliant		Compliant		
Team of two	Only one (1) team member is present.		At least two (2) team members are present.		

SEMIFINAL PRESENTATION/INTERVIEW (69 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	Record scores in the column spaces below.
	1-4 points	5-8 points	9-10 points	
Organization (X1)	Participants seem unorganized and unprepared for the sales pitch/demonstration; illogical explanation of the project is presented.	Participants are generally prepared for the sales pitch/demonstration; explanation of the project is communicated and generally organized.	The sales pitch/demonstration is logical, well organized, and easy to follow; the project concept is communicated in a concise manner.	
Knowledge (X1)	Participants seem to have little understanding of the concepts in their project; answers to questions may be vague.	Participants exhibit an understanding of the concepts in their project.	Participants show clear evidence of a thorough understanding of the concepts in their project.	
Articulation (X1)	The sales pitch is full of illogical thoughts that lack clarity.	The sales pitch is somewhat logical and easy-to-understand and follow.	The sales pitch provides a clear, concise, and easy-to-follow description of the project.	

COMPUTER INTEGRATED MANUFACTURING (CIM)

SEMIFINAL PRESENTATION/INTERVIEW (69 points) – continued				
Delivery (X1)	The sales pitch is full of illogical thoughts that lack clarity, and/or there is insufficient information provided describing the project.	The sales pitch is somewhat logical, easy-to-follow, and/or there is sufficient information provided describing the project.	The sales pitch is clear, concise, and there is ample information provided describing the project.	
Team participation (X1)	The majority of the delivery is made by one member of the team; the partners may be disengaged from the sales pitch.	Team members generally are engaged in the process, though one member may take on more responsibility than the others.	Team members are actively involved in the sales pitch and responses to interview questions; there is shared responsibility on the part of team members.	
LEAP Report/ Interview (19 points; 10% of total event points)	The team's efforts are not clearly communicated, lack detail, and/or are unconvincing; few, if any, attempts are made to identify and/or incorporate the SLC Practices and Behaviors.	The team's efforts are adequately communicated, include some detail, are clear, and/or are generally convincing; identification and/or incorporation of SLC Practices and Behaviors is adequate.	The team's efforts are clearly communicated, fully-detailed, and convincing; identification and/or incorporation of the SLC Practices and Behaviors is excellent.	
		SEMIFINAL PRESENTATION/INTERVIEW SUBTOTAL (69 points)		

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right. Indicate the rule violated: _____	

SEMIFINAL SUBTOTAL (69 points)	

To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary. **TOTAL (209 points)**	

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____ Signature: _____

COMPUTER INTEGRATED MANUFACTURING (CIM) EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Judges:

    1. Preliminary round, two (2) or more

    2. Semifinal round, two (2) or more

C. Timekeeper, one (1)

D. Assistants at check-in, two (2) or more

MATERIALS

A. Coordinator's packet, containing

    1. Event guidelines, one (1) copy for the coordinator and for each judge

    2. TSA Event Coordinator Report

    3. List of judges/assistants

    4. Pre-populated flash drives for judges

    5. Stick-on labels for entries, as needed

    6. Results envelope

    7. Stopwatch

    8. Envelope for LEAP Reports

    9. LEAP Interview Judging Protocol

B. Tables and chairs for check-in assistants, the timer, judges, and the event coordinator

C. Tables for display of entries; chairs for each team member

RESPONSIBILITIES

AT THE CONFERENCE

1. Attend the mandatory coordinator's meeting at the designated time and location.

2. Report to the CRC room and obtain the coordinator's packet; check the contents.

3. Review the event guidelines and check to see that enough judges and assistants have been scheduled.

4. Inspect the area in which the portfolios are being placed for appropriate set-up including sufficient number and size of tables.

5. At least one (1) hour before the event is scheduled to begin, meet with judges/assistants to review time limits, procedures, and regulations. If questions arise that cannot be answered, speak to the event manager before the event begins.

EVENT CHECK-IN

1. Check in the entries at the time stated in the conference program.

2. Anyone reporting who is not on the entry list may check in only after official notification is received from the CRC.

3. Late entries are considered on a case-by-case basis and only when the delay is caused by events beyond participant control.

4. Each entry must include the team's identification number in the upper right-hand corner of the entry.

5. Position the entries for evaluation and viewing.

6. Secure the entries in the designated area.

PRELIMINARY ROUND

1. Judges independently assess the entries.

2. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

    a. To deduct twenty percent (20%) of the total possible points in this round or

    b. To disqualify the entry

    c. The event coordinator, judges and CRC manager must initial either of these actions on the rating form

3. Judges determine the twelve (12) semifinalists.

4. Review and submit the semifinalist results and all related items/forms in the results envelope to the CRC room for posting.

5. Create semifinalist sign-up sheet for each team's final presentation.

SEMIFINAL ROUND

1. Inspect the area in which the sales pitches/interviews are to take place. Ensure that there is a table and seating for the interviews.

2. At least one (1) hour before the event is to begin, meet with semifinalist judges to review time limits, procedures, and regulations. If questions arise that cannot be answered, speak to the event manager before the event begins.

3. Conduct the sales pitch demonstration sessions. The LEAP interview will be conducted as part of the semifinalist demonstration and will last a maximum of five (5) additional minutes.

4. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

   a. To deduct twenty percent (20%) of the total possible points in this round or

   b. To disqualify the entry

   c. The event coordinator, judges and CRC manager must initial either of these actions on the rating form.

5. Judges determine the ten (10) finalists and discuss and break any ties. (Determine the procedure for breaking ties before the onsite competition begins.)

6. Review and submit the finalist results and all related forms in the results envelope to the CRC room.

7. If necessary, manage security and the removal of materials from the event area.

DEBATING TECHNOLOGICAL ISSUES

OVERVIEW

The skill of debating is essential for government, business, and technology leaders as our society faces new challenges in areas such as medicine, space exploration, pollution, global warming, economics, manufacturing, and agriculture. Tied to these challenges is the necessity for proficiency in science, technology, engineering, and mathematics (STEM). Developing debate and communication skills in students, in conjunction with a focus on topics related to STEM, is an effective way to increase technological literacy.

In this event, team members work together to prepare for a debate against a team from another chapter. The teams will be instructed to take either the Pro or Con side of a selected subtopic.

The theme (and subtopics) for this event will be posted on the national TSA website under Competitions/Themes and Problems.

ELIGIBILITY

Three (3) teams of two (2) individuals per state may participate.

TIME LIMITS

1. For the debate, see Preliminary Round, Procedure 2.6 for time limits.
2. The LEAP interview will be conducted immediately following each semifinalist debate round and will last a maximum of five (5) additional minutes (per team).

LEAP

A team LEAP Report is required for this event and must be submitted at event check-in (see LEAP Program).

ATTIRE

TSA competition attire is required for this event.

PROCEDURE

PRELIMINARY ROUND

1. Participants research all subtopics and should be prepared to debate any of the subtopics from both Pro and Con views.
   a. All participants will be assigned the same subtopic.
   b. A new subtopic may be assigned for the semifinals, and all participants will debate that new subtopic.

2. Pre-debate meeting
   a. Participants report to the event area at the time and place stated in the conference program to receive an assigned debate time, a subtopic, general directions, and information from the judging team.
   b. Failure of participants to attend this meeting will result in disqualification.
   c. This meeting will be held for both preliminary heats and the semifinal portion of the event.
   d. Participants will be reminded in this meeting to not state their individual or school name in the presence of judges.
   e. Teams must submit a LEAP Report at the pre-debate meeting in order to compete.

3. Each team reports to the preparation room fifteen (15) minutes before the scheduled debate time.

4. One (1) minute before teams are instructed to report to the presentation room, each team will be informed of the view (Pro or Con) of the issue it will present to the judges.

5. Once the teams are informed of the view they are to take, they will be escorted to the debate room.

6. Order of debate format:
   a. Pro Speaker (maximum of 2 minutes)
   b. Con Speaker (maximum of 2 minutes)
   c. Break (1 minute)

d. Pro Cross Examination of Con (maximum of 2 minutes)

e. Con Cross Examination of Pro (maximum of 2 minutes)

f. Break (1 minute)

g. Pro Rebuttal (maximum of 2 minutes)

h. Con Rebuttal (maximum of 2 minutes)

7. During cross-examination, the team answering the questions remains seated.

8. The escort will introduce the Pro team by identification number and the team will be instructed to sit to the left side of the podium.

a. The first speaker should sit next to the podium.

b. At this time, participants will present their schedule card and reference summary to the judges.

9. The Con team will be introduced by identification number and will be instructed to sit to the right side of the podium.

a. The first speaker should sit next to the podium.

b. At this time, participants will present their schedule card and reference summary to the judges.

10. When the judges and teams are ready, the Pro speaker will be instructed to move to the podium and begin.

a. Timing starts when the speaker begins.

b. After one (1) minute and forty-five (45) seconds, the timer will hold up a 4" x 6" card that reads "15 seconds."

c. Penalty points will be deducted if a speaker exceeds the allotted time.

11. When the Pro speaker is finished and has been seated, the Con speaker will move to the podium and begin, according to the same procedure noted above.

12. When the Con speaker is finished and has been seated, the timer will announce a one (1)-minute conference period in which both teams may prepare their questions for cross examination.

13. At the conclusion of the one (1)-minute conference period, the timer will announce that the conference period is over and the Pro questioning speaker will approach the podium.

a. Timing starts when the speaker begins.

b. After one (1) minute and forty-five (45) seconds, the timer will hold up a 4" x 6" card that reads "15 seconds."

c. If the con team is in the process of answering a question, the team may finish its answer, provided it does not exceed an additional 15 seconds beyond the allotted two (2) minutes. At this time, the team will be cut off by the timer.

14. When the Pro questioning speaker is seated, the Con questioning speaker will approach the podium.

a. Timing starts when the speaker begins.

b. After one (1) minute and forty-five (45) seconds, the timer will hold up a 4" x 6" card that reads "15 seconds."

c. If the pro team is in the process of answering a question, the team may finish its answer, provided it does not exceed an additional 15 seconds beyond the allotted two (2) minutes. At this time, the team will be cut off by the timer.

15. At the conclusion of the cross examination, the teams will be given a one (1) minute conference break to prepare their rebuttals.

16. The timer will announce the end of the conference break and the Pro rebuttal speaker will approach the podium.

a. Timing starts when the speaker begins.

b. After one (1) minute and forty-five (45) seconds the timer will hold up a 4" x 6" card that reads "15 seconds."

c. Penalty points will be deducted if a speaker exceeds the allotted time.

17. When the Pro rebuttal speaker is finished and has been seated, the Con rebuttal speaker will move to the podium and begin, according to the same procedure noted above in Procedure 16.

18. When the Con rebuttal speaker is finished and has been seated, the timer will announce to both teams that they may leave the debate room.

19. If there is an odd number of teams entered in the event, one team will debate twice, based on a random drawing for teams that wish to go twice. (Note that the coordinator may not force a team to go twice if it does not wish to do so.)

20. If a team debates twice, it may or may not have the same side of the debate.

    a. The team will also be required to provide an additional copy of the Resource List (see Regulation M) to the judges.

    b. The highest score of the twice-debating team will be used as its score.

21. If preliminary heats are used, twelve (12) semifinalists will be posted in random order.

SEMIFINAL ROUND

1. Semifinalists will report to the event area at the time and place stated in the conference program to receive an assigned debate time, as well as general directions and information from the judging team. Note that a different subtopic from the preliminary round may or may not be used.

2. Each team reports to the preparation room at its assigned time.

3. The semifinalist LEAP interview will take place immediately following each semifinalist debate round.

4. Preliminary round, Procedures 4-18 will be followed to determine the ten (10) finalists.

5. Room set-up:

Pro Team	Podium	Con Team
	Judge Timer Judge	

REGULATIONS

PRELIMINARY ROUND

A. Participants must debate the current year's selected subtopic, as assigned at the conference.

B. Pre-written notes may be used. Notes must be written on 3" x 5" notecards.

C. Handwritten notes may be taken during the debate.

D. A three (3)-ring binder of reference materials, as noted on the summary provided to the judges, may be used during the debate.

E. No audio-visual materials of any type may be used.

F. Participants are not allowed to hear the debates of other teams, aside from the team they are debating.

G. Participants may use their own stopwatches to time themselves. These may only be traditional stopwatches; cell phone stop watches are NOT ALLOWED.

H. No observers or assistants are allowed in the preparation room.

I. No observers are allowed to view the preliminary heats.

J. Teams are penalized five (5) points for speaking over the allotted time.

K. Participants must both present at different times during the debate. Only one (1) speaker per side is allowed at the podium at any time.

L. Cross examination (questioning) of the opposing team is to remain civil. Any aggressive behavior, belittling of opponents, or shouting will result in immediate disqualification of the offending team.

M. Each team is required to submit a summary of references (used to prepare for the event) on an 8½" x 11" sheet of paper; both sides of the paper may be used.

    1. The event title, the event's yearly topic, and a line for the entry number must be printed at the top of the front side of the paper.

    2. The reference summary must be typewritten (handwritten is not acceptable).

    3. Font size must not be less than 10 point.

4. MLA format must be used to cite sources.

5. References for all three (3) subtopics are to be submitted on one (1) sheet of paper, not a separate sheet for each subtopic.

6. The summary of references must be given to the judges at both preliminary heats and semifinalist rounds.

7. Not having a summary of references will result in a rules violation deduction.

SEMIFINAL ROUND
(In addition to the Preliminary Round regulations)

A. Observers are allowed in the debate room during the semifinalist debates.

   1. No audio or visual recording devices are allowed.

   2. No talking or gesturing is permitted.

   3. Observers are not allowed to enter or leave during a debate.

   4. There is no applause until the debate is completed.

B. The LEAP Report

   1. Teams document the leadership skills they have developed and demonstrated while working on this event, and on a non-competitive event leadership experience.

   2. Teams will respond to questions about the content of the LEAP Report as part of the LEAP interview, which will be conducted immediately following each semifinalist debate round.

   3. Specific LEAP Report regulations can be found in the LEAP Program section of this guide and on the TSA website.

EVALUATION

1. The team's knowledge of a selected subtopic

2. The team's communication ability (i.e., the use of debate and presentation skills)

3. The LEAP requirements and interview

Refer to the official rating form for more information.

DEBATING TECHNOLOGICAL ISSUES
2019 & 2020 OFFICIAL RATING FORM
HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

☐ Completed LEAP Report is present.
☐ ENTRY NOT EVALUATED

DEBATE (110 points)				Record scores in the column spaces below.
CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Points of argument (X1)	Team does not get the attention of the audience, and/or does not outline points clearly.	Team makes an effort to grab the attention of the audience; previewing points are somewhat organized in a logical manner.	Introduction uses an attention getter, clearly states the thesis, and previews main points of the argument; the team is cognizant of the audience.	
Organization (X1)	The main idea may not be focused or developed; the introduction is undeveloped; transitions may be needed.	The main idea is adequately presented, but the organizational structure may need to be strengthened; ideas are generally developed and flow smoothly.	The main idea is clearly presented, well-developed, and firmly supported.	
Topic knowledge (X2)	The team does not have a grasp of the information; inaccurate, generalized, or inappropriate supporting material is used; there is an over-dependence on notes.	The team has a partial grasp of the information; supporting material is adequate and the team is at ease.	The team has a clear grasp of information; citations are introduced and attributed accurately; the team demonstrates full knowledge, with explanations and elaboration, of the subject area.	
Delivery (X2)	Delivery detracts from the message; eye contact may be very limited; presenter may tend to look at the floor, mumble, speak inaudibly, fidget, or read from notecards; gestures and movements may be jerky or excessive.	Delivery generally seems effective, however, use of volume, eye contact, vocal control, etc., may not be consistent; some hesitancy may be observed; vocal tone, facial expressions, and/or other nonverbal expressions do not detract from the message.	Delivery is extemporaneous, natural, confident, and enhances the message; posture, eye contact, smooth gestures, facial expressions, volume, pace, etc., indicate confidence, a commitment to the topic, and a willingness to communicate.	
Cross Examination (X1)	Questions posed to the opposing team show a minimal knowledge of the subtopic and do not leave much room for discussion.	Questions posed to the opposing team show an adequate knowledge of the subtopic and prompt reasonable discussion.	Questions posed to the opposing team show excellent knowledge of the subtopic and prompt eloquent discussion.	
Question Responses (X1)	The team's responses are minimally sourced and do not fully answer the questions posed.	The team's responses are moderately sourced and mostly answer the questions posed.	The team's responses are fully sourced and completely answer the questions posed.	

DEBATE (110 points) – continued

Rebuttal (X1)	Rebuttal is unorganized, unclear, and/or incoherent; rebuttal includes no counter to points made from the opposing team.	Rebuttal is somewhat organized, and it creates a mostly logical counter to the opposing team's points.	Rebuttal is logical, concise, and creative; counter arguments from the opposing team are incorporated in the rebuttal in a unique and interesting way.	
Voice and language (X1)	Language choices may be limited, peppered with slang or jargon, too complex, or too dull; language is questionable or inappropriate for the audience.	Language used is mostly appropriate, respectful, or inoffensive; word choices are adequate.	Language is familiar to the audience, appropriate for the setting, and free of bias; word choices are vivid and precise.	
Group member participation (X1)	One team member speaks for the initial, cross examination, question responses, and the rebuttal; the other team member is disengaged.	Each team member speaks in the debate—one for the initial portion and the other for the rebuttal; during questioning, both team members have adequate knowledge of the topic and subtopic and share ownership equally.	Each team member speaks eloquently in the debate—one for the initial portion of the debate and the other for the rebuttal; during questioning, both team members show clear understanding, knowledge, and ownership of the topic and subtopic.	

DEBATE SUBTOTAL (110 points)

Rules violations (a deduction of 20% of the total possible points in the semifinalist section) must be initialed by the evaluator, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

Time violation (a deduction of five [5] points total will be incurred for exceeding the debate time limit). Record the deduction in the space to the right.

PRELIMINARY SUBTOTAL (110 points)

SEMIFINAL LEAP INTERVIEW (11 points)

Record scores in the column spaces below.

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
LEAP Report/ Interview (10% of total event points)	The team's efforts are not clearly communicated, lack detail, and/or are unconvincing; few, if any, attempts are made to identify and/or incorporate the SLC Practices and Behaviors.	The team's efforts are adequately communicated, include some detail, are clear, and/or are generally convincing; identification and/or incorporation of the SLC Practices and Behaviors is adequate.	The team's efforts are clearly communicated, fully-detailed, and convincing; identification and/or incorporation of the SLC Practices and Behaviors is excellent.	

SEMIFINAL LEAP INTERVIEW SUBTOTAL (11 points)

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

SEMIFINAL SUBTOTAL (11 points)

To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary.	TOTAL (121 points)	

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____   Signature: _____

DEBATING TECHNOLOGICAL ISSUES
EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Judges

   1. Preliminary round of debates, two (2) or more

   2. Semifinal round of debates, two (2) or more; these judges should not judge the preliminary round of debates

C. Timekeeper/Announcers

   1. Preliminary round of debates, one (1) timekeeper/announcer per heat room; timekeepers may serve as judges

   2. Semifinal round of debates, one (1) timekeeper/announcer per heat room; timekeepers may serve as judges

D. Escorts for moving teams from preparation room to debate room

   1. Preliminary round, one (1) per heat room; escorts may not serve as judges

   2. Semifinal round, one (1) escort

MATERIALS

A. Coordinator's packet, containing:

   1. Event guidelines, one (1) copy for the coordinator and for each judge

   2. TSA Event Coordinator Report

   3. List of judges/assistants

   4. Pre-populated flash drives for judges

   5. Signs that read "DEBATE in PROGRESS" for all rooms, as needed

   6. One (1) stopwatch for each debate room

   7. A 4" x 6" card with the message "15 seconds" written on the card, one (1) card for each debate room

   8. Two (2) 3" x 5" cards with "Pro" written on the card; two (2) 3" x 5" cards with "Con" written on the card; and one (1) 3" x 5" card with "2 minutes" written on it for each debate room

   9. Copies of schedule cards

   10. Results envelope

   11. Envelope for LEAP Reports

   12. LEAP Interview Judging Protocol

B. Podium for each debate room

C. One (1) table and two (2) chairs for the Pro side and one (1) table and two (2) chairs for the Con side for each debate room

D. One (1) table and three (3) chairs for judges and timekeeper/announcer for each debate room; one (1) chair in the back of the room for the escort

E. Chairs for observers during the semifinalist debate round

F. Three (3) tables and three (3) chairs in the preparation room for event personnel and participants

RESPONSIBILITIES

AT THE CONFERENCE

   1. Attend the mandatory coordinator's meeting at the designated time and location.

   2. Report to the CRC room and obtain the coordinator's packet; check the contents.

   3. Review the event guidelines and check to see that enough judges and assistants have been scheduled.

   4. Inspect the area in which the debates will take place for appropriate set-up including sufficient number and size of tables.

   5. Develop a heat schedule, taking into consideration the number of preparation and debate rooms, the number of entries, and the time allotted for the event. Twenty (20) minutes should be allowed for each debate.

   6. Develop a semifinalist schedule, taking into account the number of semifinalists and the time allotted for the event. Twenty (20) minutes should be allowed for each semifinalist debate. Include an additional ten (10) minutes per round to allow for each team to participate (individually) in the semifinalist LEAP interview immediately following their semifinalist debate (maximum of five [5] minutes per team).

7. From the list of subtopics, choose one subtopic that will be used for each round. One (1) subtopic may be chosen for the preliminary heats and a different subtopic for the semifinalist round. The subtopic chosen must apply for all teams.

8. At least one (1) hour before the event is scheduled to begin, meet with judges/assistants to review time limits, procedures, and regulations. If questions arise that cannot be answered, speak to the event manager before the event begins.

EVENT CHECK-IN/PRELIMINARY ROUND

1. Gather with the participants at the scheduled time and place noted in the conference program for a pre-event meeting.

2. At this meeting, take attendance, collect LEAP Reports, review rules and procedures, provide directions and information, and announce the selected subtopic that all participants will present on in the first round.

3. Teams who do not submit the required team LEAP Report are not permitted to compete.

4. Only one (1) team member needs to attend this meeting. Failure of a team representative to attend this meeting will result in disqualification. The coordinator may:

   a. allow participants to select a debate time, or

   b. pre-assign times and inform the participants of the schedule

5. Begin the event by checking in the participants when they arrive at the preparation room at their scheduled time.

6. When two (2) teams and a debate room are available, have one (1) team draw one (1) or two (2) schedule cards (one [1] card will have Pro written on it and the other card will have Con written on it).

   a. The view a team selects will apply for the entire event.

   b. Each team, with the coordinator's assistance, will complete the remaining information on the card.

   c. This card, along with a team's reference summary, will be given to the judges once a team has entered the debate room.

7. Record the view each team is presenting on the scheduling sheet.

8. Have the escort take the teams to the debate room.

9. The escort will announce to the judges the identification number of the Pro team first and then the Con team.

   a. Each team will then sit on a designated side of the podium.

   b. The judges will need to record each team's identification number on the judge's evaluation sheet.

10. The escort should remain in the debate room until the end of the debate, when s/he will escort each team from the room. This process of escorting teams into and then out of the debate room for competition will take place until all teams have participated.

11. If there is an odd number of teams entered in this event (see Procedure 19), teams will be randomly selected to determine the team that will debate twice. If a team debates twice, its highest score will be used to determine placement.

12. When the timekeeper/announcer has confirmed that the teams and judges are ready to begin, s/he will instruct the Pro speaker to approach the podium and begin.

13. The timing of each debate will start when the speaker begins; however, if there are any unreasonable delays, the speaker will be warned by the timer and timing will begin.

14. Timing of the conference break will start once the Con speaker has completed the presentation. The timekeeper will inform the teams that they are in the conference break and will also inform the teams when the period is over.

15. Once the conference break is over, the Pro cross examination speaker will approach the podium and begin, followed by the Con cross examination speaker.

16. Timing of the second conference break will begin once the Con cross examination speaker is seated.

17. Once the second conference break is over, the Pro rebuttal speaker will approach the podium and begin, followed by the Con rebuttal speaker.

18. When the Con rebuttal speaker is finished, s/he should return to his/her seat. The timekeeper will collect the summary of references from both teams. When the evaluators are ready, the timekeeper will announce to the teams that they are to leave the room and they will be escorted out by the escort.

19. The judges will inform the escort when they are ready for a new set of teams so that the escort may return to the preparation room.

20. Following the last team's presentation, the judges will complete the scoring, making adjustments for time penalties.

21. For participants who violate the rules, the decision either to
    a. deduct 20% of the total possible points or
    b. to disqualify the entry must be discussed and verified with the judges, event coordinator, and a CRC manager.
    c. The event coordinator, judges, and CRC manager must all initial either of these actions on the rating form.

22. Following the preliminary heats, judges determine twelve (12) semifinalist teams and submit the results to the CRC for posting.

SEMIFINAL ROUND

1. At the time and place stated in the conference program, meet with semifinalists to review scheduling and procedures.

2. Follow procedures as above for the semifinalist round of debates. The semifinalist LEAP interviews will take place immediately following each semifinalist debate and will last a maximum of five (5) minutes per team.

3. All communication related to judges and participants during the debate should be handled by the timekeeper.

4. For participants who violate the rules, the decision either to
    a. deduct 20% of the total possible points or
    b. to disqualify the entry must be discussed and verified with the judges, event coordinator, and a CRC manager.
    c. The event coordinator, judges, and CRC manager must all initial either of these actions on the rating form.

5. Judges determine the ranking of the ten (10) finalists, and discuss and break any ties. (Determine the procedure for breaking ties before the onsite competition begins.)

6. Review and submit the finalist results and all items/forms in the results envelope to the CRC room.

7. If necessary, manage security and the removal of materials from the event area.

DIGITAL VIDEO PRODUCTION

OVERVIEW

Participants have the opportunity to use digital video skills, tools, and processes to communicate, entertain, inform, analyze, or illustrate the given year's theme. An extremely powerful and ubiquitous medium, video technology has great potential, strengths, and limitations that should be understood by all.

ELIGIBILITY

Three (3) teams per state may participate; an individual may participate solo in this team event.

TIME LIMITS

1. The video must not exceed three (3) minutes in length.
   a. If it is over three (3) minutes, a time violation of five (5) points will be assessed.
   b. Time starts with the first image or sound and continues until the last sound or image ends.
2. Semifinalists will participate in a LEAP interview that will last a maximum of five (5) minutes.

LEAP

A team LEAP Report is required for this event and must be submitted at event check-in (see LEAP Program).

ATTIRE

TSA competition attire is required for this event.

PROCEDURE

PRELIMINARY ROUND

1. Participants check in their entries and submit a LEAP Report at the time and place stated in the conference program.
2. Entries are reviewed by judges. Neither students nor advisors are present at this time.
3. A list of twelve (12) semifinalists (in random order) will be posted by the CRC.

SEMIFINAL ROUND

1. Semifinalist teams will report at the time and place stated in the conference program to sign up for a semifinalist LEAP interview.
2. The top ten (10) finalists will be announced at the awards ceremony.

REGULATIONS

PRELIMINARY ROUND

A. Videos
   1. Must be submitted on a USB flash drive in MP4 format.
   2. Must not exceed three (3) minutes in length. If a video exceeds three (3) minutes, a time violation will be assessed.
   3. May be an individual or team project.
   4. All video footage must be the original work of the team.
   5. All ideas, text, images, and sound from other sources must be properly cited.
   6. If copyrighted material is used, proper written permission must be included. NOTE: The video production product will not be judged if copyright procedures are not followed.

B. Documentation materials (comprising "a portfolio") are required and must be placed in a multi-page, single-file PDF on a USB drive, in this order:
   1. LEAP Report
   2. Title page with the event title, the title of the video, the conference city and state, and the year; one (1) page
   3. Table of contents; pages as needed
   4. Purpose and description of the video; one (1) page
   5. Team's self-evaluation of the video, using criteria from the official rating form; one (1) page
   6. Hand sketched storyboard; pages as needed
   7. Digital video script; pages as needed

8. List of hardware and software used in the development of the video; one (1) page

9. List of references that includes sources for materials (copyrighted and non-copyrighted); pages as needed

10. Permission letters for copyrighted material (including clips and images); pages as needed

11. Completed and signed Student Copyright Checklist (see Forms Appendix or TSA website)

12. Signed consent forms for all video participants (see Forms Appendix or TSA website)

13. Plan of Work log that indicates preparation for the event, as noted by date, task, time involved, team member responsible, and comments (see Forms Appendix or TSA website); one (1) page

14. USB flash drive should be submitted secured in the documentation portfolio.

SEMIFINAL ROUND

A. The LEAP Report

1. Participants document the leadership skills they have developed and demonstrated while working on this event, and on a non-competitive event leadership experience.

2. Participants will respond to questions about the content of the LEAP Report as part of the LEAP interview, which will last a maximum of five (5) minutes.

3. Specific LEAP Report regulations can be found in the LEAP Program section of this guide and on the TSA website.

EVALUATION

PRELIMINARY ROUND

1. Evaluation will be based on the video footage and on the accompanying documentation.

2. Depending on the stated purpose, videos are judged on story concept, artistic and/or social value, audio and camera techniques, transitions, and pace, as well as technical attributes, creativity and organization, and the overall effect.

3. Portfolios must be complete, well-written, and professional in organization and appearance.

SEMIFINAL ROUND

The content and quality of the LEAP Report and interview will be evaluated.

Refer to the official rating form for more information.

STEM INTEGRATION

This event aligns with the STEM educational standards of Science, Technology, Engineering, and Mathematics.

CAREERS RELATED TO THIS EVENT

- Audio/video operator or technician
- Cinematographer
- Film/video editor
- Screen editor

DIGITAL VIDEO PRODUCTION

2019 & 2020 OFFICIAL RATING FORM

HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

- ☐ Video is readable/playable on judge's device.
- ☐ Documentation is present as a PDF file/USB.
- ☐ Student Copyright Checklist and release forms are present.
- ☐ Completed LEAP Report is present.
- ☐ ENTRY NOT EVALUATED

PREPRODUCTION DOCUMENTATION (30 points)				Record scores in the column spaces below.
CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Portfolio components (X1)	The portfolio is completely unorganized and/or is missing three (3) or more components.	The portfolio is missing two (2) components and/or is loosely organized.	The portfolio is clearly organized and has either one or no missing components.	
Purpose and description (X1)	The purpose and description of the video are unclear and hard to visualize.	The purpose and description of the video are clear, and they are generally concisely written.	The documentation provides a clear and concisely written purpose and description that interests the reader.	
Storyboard (X1)	The hand-sketched storyboard and script are sloppy, appear to be thrown together as an after-thought, and/or do not correlate with the video.	The storyboard and script are drawn appropriately and generally correlate with the completed video.	The storyboard and script are of exceptional aesthetic and artistic quality, and they clearly correlate with the video.	
PREPRODUCTION DOCUMENTATION SUBTOTAL (30 points)				

VIDEO PRODUCTION (70 points)				Record scores in the column spaces below.
CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Video (X1)	The video shots have obvious problems with focus, steadiness, and framing.	The video shots are clearly focused and framed, but there is limited use of close-ups.	The video is enhanced by steady, creative shots; and it incorporates excellent use of close-ups.	
Audio (X1)	The audio quality is poor, a result of primary use of the on-camera microphone for recording.	The audio quality is clear, with good levels, and reflects the correct use of microphones and audio techniques.	The audio quality is excellent, with use of additional audio clips/cues that enhance the video production.	

DIGITAL VIDEO PRODUCTION

VIDEO PRODUCTION (70 points) – continued

	Minimal	Adequate	Exemplary	
Lighting (X1)	The video reflects poor ambient lighting choices and/or the use of heavy back-lighting.	The video reflects adequate lighting on subjects and the proper use of lighting techniques.	The video reflects an excellent and creative use of lighting, which propels the story emotionally.	
Continuity and pacing (X1)	The sequencing is confusing or incomprehensible; shots are left on too long, and edit points/transitions are "glitchy."	The pace and timing are well structured; the shots move along, helping to tell the story, and there is moderate use of transitions.	The shots are logically paced and move the story along in an interesting way, with excellent and purposeful use of transitions.	
Creativity and originality (X1)	There is little original thought or creativity in the design and production, resulting in what appears to be a simple piecing together of events.	The video reflects original thought and creative elements that are effectively expressed and highlighted.	Originality and creativity are at the forefront of the video, with thematic elements incorporated in a highly authentic way.	
Video effectiveness (X2)	The work does not meet the project goals, has an unclear message, and reflects sloppy work.	The topic is presented with some insight, and the video meets most project goals.	The video is focused, with a clear message and a rich variety of supporting material.	
VIDEO PRODUCTION SUBTOTAL (70 points)				

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

Time violation (a deduction of five (5) points total will be incurred for exceeding the three (3)-minute limit for the length of the video). Record the deduction in the space to the right.

PRELIMINARY SUBTOTAL (100 points)

SEMIFINAL LEAP INTERVIEW (10 points)

Record scores in the column spaces below.

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
LEAP Report/ Interview (10% of total event points)	The individual's or team's efforts are not clearly communicated, lack detail, and/or are unconvincing; few, if any, attempts are made to identify and/or incorporate the SLC Practices and Behaviors.	The individual's or team's efforts are adequately communicated, include some detail, are clear, and/or are generally convincing; identification and/or incorporation of the SLC Practices and Behaviors is adequate.	The individual's or team's efforts are clearly communicated, fully-detailed, and convincing; identification and/or incorporation of the SLC Practices and Behaviors is excellent.	
SEMIFINAL LEAP INTERVIEW SUBTOTAL (10 points)				

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

SEMIFINAL SUBTOTAL (10 points)

To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary.	**TOTAL (110 points)**	

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____   Signature: _____

DIGITAL VIDEO PRODUCTION EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Judges

    1. Preliminary round, two (2) or more

    2. Semifinal round, two (2) or more

MATERIALS

A. Coordinator's packet, containing:

    1. Event guidelines, one (1) copy for the coordinator and for each judge

    2. TSA Event Coordinator Report

    3. List of judges/assistants

    4. Pre-populated flash drives for judges

    5. One (1) stopwatch per team of judges

    6. Stick-on labels for entries, as needed

    7. Results envelope

    8. Envelope for LEAP Reports

    9. LEAP Interview Judging Protocol

B. Tables and chairs for judges

C. Computers capable of reading a USB, as needed

D. Extension cords (25' minimum length), as needed

E. Power bars with surge protection, as needed

RESPONSIBILITIES

AT THE CONFERENCE

1. Attend the mandatory coordinator's meeting at the designated time and location.

2. Report to the CRC room and check the contents of the coordinator's packet.

3. Review the event guidelines and check to see that enough judges/assistants have been scheduled.

4. Inspect the area(s) in which the event is to be held for appropriate set-up, including room size, chairs, tables, outlets, etc. Notify the event manager of any potential problems.

5. At least one (1) hour before the event is to begin, meet with judges to review time limits, procedures, and regulations. If questions arise that cannot be answered, speak to the event manager before the event begins.

PRELIMINARY ROUND

1. Place an identification number on each USB drive. Secure the entries in the designated area.

2. All participants and judges should be in the room at this time.

3. Anyone reporting who is not on the entry list may check in only after official notification is received from the CRC.

4. Late entries are considered on a case-by-case basis and only when the delay is caused by events beyond participant control.

5. In order to compete, participants must be on the entry list or must have approval of the CRC.

6. Each group of judges determines the top five (5) entries from that group. (The number of evaluator groups depends on the number of entries. Typically, there are two [2] evaluators for every twenty [20] entries.) The top five (5) entries from each group are forwarded to the event coordinator.

7. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

    a. To deduct twenty percent (20%) of the total possible points in this round or

    b. To disqualify the entry

    c. The event coordinator, judges and CRC manager must all initial either of these actions on the rating form.

8. Judges determine the twelve (12) semifinalists and discuss and break any ties.

9. The coordinator notes the semifinalists (there may be more than twelve [12]) for further evaluation and LEAP interviews.

10. Review and submit semifinalist results and all related forms in the results envelope to the CRC room.

SEMIFINAL ROUND

1. Meet with semifinalist teams at the time and place stated in the conference program to allow them to sign up for a semifinalist LEAP interview time.

2. Inspect the area in which the LEAP interviews will take place. Ensure that there is a table and seating for participants and judges.

3. Meet with semifinalist judges to review the LEAP Judging Protocol. If questions arise that cannot be answered, speak to the event manager before the semifinalist interviews begin.

4. Conduct semifinalist LEAP interviews. Interviews should be a maximum of five (5) minutes in length.

5. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

    a. To deduct twenty percent (20%) of the total possible points in this round or

    b. To disqualify the entry

    c. The event coordinator, judges and CRC manager must all initial either of these actions on the rating form.

6. Judges determine the ranking of the ten (10) finalists and discuss and break any ties. (Determine the procedure for breaking ties before the onsite competition begins.)

7. Review and submit the finalist results and all items/forms in the results envelope to the CRC room.

8. Return all USBs, computers, portfolios, extension cords, and supplies to the CRC room.

9. If necessary, manage security and the removal of materials from the area.

DRAGSTER DESIGN

OVERVIEW

Participants design, produce a working drawing for, and build a CO_2-powered dragster according to stated specifications, using only certain materials.

ELIGIBILITY

Two (2) individuals per chapter, one (1) entry per individual.

TIME LIMITS

The top sixteen (16)-qualifying dragster builders will participate in a five (5)-minute car builder interview and a LEAP interview, which will last a maximum of five (5) additional minutes.

LEAP

An individual LEAP Report is required for this event and must be submitted at event check-in (see LEAP Program).

ATTIRE

TSA competition attire is required for this event.

PROCEDURE

PRELIMINARY ROUND

1. Participants check in their dragster, drawing, and LEAP Report at the time and place stated in the conference program.
2. Entries are reviewed by judges to determine safety on the track.
3. Safe dragsters race for qualifying time on the same lane of the raceway.
4. The top sixteen (16) qualifying entries, based on the time trials, are evaluated against the criteria for this event.
5. Dragsters that do not meet event regulations are disqualified and lower qualifying cars are moved up until sixteen (16) dragsters that meet specifications are determined.

SEMINFINAL ROUND

1. The top sixteen (16) dragster builders will report to the track at the posted time for a five (5)-minute interview immediately followed by the LEAP interview (maximum of five [5] additional minutes).
2. The top sixteen (16) entries race in a double-elimination format to earn points for the race portion of the event.
3. Drawing, design, and body finish points are combined with race points to determine the final standings.
4. The top ten (10) finalists will be announced at the awards ceremony.

REGULATIONS

PRELIMINARY ROUND

A. Participants must check the national TSA website under Competitions/Themes and Problems for the current year's design challenge specifications.
B. Drawings:
   1. The two (2)-view (top and side) drawing with metric dimensions is made on drawing paper no larger than 11" x 17" in size.
   2. Drawings are developed using standard engineering practices and procedures.
   3. The drawing may be produced using traditional drafting methods or CAD.
   4. The title block includes only the participant's identification number, which is assigned at registration time and is placed on the entry and drawing during check-in.
C. Dragsters that do not meet the below specifications/tolerances are disqualified from the race.

Dragster body		
	MINIMUM	**MAXIMUM**
1. One (1)-piece, all-wood construction; any type of lamination results in disqualification. No add-ons such as body strengtheners, fenders, plastic canopy, exhausts, or air foils may be attached to or enclosed within the vehicle. Fiberglass and shrink wrap are considered body strengtheners and cannot be used on the car body for any reason. Decals may be used for decoration only; they may not be used to gain an aerodynamic advantage, i.e., decals cannot cover the exterior axle holes or be used to cover open areas of the body. Two (2) or more like or unlike pieces of wood glued together are not considered one (1)-piece, all-wood construction.		
2. Body length	(2019) 295mm (2020) 210mm	(2019) 305mm (2020) 220mm
3. Body height with wheels		75mm
4. Body mass (completed car without CO_2)	(2019) 55g (2020) 30g	N/A
5. Body width at the point the axles pass through the body, front and back	35mm	42mm
6. Vehicle total width (including wheels).		90mm

Axles/axle holes/wheelbase		
	MINIMUM	**MAXIMUM**
1. Dragsters must have two (2) axles per car, no more.		
2. Bottom of axle hole or bearing above bottom of car body. (NOTE: This will be only be measured at the side surfaces of the wood car body at the axle hole.)	5mm	10mm
3. Axle hole from front and rear of car	9mm	100mm
4. Wheelbase (axle distance apart at farthest points)	105mm	270mm
5. Bearings, bushings and lubricants may be used.		
6. Glue may be used to secure bearings to body.		

Spacer washers/clips		
	MINIMUM	**MAXIMUM**
1. Spacer washers		8
2. Axle clips		8
3. Silicone or any other type of glue/adhesive may not be used in place of wheel clips to hold wheels or axles in place.		

Power plant (CO$_2$ cartridge hole)

	MINIMUM	MAXIMUM
1. The power plant hole must be at the farthest point at the rear of the car and must be drilled parallel to the racing surface to assure proper puncture of the CO$_2$ cartridge. A minimum of 3mm thickness around the entire power plant hole must be maintained on the dragster for safety. The inside of the power plant hole must not be intentionally painted.		
2. Hole depth	45mm	55mm
3. Safety zone thickness	3mm	
4. Chamber diameter	19mm	20mm
5. Lowest point of chamber diameter to race surface (with wheels)	26mm	40mm

Screw eyes

	MINIMUM	MAXIMUM
1. Dragsters must have two (2) screw eyes (no more) per car that meet tolerances. Screw eyes must not make contact with the racing surface. The track string must pass through both screw eyelets, which are located on the center line of the bottom of the car. Glue may be used to reinforce the screw eyes. It is the responsibility of the car designer/ engineer to see that the screw eye holes are tightly closed to prevent the track string from slipping out. As with all adjustments, this must be done prior to event check-in.		
2. Inside diameter	3mm	5mm
3. Distance apart (at farthest points)	150mm	270mm

Wheels

	MINIMUM	MAXIMUM
1. A dragster must have four (4) wheels, no more. a. Two (2) wheels must meet the requirements in #2 and #3 below. b. The other two (2) wheels must meet the requirements in #4 and #5 below. c. All four (4) wheels must touch the racing surface at the same time. d. All wheels must roll. e. Wheels must be made entirely from plastic. f. Dimensions must be consistent for the full circumference of each wheel. g. Measurement represents the FULL surface contact point where wheel makes contact with the track.		
2. Front diameter	32mm	37mm
3. Front width (at surface contact point)	1.5mm	5mm
4. Rear diameter	35mm	40mm
5. Rear width (at full, unbroken, surface contact point)	12mm	18mm

SEMINFINAL ROUND

A. Race

1. The official distance between the start line and the finish line on the race track is twenty (20) meters.

2. No repair or maintenance is allowed after the entries have been registered.

3. Any entry damaged during the race is evaluated by the event coordinator to determine whether or not the vehicle is allowed to race again.

4. In the event that the vehicle is damaged by conference personnel, the event coordinator rules as to whether or not the vehicle may be repaired by the student entering the vehicle. This is the only reason a student is allowed to touch his/her vehicle after registration.

5. Undamaged wheels that come off during the event may be replaced as determined by the event coordinator.

6. Damaged wheels may not be replaced.

7. All CO_2 cartridges for the race are provided by national TSA.

B. The LEAP Report

1. Participants document the leadership skills they have developed and demonstrated while working on this event, and on a non-competitive event leadership experience.

2. Participants will respond to questions about the content of the LEAP Report as part of the LEAP interview, which will last a maximum of five (5) minutes.

3. Specific LEAP Report regulations can be found in the LEAP Program section of this guide and on the TSA website.

EVALUATION

1. Points earned through car design and appearance

2. Accuracy and quality of the drawing

3. Points earned from the (top 16) interviews

4. Placement in the double elimination onsite race

5. The content and quality of the LEAP Report and interview

Refer to the official rating form for more information.

STEM INTEGRATION

This event aligns with the STEM educational standards of Science, Technology, Engineering, and Mathematics.

CAREERS RELATED TO THIS EVENT

• Automotive designer
• Automotive modeler
• Industrial designer
• Industrial engineer
• Race car engineer

DRAGSTER DESIGN
2019 & 2020 OFFICIAL RATING FORM
HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

☐ Vehicle meets specifications described in Regulations.
☐ Completed LEAP Report is present.
☐ ENTRY NOT EVALUATED

DRAGSTER CONSTRUCTION (50 points)				Record scores in the column spaces below.
CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Dragster body production quality (X1)	Dragster exhibits poor production quality, with a crude and rough surface and little or no attention to detail.	Dragster shows evidence of proper production techniques; it is adequate but may need improvement.	Dragster displays excellent production techniques, with obvious attention to detail and quality.	
Body paint/finish (X1)	Surface preparation is inadequate; the body is unprimed, with poorly applied final finish.	Dragster body is painted and finished adequately.	Dragster body finish is exemplary; body is smooth, shiny, and exhibits quality.	
Vehicle assembly (X1)	Dragster exhibits poor or sloppy assembly of parts (wheels are loose, screw eyes are loose and/or not level, etc.).	Dragster is well assembled, with adequate attention to detail.	Dragster is properly assembled, with obvious evidence of attention to detail.	
Drawing scale and dimensioning (X1)	The drawing is present, but is not to scale; dimensions are missing, or dimensioning is poorly done.	The drawing is acceptable and to scale; it is a close representation of the vehicle, but some dimensions may be missing.	The drawing is exemplary, exact, and includes all pertinent dimensions.	
Drawing completion and quality (X1)	The drawing is sloppy, missing parts, and lacking quality.	The drawing is complete, and the quality is adequate.	The drawing is complete and precise, and of exceptional quality.	
DRAGSTER CONSTRUCTION SUBTOTAL (50 points)				

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right. Indicate the rule violated: _____	

PRELIMINARY SUBTOTAL (50 points)	

DRAGSTER DESIGN

SEMIFINAL INTERVIEW (33 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Car builder interview (X2)	The participant demonstrates very limited knowledge of and has difficulty articulating how the car was produced or decisions made during the production; there are signs of the student not being involved in the dragster production.	The participant demonstrates some knowledge of the dragster production and has adequate knowledge of some processes or reasoning behind the vehicle design.	The participant demonstrates competence and knowledge related to the design and production of the vehicle; the student is able to articulate "reasoning" behind the decisions made.	
LEAP Report/ Interview (13 points; 10% of total event points)	The individual's efforts are not clearly communicated, lack detail, and/or are unconvincing. Few, if any, attempts are made to identify and/or incorporate the SLC Practices and Behaviors.	The individual's efforts are adequately communicated, include some detail, are clear, and/or are generally convincing. Identification and/or incorporation of the SLC Practices and Behaviors is adequate.	The individual's efforts are clearly communicated, fully-detailed, and convincing. Identification and/or incorporation of the SLC Practices and Behaviors is excellent.	
			SEMIFINAL INTERVIEW SUBTOTAL (33 points)	

RACE (55 points)

1st	2nd	3rd	4th	5th & 6th	7th & 8th	9th-12th	13th – 16th	
55 Points	50 Points	45 Points	40 Points	35 Points	30 Points	25 Points	15 Points	
							RACE SUBTOTAL (55 points)	

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary. **TOTAL (138 points)**

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____ Signature: _____

DRAGSTER DESIGN
EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Judges, two (2) or more

C. Recorder for double elimination chart, (one) 1

D. Assistants, two (2)

MATERIALS

A. Coordinator's packet and box, containing:

1. Event guidelines, one (1) copy for the coordinator and for each judge

2. TSA Event Coordinator Report

3. List of judges/assistants

4. Pre-populated flash drives for judges

5. Time trial record sheet

6. Qualifier interview time slot sheet

7. Double elimination bracket chart

8. Stick-on labels for entries, as needed

9. Results envelope

10. Envelope for LEAP Reports

11. LEAP Interview Judging Protocol

B. CO_2 cartridges

C. Metric scientific scales (triple beam balance or digital)

D. Mono-filament fishing line (suggested between 30 and 50 pound); four (4) pre-tied: two (2) on track and two (2) reserve, for the track

E. Race track set, including a starting gate and a finish gate, with a digital timer and winning lane indicator

F. Padding for the finish gate

G. Extra vehicles to test and demonstrate the track

H. Race brackets for placement of the semifinalists

I. Tables for the display of cars and for evaluation

J. Table at the starting line, for arranging and holding cars prior to the races

K. Table at the finish gate for the placement of cars after the races and to hold eliminated cars

L. Table for the official timekeeper

M. When using a computer controlled track, provide the proper computer for the software being used, all necessary connections, and a printer. This equipment is placed on the official timekeeper's table.

N. Provide for a display of time trial and race brackets.

O. Ultraviolet ink and light to mark cars and check for cars that have been previously entered..

RESPONSIBLITIES

AT THE CONFERENCE

1. Attend the mandatory coordinator's meeting at the designated time and location.

2. Report to the CRC room and obtain the coordinator's packet; check the contents.

3. Review the event guidelines and check to see that enough judges/assistants have been scheduled.

4. Inspect the area(s) in which the event is to be held for appropriate set-up, including room size, chairs, tables, outlets, etc. Notify the event manager of any potential problems.

5. Check-in the entries at the time stated in the conference program.

6. Anyone reporting who is not on the entry list may check in only after official notification is received from the CRC.

7. Late entries are considered on a case-by-case basis and only when the delay is caused by events beyond participant control.

8. Check to see that each entry drawing includes the participant's identification number in the upper right-hand corner of the paper.

9. Place an entry number on each entry.

10. Position each entry (dragster and drawing) for evaluation and viewing.

11. Secure the entries in the designated area.

12. At least one (1) hour before the event is scheduled to begin, meet with judges/assistants to review time limits, procedures, and regulations. If questions arise that cannot be answered, speak to the event manager before the event begins.

PRELIMINARY ROUND

1. Assist judges with evaluation of the design, drawing, and construction categories.

2. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

    a. To deduct twenty percent (20%) of the total possible points in this round or

    b. To disqualify the entry

    c. The event coordinator, judges and CRC manager must all initial either of these actions on the rating form.

3. Begin the time trials at the scheduled time.

    a. Every race-worthy car should be tested.

    b. Students do not have to be present.

    c. Public viewing is allowed.

    d. Each car is timed in the same lane.

    e. Cars are timed only once.

    f. It is important that each car be positioned as well as possible in the starting gate.

4. Position a judge at the starting gate to ensure that all cars are positioned in the starting gate correctly.

5. Position another judge at the finish line.

6. If there is a misfire or if a time is not properly recorded, a rerun may be ordered at the discretion of the event coordinator.

7. Record preliminary times on a time trial record sheet.

8. Place each car in the double elimination race bracket (see sample) according to the rank of its qualifying time.

9. Judges verify that the top sixteen (16) qualifying cars meet Regulation C specifications.

10. Entries that do not meet specifications are removed.

11. Cars that are damaged or broken during the qualifying round are deemed non-raceable and also are removed.

12. Only raceable cars, as determined by the judges, are allowed to compete for the semifinalist category.

13. Lower qualifying cars are moved up until there are sixteen (16) legal semifinalists.

14. Review and submit the semifinalist results and all related forms in the results envelope to the CRC room.

SEMIFINAL ROUND

1. Post the top sixteen (16) cars with interviews times.

2. Car builders will report to the track at the posted time for a five (5)-minute car builder interview and a LEAP interview, which will last a maximum of five (5) additional minutes.

3. Conduct interviews with the qualifying top sixteen (16) car builders.

4. Begin the semifinals at the scheduled time.

5. Run the semifinalist race. A sample double-elimination bracket follows.

6. Only the sixteen (16) qualifying cars are raced.

7. Students do not have to be present.

8. Public viewing is allowed.

9. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

    a. To deduct twenty percent (20%) of the total possible points in this round or

    b. To disqualify the entry

    c. The event coordinator, judges and CRC manager must all initial either of these actions on the rating form

10. Judges use qualifying times to break any ties among the sixteen (16) qualifying cars.

11. Review and submit the finalist results and all related forms in the results envelope to the CRC room. If necessary, manage security and the removal of materials from the event area.

RACE BRACKET FOR 16-CAR DOUBLE ELIMINATION

ENGINEERING DESIGN
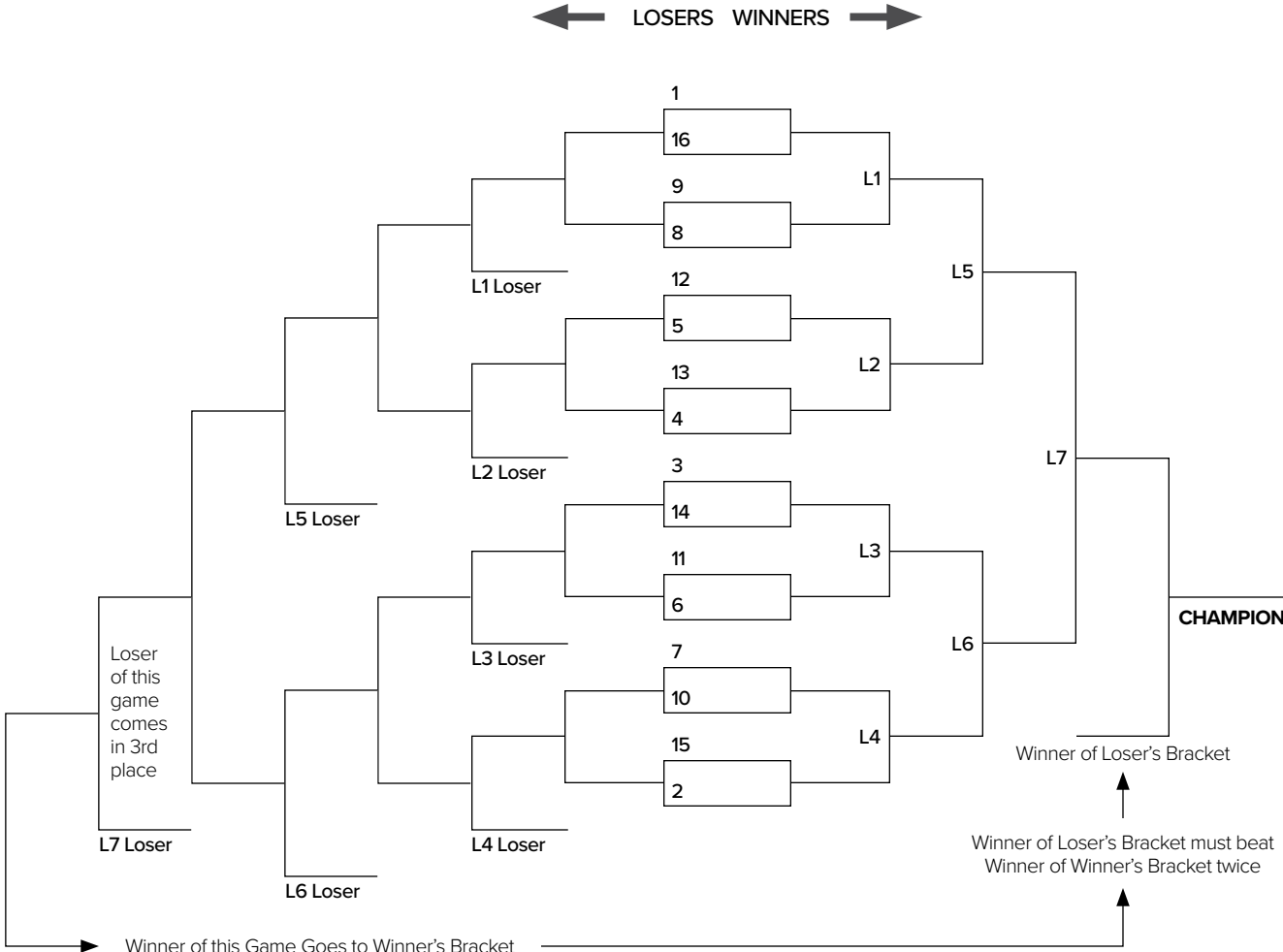
OVERVIEW

The National Academy of Engineering has identified fourteen (14) paramount current and emerging societal challenges that engineering can play a major role in solving. Through research and critical problem-solving, teams will develop a solution to a grand challenge posted on the national TSA website under Competition Themes/Problems.

The solution offered will be informed and designed by precise problem definition, thorough research, creativity, experimentation (when possible), and the development of documents and appropriate models (mathematical, graphical, and/or physical prototype/model). Semifinalist teams will present and defend their proposed solution to a panel of judges. The semifinalist presentation will be in the format of a poster session (the poster will be contained in a display).

ELIGIBILITY

Three (3) teams of three to six (3-6) members per state may participate.

TIME LIMITS

1. Semifinalist teams will be given ten (10) minutes to present and defend their proposals to judges.
2. Judges may ask questions during the team's presentation and may question each team for an additional five (5) minutes at the conclusion of the presentation.
3. The LEAP interview will be conducted as part of the semifinalist presentation/interview and will last a maximum of five (5) additional minutes.

LEAP

A team LEAP Report is required for this event and must be submitted at event check-in (see LEAP Program).

ATTIRE

TSA competition attire is required for this event.

PROCEDURE

PRELIMINARY ROUND

1. Teams check in their entries at the time and place stated in the conference program.
   a. portfolio in pdf format on two [2] USB flash drives
   b. poster
   c. physical model display, or visual representation,
   d. LEAP Report
2. No more than two (2) team members set up the display.
3. Portfolios will be evaluated to determine the top twenty-four (24) entries.
   a. Only the top twenty-four (24) displays will then be evaluated to determine the twelve (12) semifinalists.
   b. Neither students nor advisors are present at this time.
4. A list of twelve (12) semifinalists (in random order) will be posted.

SEMIFINAL ROUND

1. Three (3) representatives from each semifinalist team report to the event area for the interview at the time and place stated in the conference program.
2. Each semifinalist team explains its research and solution for the challenge. Semifinalist teams will use a poster to assist in the defense and explanation of their proposed solution.
3. The semifinalist LEAP interview will take place as part of the semifinalist presentation/interview.
4. The top ten (10) finalists will be announced at the awards ceremony

REGULATIONS

PRELIMINARY ROUND

A. Teams must demonstrate a firm understanding of the challenge and problem they are addressing. A team's entry must reflect thorough and serious research, as well as a creative and plausible solution.

B. A team's solution must include likely impacts to the environment, economy, and society, as well as any important ethical considerations, and/or political ramifications.

C. Documentation materials (comprising "a portfolio") are required and must be submitted on two (2) USB flash drives in PDF format, and include the following single sided 8½" x 11" pages, in this order:

1. LEAP Report

2. Title page with the challenge listed, event title, the conference city and state, and the year; one (1) page

3. Table of contents; pages as needed

4. Definition of the challenge/problem; one (1) page

5. Explanation of importance: Explain why the problem is important to society and describe the necessary scientific and technical concepts, as well as current issues related to the challenge; two (2) pages

6. Pages titled "Problem Solution": Present the solution for the identified problem, with support from scientific concepts and principles drawn from evidence. Mathematical and graphic models should be included as necessary, as well as photographs of any physical models developed; seven (7) pages, maximum

7. Patent Application: to include specification, drawing, and oath or declaration (refer to www.uspto.gov)

8. Plan of Work log that covers the life of the project including date, task, time involved, team member responsible, and comments (see Forms Appendix or TSA website); pages as needed

9. Page(s) titled "References and Resources" that cite books, interviews, professional journals, websites, etc., using Modern Language Association (MLA) style; pages as needed

D. The size of the display may not exceed 15" deep x 3' wide x 4' high.

E. A free-standing poster is required. The height and width of the poster must be within the limits of the display.

F. A physical model/s (or prototype/s) is/are required and must remain within the display limits at all times (including during judging).

G. If the display or physical model/s or prototype/s require power, they must be powered by dry cell(s) or photo-voltaic cells.

1. The power supply must fit inside the display area.

2. All power must be off once the team has completed set-up.

3. Complete instructions must be provided for the judges to press one (1) button or flip one (1) switch to turn on the power supply for judging.

H. No harmful or illegal substances are permitted. No viruses, live plants, or animals are permitted. No dangerous processes, experiments, or physical models may be displayed or demonstrated.

SEMIFINAL ROUND

A. Each team must be prepared to send three (3) representatives to a semifinalist poster presentation and interview.

B. During the semifinalist presentation and interview, each team will be given ten (10) minutes to present and defend its entry to the judges.

1. Judges may ask questions during the team's presentation for purposes of improved clarity and understanding and may also ask questions for an additional five (5) minutes at the conclusion of the presentation.

2. During the presentation/interview teams will be expected to use their posters to enhance and explain their proposed solution/s to the challenge and problem addressed.

C. The LEAP Report

1. Teams document the leadership skills they have developed and demonstrated while working on this event, and on a non-competitive event leadership experience.

2. Teams will respond to questions about the content of the LEAP Report as part of the LEAP interview, which will last a maximum of five (5) minutes.

3. Specific LEAP Report regulations can be found in the LEAP Program section of this guide and on the TSA website.

EVALUATION

PRELIMINARY ROUND

1. Portfolios, which will be evaluated to determine the top twenty-four (24) entries. Only the top twenty-four (24) displays will then be evaluated to determine the twelve (12) semifinalists.

2. The model or prototype display

3. The poster

SEMIFINAL ROUND

1. Event-specific presentation/interview

2. The content and quality of the LEAP Report and interview

Refer to the official rating form for more information.

STEM INTEGRATION

This event aligns with the STEM educational standards of Science, Technology, Engineering, and Mathematics.

CAREERS RELATED TO THIS EVENT

- Civil engineer
- Environmental scientist
- Health and safety specialist
- Manufacturing consultant
- Mechanical engineer

ENGINEERING DESIGN
2019 & 2020 OFFICIAL RATING FORM
HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

- ☐ Portfolio is present (two [2] USB flash drives)
- ☐ Meets size constraints.
- ☐ Physical model or prototype is present.
- ☐ Free-standing poster is present.
- ☐ Completed LEAP Report is present.
- ☐ ENTRY NOT EVALUATED

DOCUMENTATION (120 points)				Record scores in the column spaces below.
CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Portfolio components (X1)	Portfolio is unorganized and/or is missing three or more components.	Portfolio has most components and is generally organized.	Portfolio has all required components and is well organized.	
Problem definition (X1)	The problem is not clearly written or defined; the problem does not fall within the grand challenge selected.	The problem is somewhat clearly written and defined.	The problem is clearly written, concise, and well defined; the problem falls within the grand challenge selected.	
Explanation of importance (X2)	There is little evidence of research; there is a lack of understanding of the issues cited.	There is some evidence of research; an adequate understanding of the issues is present.	Thorough research is clearly evident with a firm understanding of the issues established.	
Problem solution (X4)	A very brief explanation of the final solution is presented; there is a lack of creativity; descriptions are weak.	An adequate description of the solution is presented and supported by some amount of research and evidence; the solution is somewhat creative.	The solution is supported by the research gathered and scientific and engineering evidence; the solution is plausible and creative.	
Patent application (X2)	The patent application is incomplete, poorly worded, or missing.	The patent application is complete, but adequately worded, with somewhat effective drawings.	The patent application is complete and effective in presenting the inventor's product design.	
Plan of Work log (X1)	The log is poorly organized and/or incomplete.	The log is adequately detailed, organized, and contains most of the required components.	The log is very well done and contains all the required components.	
References and resources (X1)	There are few references listed, and/or references listed show little relevance to the project's goal.	There are a sufficient number and quality of references listed.	Many quality references are listed, reflecting research in the areas covered.	
DOCUMENTATION SUBTOTAL (120 points)				

DISPLAY (POSTER AND MODELS) (50 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Aesthetics (X1)	The poster design is unattractive in appearance and shows a lack of understanding of graphic design principles.	The poster design is somewhat attractive and shows an adequate understanding of the use of graphic design principles.	The poster is of professional quality with an exemplary use of graphic design principles.	
Use of mathematical models, graphic models, and/or physical models (if included) (X1)	Models are confusing and do not represent and/or support the proposed problem solution.	Models provide adequate representation and support of the proposed problem solution.	Models provide excellent representation and support of the proposed problem solution.	
Overall impact (X3)	The poster information and models do not detail or enhance the essential components of the team's problem identification and solution.	The poster information and models somewhat detail and enhance the essential components of the team's problem identification and solution.	The poster information and models greatly detail and enhance the essential components of the team's problem identification and solution.	
			DISPLAY SUBTOTAL (50 points)	

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

PRELIMINARY SUBTOTAL (170 points)	

SEMIFINAL PRESENTATION/INTERVIEW (127 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Organization (X1)	Team seems unprepared and unorganized for the presentation/interview, with an illogical explanation of the project.	Team is prepared for the interview and is somewhat organized in its presentation to judges; team's presentation thesis is, for the most part, logical and/or clear.	Team's presentation/interview with judges is well organized; the interview is concise and logical, with a clear explanation of the development of the project.	
Knowledge (X1)	Team members seem to have little understanding of the concepts in their project; vague interview answers are provided.	Team members have a generalized understanding of the concepts discussed and answer questions adequately.	Evidence is clear that team members have a thorough understanding of the concepts discussed; they answer questions thoroughly.	
Articulation (X1)	The presentation and interview provide an unclear, unorganized, and or illogical description of the project.	The presentation and interview offer a somewhat logical and easy-to-understand project description.	The presentation/interview provides a clear, concise, and easy-to-follow description of the project.	
Delivery (X1)	The team is verbose and/or uncertain in its presentation/interview; participants' posture, gestures, and lack of eye contact diminish the delivery.	The team is somewhat well-spoken and clear in its presentation/interview; participants' posture, gestures, and eye contact result in an acceptable delivery.	The team is well-spoken and distinct in its presentation/ interview; participants' posture, gestures, and eye contact result in a polished, natural, and effective delivery.	

SEMIFINAL PRESENTATION/INTERVIEW (127 points) – continued				
Team participation (X1)	Only one person in the group communicates with judges; there is little or no participation from other team members.	Team members all participate to some extent and seem to understand the concepts.	Team members seem to fully understand the concepts and share an equal role in the interview.	
Poster presentation (X3)	The presentation shows a lack of understanding and knowledge of the problem and the team's solution to it.	The presentation gives a general understanding and knowledge of the problem and the team's solution for it.	The presentation shows a great understanding and articulation of the problem and the team's solution for it; team members make excellent use of the poster to feature or explain complex information.	
Responses to judges' questions (X2)	The team's answers to questions reflect a lack of understanding and sophistication; only one or two team members contribute.	The team's answers to questions reflect an adequate degree of understanding and sophistication; team members all participate somewhat.	The team's answers to questions reflect a high degree of understanding and sophistication; team members participate equally.	
LEAP Report/ Interview (27 points; 10% of total event points)	The team's efforts are not clearly communicated, lack detail, and/ or are unconvincing; few, if any, attempts are made to identify and/or incorporate the SLC Practices and Behaviors.	The team's efforts are adequately communicated, include some detail, are clear, and/or are generally convincing; identification and/or incorporation of the SLC Practices and Behaviors is adequate.	The team's efforts are clearly communicated, fully-detailed, and convincing; identification and/or incorporation of the SLC Practices and Behaviors is excellent.	
SEMIFINAL PRESENTATION/INTERVIEW SUBTOTAL (127 points)				

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right. Indicate the rule violated: _____	

SEMIFINAL SUBTOTAL (127 points)	

To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary. **TOTAL (297 points)**	

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____   Signature: _____

ENGINEERING DESIGN EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Judges:

1. Preliminary round, two (2) or more

2. Semifinal round, two (2) or more

MATERIALS

A. Coordinator's packet, containing:

1. Event guidelines, one (1) copy for the coordinator and for each judge

2. TSA Event Coordinator Report

3. Stick on labels for entries

4. Envelopes for portfolio flash drives

5. List of judge/assistants

6. Pre-populated flash drives for judge

7. One (1) stopwatch per team of judge

8. Results envelope

9. Envelope for LEAP Reports

10. LEAP Interview Judging Protocol

B. Table and chairs for semifinalist presentation

RESPONSIBILITIES

AT THE CONFERENCE

1. Attend the mandatory coordinator's meeting at the designated time and location.

2. Report to the CRC room and obtain the coordinator's packet; check the contents.

3. Review the event guidelines and check to see that enough judges and assistants have been scheduled.

4. Inspect the area in which the portfolios are being placed for appropriate set-up including sufficient number and size of tables.

5. At least one (1) hour before the event is scheduled to begin, meet with judges/assistants to review time limits, procedures, and regulations. If questions arise that cannot be answered, speak to the event manager before the event begins.

EVENT CHECK-IN

1. Check in the entries at the time stated in the conference program.

2. Anyone reporting who is not on the entry list may check in only after official notification is received from the CRC.

3. Late entries are considered on a case-by-case basis and only when the delay is caused by events beyond participant control.

4. Place an entry number on each portfolio (USB flash drive), poster, and model (if included).

5. Secure the entries in the designated area.

PRELIMINARY ROUND

1. Judges independently review and assess all portfolios to determine the top twenty-four (24) entries.

2. Only the top twenty-four (24) displays will then be evaluated to determine the twelve (12) semifinalists.

3. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

   a. To deduct twenty percent (20%) of the total possible points in this round or

   b. To disqualify the entry

   c. The event coordinator, judges and CRC manager must initial either of these actions on the rating form.

4. Judges determine the twelve (12) semifinalists.

5. Review and submit the semifinalist results and all related items/forms in the results envelope to the CRC room for posting.

6. Create semifinalist sign-up sheet for each team's final presentation.

SEMIFINAL ROUND

1. Inspect the area in which the presentations/interviews are to take place. Ensure that there is a table and seating for the interviews.

2. At least one (1) hour before the event is to begin, meet with semifinalist judges to review time limits, procedures, and regulations. If questions arise that cannot be answered, speak to the event manager before the event begins.

3. The twelve (12) semifinalist teams report at the time and location stated in the conference program for their presentation/interview and LEAP interview.

4. The LEAP interview will be conducted as part of the regular event presentation/interview and will last a maximum of five (5) additional minutes.

5. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

   a. To deduct twenty percent (20%) of the total possible points in this round or

   b. To disqualify the entry

   c. The event coordinator, judges and CRC manager must initial either of these actions on the rating form.

6. Judges determine the ten (10) finalists and discuss and break any ties. (Determine the procedure for breaking ties before the onsite competition begins.)

7. Review and submit the finalist results and all related forms in the results envelope to the CRC room.

8. If necessary, manage security and the removal of materials from the event area.

ESSAYS ON TECHNOLOGY

OVERVIEW

Participants will write a research-based essay, using two (2) or more sources provided onsite, that makes insightful connections about a current technological topic.

ELIGIBILITY

Three (3) individuals per state are allowed to participate.

TIME LIMITS

1. The allotted time to complete the essay is two (2) hours.
2. Semifinalists will participate in a LEAP interview that will last a maximum of five (5) minutes.

LEAP

An individual LEAP Report is required for this event and must be submitted at event check-in (see LEAP Program).

ATTIRE

TSA competition attire is required for this event.

PROCEDURE

PRELIMINARY ROUND

1. Participants report to the event area at the time and place stated in the conference program.
2. Participants must submit a LEAP Report prior to receiving the writing prompt.
3. Participants prepare essays using a laptop computer (provided by participants).
4. Essays will be submitted in PDF format on a clean (unused) USB flash drive, provided by the participant.
5. Participants will be provided with a prompt and two (2) or more articles on a current technological topic.
6. Time begins after participants have received all materials.
7. After two (2) hours, participants stop writing. Each participant turns in an essay not exceeding three (3) typed pages, and one (1) works-cited page.

8. Entries are reviewed by judges. Neither students nor advisors are present at this time.
9. A list of twelve (12) semifinalists (in random order) will be posted by the CRC.

SEMIFINAL ROUND

1. Semifinalist teams will report at the time and place stated in the conference program to sign up for a semifinalist LEAP interview.
2. The top ten (10) finalists will be announced at the awards ceremony.

REGULATIONS

PRELIMINARY ROUND

A. Participants are responsible for bringing a fully-charged laptop computer complete with software necessary to produce and convert documents for the final presentation. Participants who report without a laptop will not be permitted to compete.

B. National TSA will NOT provide access to the Internet. All participants must download any and all software/programs onto their laptops prior to the event. Using a hotspot for this event will not be allowed.

C. No power sources will be provided for participants. The laptop computer must be capable of being used for the entire two (2) hour time frame of the event, without needing a power source.

D. Participants are responsible for bringing a clean (unused) USB flash drive to the event room.
   1. Flash drives must not contain any other documents, images, etc.
   2. Flash drives will not be returned to participants.
   3. Participants who report without a flash drive will not be permitted to compete.

E. Only participants are allowed in the event area. Should a participant finish before the allotted time expires, the participant is allowed to leave quietly but may not re-enter the event room.

F. Each entry must have only the participant identification number noted and centered directly below the title of the essay.

G. The length of the essay is limited to three (3) typed pages, single-spaced. The list of references is not included in the three (3) pages.

H. All essays must adhere to the following criteria:

1. 11pt Arial or Calibri font

2. One inch (1") margins on all sides

3. Single (normal) spacing

I. With the essay, participants must turn in a one (1)-page typed bibliography, using proper MLA bibliography format.

J. Essays must be submitted with a bibliography and in PDF format. Entries not following these guidelines will not be scored.

K. All essays and USB drives become the property of TSA and will not be returned.

L. LEAP Requirements

1. Participants document the leadership skills they developed and demonstrated while working on this event, and on a non-competitive event leadership experience.

2. Semifinalists will respond to questions about the content of their LEAP Report as part of their event-specific presentation/interview.

3. Specific LEAP Report regulations can be found in the LEAP Program section of this guide and on the TSA website.

EVALUATION

1. The criteria listed on the official rating form

2. The LEAP requirements

Please refer to the official rating form for more information.

STEM INTEGRATION

This event aligns with the STEM educational standards of Science, Technology, Engineering, and Mathematics.

CAREERS RELATED TO THIS EVENT

- Economist
- Engineer
- Research technician
- Scientist
- echnical writer

ESSAYS ON TECHNOLOGY
2019 & 2020 OFFICIAL RATING FORM
HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

_____

- ☐ The participant has a fully charged laptop computer.
- ☐ The participant has a flash drive.
- ☐ The entry is submitted in PDF format with a bibliography.
- ☐ Completed LEAP Report is present.
- ☐ ENTRY NOT EVALUATED

ESSAY (110 points)

Record scores in the column spaces below.

CRITERIA	Minimal performance 1-4 points	Adequate performance 5-8 points	Exemplary performance 9-10 points	
Thesis (X1)	The thesis is not a complete thought and/or is inappropriate for the essay; the title and thesis do not correlate with one another, or the thesis lacks creativity.	The thesis is evident and the idea behind it is somewhat concise and fairly creative; the essay title correlates with the thesis.	The thesis is well structured, concise, positioned appropriately, and creative; the essay title is authentic and correlates well with the thesis.	
Introduction paragraph (X1)	The introduction explains the background but may lack detail; it does not help to establish the writer's position.	The introduction creates interest and generally states the position.	A well-developed introduction engages the reader and creates interest; the introduction states a significant and compelling position.	
Supporting paragraphs (X2)	Paragraphs lack main points to support the thesis, and/or there is a poor development of ideas.	Paragraphs include main points that are related to the thesis, with adequate supporting details and a fairly well-developed narrative.	Paragraphs provide well-developed main points directly related to the thesis; supporting examples are concrete and detailed; the narrative presents a consistent and effective point of view.	
Concluding paragraph (X1)	The conclusion is recognizable, but it does not effectively summarize the topic.	The conclusion generally summarizes the topic and restates the thesis.	The conclusion wraps up the point of the essay and creatively restates the thesis.	
Organization (X1)	There is no discernible organization; transitions are not present.	A logical progression of ideas is evident; transitions are present throughout the essay.	The essay conveys a logical progression of ideas, with a clear structure that enhances the thesis; transitions are mature and graceful.	
Style (X1)	The style is confusing and hard to follow; it contains fragments and/or run-on sentences; word choice is simple, ordinary, and/or uncompelling.	The style is clear, sentences are somewhat expressive, and word choice is appropriate.	The style is smooth, skillful and coherent; sentences are strong and expressive, with varied structure; word choice is appropriate and mature.	
Mechanics (X2)	The essay contains distracting errors in punctuation, grammar, and spelling.	Punctuation, spelling, and grammar are generally correct, with few errors.	Punctuation, spelling, and grammar are correct with no errors evident.	
Research base (X1)	The essay lacks an adequate research base and/or uses minimal support from articles.	The research base is adequate, with support from articles.	The essay conveys a detailed research base that includes comprehensive support from articles.	

ESSAY (110 points) – continued

Works cited (X1)	References are not used effectively, and/or they are not cited using proper MLA format.	Most sources cited are used effectively and help to support the essay topic.	The essay incorporates multiple sources that are credible, appropriate, and support the topic.	
			ESSAY SUBTOTAL (110 points)	

Rules violations (a deduction of 20% of the total possible points in the semifinalist section) must be initialed by the evaluator, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

PRELIMINARY SUBTOTAL (110 points)	

SEMIFINAL LEAP INTERVIEW (11 points)

Record scores in the column spaces below.

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
LEAP Report/ Interview (10% of total event points)	The individual's efforts are not clearly communicated, lack detail, and/or are unconvincing; few, if any, attempts are made to identify and/or incorporate the SLC Practices and Behaviors.	The individual's efforts are adequately communicated, include some detail, are clear, and/or are generally convincing; identification and/or incorporation of the SLC Practices and Behaviors is adequate.	The individual's efforts are clearly communicated, fully-detailed, and convincing; identification and/or incorporation of the SLC Practices and Behaviors is excellent.	
			SEMIFINAL LEAP INTERVIEW SUBTOTAL (11 points)	

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

SEMIFINAL SUBTOTAL (11 points)	

To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary. **TOTAL (121 points)**	

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____ Signature: _____

ESSAYS ON TECHNOLOGY
EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Judges:

1. Preliminary round, two (2) for every twenty (20) entries for the first reading

2. Semifinal round, two (2) or more for the reading of the top-rated twenty (20) essays

3. Timekeeper

MATERIALS

A. Coordinator's packet, containing:

1. Event guidelines, one (1) copy for the coordinator and for each judge

2. TSA Event Coordinator Report

3. List of judges/assistants

4. Pre-populated flash drives for judges

5. Stopwatch

6. Zip-lock snack bags – one (1) for each participant's USB flash drive

7. Results envelope

8. Envelope for LEAP Reports

9. LEAP Interview Judging Protocol

B. Tables and chairs for judges

C. Tables and chairs for participants

D. Securable room (preferable) for the duration of the event

E. Two (2) or more articles on a current technological topic; one (1) set per participant and one (1) set per judge

RESPONSIBILITIES

AT THE CONFERENCE

1. Attend the mandatory coordinator's meeting at the designated time and location.

2. Report to the CRC room and obtain the coordinator's packet; check the contents.

3. Review the event guidelines and check to see that enough judges and assistants have been scheduled.

4. Inspect the area in which the event will take place for appropriate set-up including sufficient number and size of tables.

5. At least one (1) hour before the event is scheduled to begin, meet with judges/assistants to review time limits, procedures, and regulations. If questions arise that cannot be answered, speak to the event manager before the event begins.

EVENT CHECK-IN

1. Check in the entries at the time stated in the conference program.

2. Anyone reporting who is not on the entry list may check in only after official notification is received from the CRC.

3. Late entries are considered on a case-by-case basis and only when the delay is caused by events beyond participant control.

4. Place an entry number on each USB flash drive.

PRELIMINARY ROUND

1. Instruct participants that they must have their participant identification number only centered directly below the title of the essay. No other identifying information can be included.

2. Remind the participants to leave a one inch (1") margin on all sides of the essay.

3. Remind participants to single space their work using an 11pt Arial or Calibri font and to submit only three (3) essay pages, plus a single page for references.

4. Remind participants that they must save their work in PDF format on a flash drive.

5. Distribute both the prompt and the articles on a current technological topic to all participants. The prompt will indicate the topic and instructions for composing an essay related to the articles.

6. Instruct participants that those who finish before time is called must submit their work (on the flash drive) and leave quietly.

7. Five (5) minutes before the two (2) hours is up, make an announcement that participants have five (5) minutes to complete their essays. Exactly two (2) hours after beginning, call time and collect the flash drives from participants.

8. Supervise and assist the judges during the reading of the essays. Each entry must be read and evaluated independently.

9. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

   a. To deduct twenty percent (20%) of the total possible points in this round or

   b. To disqualify the entry

   c. The event coordinator, judges and CRC manager must initial either of these actions on the rating form.

10. Judges determine the twelve (12) semifinalists.

11. Review and submit the semifinalist results and all related items/forms in the results envelope to the CRC room for posting.

12. Create semifinalist sign-up sheet for each team's final presentation.

SEMIFINAL ROUND

1. Meet with semifinalists at the time and place stated in the conference program to allow them to sign up for a semifinalist LEAP interview time.

2. Inspect the area in which the semifinalist LEAP interviews are to take place. Ensure that there is a table and seating for participants and evaluators.

3. Meet with semifinalist judges to review the LEAP Judging Protocol. If questions arise that cannot be answered, speak to the event manager before the semifinalist presentations begin.

4. Conduct semifinalist LEAP interviews. Interviews should be a maximum of five (5) minutes in length.

5. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

   a. To deduct twenty percent (20%) of the total possible points in this round or

   b. To disqualify the entry

   c. The event coordinator, judges and CRC manager must initial either of these actions on the rating form.

6. Judges determine the ten (10) finalists and discuss and break any ties. (Determine the procedure for breaking ties before the onsite competition begins.)

7. Review and submit the finalist results and all items/forms in the results envelope to the CRC room.

8. If necessary, manage security and the removal of materials from the area.

EXTEMPORANEOUS SPEECH

OVERVIEW

Participants have the opportunity to verbally communicate their knowledge of technology or TSA subjects. Participants give a three-to-five (3-5) minute speech fifteen (15) minutes after having drawn a card on which a technology or TSA topic is written.

ELIGIBILITY

Three (3) individuals per state may participate.

TIME LIMITS

A. **Preliminary Round:**
   1. Each speech must be between three and five (3-5) minutes.
   2. Participants will be penalized one (1) point per ten (10) seconds for speaking over five (5) minutes or under three (3) minutes.
   3. Time commences when the speaker begins talking and concludes at the end of the speech.

B. **Semifinal Round:** The LEAP interview will take place immediately following each semifinalist speech and will last a maximum of five (5) additional minutes.

LEAP

An individual LEAP Report is required for this event and must be submitted at event check-in (see LEAP Program).

ATTIRE

TSA competition attire is required for this event.

PROCEDURE

PRELIMINARY ROUND

1. Participants report to the event area at the time and place stated in the conference program to sign up for a time and submit a LEAP Report.

2. At his/her assigned time, each participant draws three (3) cards, each containing one (1) topic, from a box and selects one (1) topic from the three (3) on which to speak. The cards with the unused topics are returned to the box.

3. Preparation
   a. After having selected a topic, the first participant enters a preparation room separate from the speech delivery room and is given fifteen (15) minutes to prepare a speech.
   b. Seven (7) minutes after the first participant enters the preparation room, the second participant enters the preparation room, goes to a different section, and begins his/her speech preparation, again with fifteen (15) minutes to prepare a speech.
   c. Each participant, in turn, is allowed to enter the preparation room at seven (7)-minute intervals, thus enabling a consistent flow of participants to speak before the judges in a timely fashion. (This allows for one [1] minute to enter the room and announce the entry number, up to five [5] minutes for the presentation, and one [1] minute to exit the room.)

4. The event coordinator introduces each participant (using the participant identification number only) according to the order in which participants appear on the sign-up sheet.

5. The timekeeper visually notifies the speaker of the time remaining by using six (6) separate cards. Each of the six (6) 5" x 7" notecards has a "time remaining in minutes" number on it (4, 3, 2, 1, ½, and 0), and each is shown in descending order to the participant by the timekeeper during the speech.

6. After speaking, the participant returns the topic card to the judges so that it can be returned to the topic box.

7. Judges independently evaluate each speech.

8. A list of twelve (12) semifinalists (in random order) is posted.

SEMIFINAL ROUND

1. Semifinalists report to the event area at the time and place stated in the conference program to sign up for a time.

2. Semifinalist preparation and speaking follow the same guidelines as above, using a different set of topics.

3. The semifinalist LEAP interview will take place immediately following each semifinalist speech.

REGULATIONS

PRELIMINARY AND SEMIFINAL ROUNDS

A. No reference is to be made concerning the name of the participant or his/her school.

B. Each speech must be the result of the participant's own effort.

C. Notes:

1. No reference materials or devices may be used or brought to the preparation room.

2. Any notes for speaking must be written during the fifteen (15)-minute preparation period.

3. Each participant will be provided a maximum of three (3) 3" x 5" blank notecards.

4. Although participants are permitted to use notes when speaking, it should be noted that deductions in scoring could be made for this practice if the use of notes detracts from the effectiveness of the speech.

D. Observers:

1. No observers are allowed in the event or preparation rooms during preliminary heats, although they are allowed to sit in the audience of the performance during the semifinal round.

2. No talking or gesturing is permitted.

3. Observers are NOT allowed to enter or leave during a speech.

4. There is no applause until the speech has concluded.

E. Participants are penalized by each judge one (1) point per ten (10) seconds for speaking over five (5) minutes or under three (3) minutes.

F. Semifinal Round only: LEAP Requirements

1. Participants document the leadership skills the team has developed and demonstrated while working on this event, and on a non-competitive event leadership experience.

2. Semifinalists will respond to questions about the content of their LEAP Report as part of their event-specific presentation/interview.

3. Specific LEAP Report regulations can be found in the LEAP Program section of this guide and on the TSA website.

EVALUATION

1. The quality of the speech

2. The degree to which the content matches the selected topic

3. Adherence to the time limits

4. The LEAP requirements and interview (seminfinalists only)

Refer to the official rating form for more information.

STEM INTEGRATION

This event aligns with the STEM educational standards of Science, Technology, Engineering, and Mathematics.

CAREERS RELATED TO THIS EVENT

- Advertising executive
- Public speaker
- Politician
- Sales and marketing executive
- Teacher

EXTEMPORANEOUS SPEECH

2019 & 2020 OFFICIAL RATING FORM

HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

☐ Completed LEAP Report is present
☐ ENTRY NOT EVALUATED

SPEECH (80 points) — Record scores in the column spaces below.

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Organization (X1)	The speech is unorganized and difficult to follow or understand.	The speech is somewhat organized and generally can be followed and understood.	The speech is well organized and easy to follow; the delivery is exceptional.	
Knowledge (X2)	Minimal knowledge of the subject is evident in the speech; the participant does not convey an understanding of the topic.	Adequate knowledge of the subject is evident, and the speaker relates and conveys a general understanding of the topic.	Complete knowledge and understanding of the topic and the development of a theme are conveyed through content of the speech.	
Voice and articulation (X1)	The presenter conveys an inconsistent use of proper grammar, word pronunciation, and acceptable tone and pitch.	The presenter generally uses proper grammar and pronunciation, and varies the use of tone and pitch.	Smooth and effective articulation, proper grammar, correct pronunciation, and varied tone and pitch are evident throughout the speech.	
Stage presence (X1)	The presenter's appearance is unprofessional, sloppy, and inappropriate.	The presenter's appearance is adequate, appropriate, and somewhat professional.	The presenter's appearance is appropriate, professional, and polished.	
Impact (X3)	The speech is unconvincing, uninteresting, and lacks compelling and attention-holding details.	The speech is somewhat convincing and emphasizes several details; it adequately holds the attention of the audience and remains interesting.	The speech is completely convincing, full of emphasis, and holds the attention and interest of the audience.	
			SPEECH SUBTOTAL (80 points)	

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

EXTEMPORANEOUS SPEECH

TIME DEDUCTIONS

One (1) point per ten (10)-second interval is to be deducted for speaking under the three (3) minutes or over the five (5) minutes allotted for the speech. Time commences when the participant begins speaking

Presentation Delivery Time	
TOTAL TIME DEDUCTION	

PRELIMINARY SUBTOTAL (80 points)	

SEMIFINAL LEAP INTERVIEW (8 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
LEAP Report/ Interview (10% of total event points)	The individual's efforts are not clearly communicated, lack detail, and/or are unconvincing; few, if any, attempts are made to identify and/or incorporate the SLC Practices and Behaviors.	The individual's efforts are adequately communicated, include some detail, are clear, and/or are generally convincing; identification and/or incorporation of the SLC Practices and Behaviors is adequate.	The individual's efforts are clearly communicated, fully-detailed, and convincing; identification and/or incorporation of the SLC Practices and Behaviors is excellent.	

SEMIFINAL LEAP INTERVIEW SUBTOTAL (8 points)	

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

SEMIFINAL SUBTOTAL (8 points)	

To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary. **TOTAL (88 points)**	

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____   Signature: _____

EXTEMPORANEOUS SPEECH EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Judges:

1. Preliminary round of speeches, two (2) or more per heat/event room

2. Semifinalist speeches, two (2) or more

C. Timekeepers, one (1) per heat/event room

D. Monitors, one (1) per event room

MATERIALS

A. Coordinator's packet, containing:

1. Event guidelines, one (1) copy for the coordinator and for each judge

2. TSA Event Coordinator Report

3. List of judges/assistants

4. Pre-populated flash drives for judges

5. Results envelope

6. Envelope for LEAP Reports

7. LEAP Interview Judging Protocol

B. Speaker's stand/podium, one (1) per heat/event room

C. Stopwatch, one (1) per heat/event room and two (2) per preparation room

D. 5" x 7" notecards for "time remaining in minutes" numbers (see Procedure E), six (6) per heat/event room

E. Table and chairs for judges and the timekeeper

F. Chairs for audience (semifinalist round only)

G. 3" x 5" blank notecards, three (3) per participant

H. 3" x 5" topic cards—a minimum of fifteen (15) different topics from which to select

I. Tables and chairs in the preparation room

RESPONSIBILITIES

AT THE CONFERENCE

1. Attend the mandatory coordinator's meeting at the designated time and location.

2. Report to the CRC room and obtain the coordinator's packet; check the contents.

3. Review the event guidelines and check to see that enough judges and assistants have been scheduled.

4. Inspect the areas in which the heats will be conducted for appropriate set-up including sufficient number and size of tables.

5. At least one (1) hour before the event is scheduled to begin, meet with judges/assistants to review time limits, procedures, and regulations. If questions arise that cannot be answered, speak to the event manager before the event begins.

EVENT CHECK-IN

1. Collect LEAP Reports from participants during the initial event sign-ups at the time and place stated in the conference program.

2. Participants who do not submit the required individual LEAP Report are not permitted to compete.

3. Anyone reporting who is not on the entry list may check in only after official notification is received from the CRC.

4. Late entries are considered on a case-by-case basis and only when the delay is caused by events beyond participant control.

PRELIMINARY ROUND

1. Manage the smooth flow of participants according to these procedures:

   a. After having selected a topic, the first participant enters a preparation room that is separate from the speech delivery room and is given fifteen (15) minutes to prepare a speech.

b. Seven (7) minutes after the first participant enters the preparation room, the second participant enters the preparation room, goes to a different section, and is given fifteen (15) minutes to prepare a speech.

c. Each participant, in turn, is allowed to enter the preparation room at seven (7)-minute intervals, thus enabling a consistent flow of participants to speak before the judges in a timely fashion. (This allows for one [1] minute to enter the room and announce the entry number, up to five [5] minutes for the presentation, and one [1] minute to exit the room.)

2. When the participants have finished, each judge records the scores, consulting the timekeeper's record. The timekeepers notify judges of any time under three (3) minutes or over five (5) minutes for which deductions should be made.

3. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

    a. To deduct twenty percent (20%) of the total possible points in this round or

    b. To disqualify the entry

    c. The event coordinator, judges and CRC manager must initial either of these actions on the rating form.

4. If heats are used, judges determine twelve (12) semifinalists and discuss and break any ties

5. Semifinalists will be posted by the CRC.

6. Review and submit the semifinalist results and all related items/forms in the results envelope to the CRC room for posting.

7. Create semifinalist sign-up sheet for each participant's final presentation

SEMIFINAL ROUND

1. Meet with semifinalist judges to review the LEAP Judging Protocol. If questions arise that cannot be answered, speak to the event manager before the semifinalist presentations begin.

2. Meet with semifinalists at the time and place stated in the conference program to allow them to sign up for a semifinalist LEAP interview time.

3. Repeat the preliminary round process to determine the finalists.

4. Include an additional five (5) minutes per time slot (semifinalist round only) to allow for each semifinalist to participate in a semifinalist LEAP interview immediately following his/her semifinalist presentation.

5. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

    a. To deduct twenty percent (20%) of the total possible points in this round or

    b. To disqualify the entry

    c. The event coordinator, judges and CRC manager must initial either of these actions on the rating form.

6. Judges determine the ten (10) finalists and discuss and break any ties. (Determine the procedure for breaking ties before the onsite competition begins.)

7. Review and submit the finalist results and all items/forms in the results envelope to the CRC room.

8. If necessary, manage security and the removal of materials from the area.

FASHION DESIGN AND TECHNOLOGY

OVERVIEW

Humans need protection from weather, environmental factors, occupational hazards, and other adversarial conditions. TSA members will demonstrate an understanding of and expertise in using research and design to convey a wearable technology concept.

Participants have the opportunity to research, design, and create a portfolio and wearable prototype that reflect the current year's published theme. Twelve (12) qualifying semifinalist teams participate in an onsite presentation/interview in which they present their garment designs to the judges.

The theme for the current year will be published on the national TSA website, under Competitions/Themes and Problems.

ELIGIBILITY

Three (3) teams of two to four (2-4) members per state may participate.

TIME LIMITS

1. Semifinalists will be allowed ten (10) minutes for a presentation/interview. A deduction of five (5) points will be incurred for exceeding the presentation/interview time limit.

2. The LEAP interview will be conducted immediately following the semifinalist presentation/interview and will last a maximum of five (5) additional minutes.

LEAP

A team LEAP Report is required for this event and must be submitted at event check-in (see LEAP Program).

ATTIRE

TSA competition attire is required for this event.

PROCEDURE

PRELIMINARY ROUND

1. Participants check in their entry and submit LEAP Reports at the time and place stated in the conference program.

2. Entries are reviewed by judges. Neither students nor advisors are present at this time.

3. A list of twelve (12) semifinalists (in random order) is posted.

SEMIFINAL ROUND

1. Semifinalist teams will sign up for times for their presentation/interview. These sessions are closed and will take place with judges only.

2. Semifinalists report to the event area at the time and place stated in the conference program.

3. Semifinalists use this assigned time to present their designs and answer questions from the judges.

4. Models will be present and wearing the prototypes designed by the team.

5. During the semifinalist round, participants will be allowed:

   a. ten (10) minutes to complete the presentation/interview, with two [2] minutes for setup

   b. three [3] minutes for the actual presentation, three [3] minutes for the interview

   c. two [2] minutes for removal of items

   d. Points will be deducted from a team's score for exceeding the ten (10)-minute time frame allowed for the semifinalist round.

6. The LEAP interview will be conducted immediately following the semifinalist presentation/interview.

7. Final evaluation by judges takes place immediately following the completion of the presentation.

8. The top ten (10) finalists will be announced at the awards ceremony.

REGULATIONS

PRELIMINARY ROUND

A. Participants will use a 32-quart plastic storage box to submit their portfolio, patterns, and any prototypes that are not placed on hangers or on mannequins.

B. Portfolio
1. Documentation materials (comprising "a portfolio") are required and should be placed and secured in a clear front report cover. (The portfolio must be submitted with the patterns and prototype.) The report cover must include the following single-sided, 8½" x 11" pages, in this order:
   a. LEAP Report
   b. Title page with the event title, the conference city and state, and the year; one (1) page
   c. Table of contents; one (1) page
   d. Literature research summary; two (2) pages
   e. Interpretation of theme; two (2) pages
   f. Explanation of the design and construction of the prototypes, textiles used, notions needed, sewing/construction techniques used, etc.; two (2) pages
   g. Design process sketches (hand-drawn); five (5) pages
   h. Computer-drawn final design print-outs; five (5) pages
   i. References /resources; two (2) pages

C. Patterns
1. Full-sized student-made pattern(s) must be included.
2. Patterns must be made of appropriate lightweight vellum paper.
3. Patterns must NOT be purchased.

D. Prototypes (garments)
1. Any type of prototype (garment) that is typical of responsible clothing design and creation is considered appropriate.
2. The purchase/use of special textiles (water/fireproof materials, etc.) is not required.

3. Information about textiles must be used in the research/design portfolio, but the prototype does not have to be constructed using these materials.
4. Prototypes for preliminary judging must be put on hangers (if applicable), or on dressmaker mannequins.
5. If the prototype is not a garment that can be placed on a hanger or mannequin, then it must be placed in the container with the portfolio and patterns.
6. The prototypes must be presentation quality.
7. All designs and prototypes/garments should be appropriate for viewing at the National TSA Conference.
8. The portfolio and patterns must accompany the prototypes.

E. Any portfolio or garment that depicts inappropriate or unacceptable designs will be disqualified.

F. All patterns and prototypes must be designed, sketched, computer-drawn, developed, and sewn by participants.

G. All garments must be the original work of the participants.

H. Only the required number of prototypes (garments) are to be submitted for evaluation. Additional items, including accessories and other garments, may be used only in the semifinalist presentation and may not be submitted for preliminary judging.

SEMIFINAL ROUND

A. The semifinalist portion of the event evaluates the quality of the team's presentation, as well as the team's knowledge and expertise pertaining to the entry in the following areas: overall prototype design and originality, research, theme, interpretation, construction/sewing techniques, and use of appropriate textiles/materials in the design.

B. Each semifinalist team must have access to student TSA member models and the team-created prototypes in order to compete in the semifinals. Models must be members of the team's TSA chapter.

C. LEAP Requirements

1. Teams document the leadership skills the team has developed and demonstrated while working on this event, and on a non-competitive event leadership experience.

2. Semifinalists will respond to questions about the content of their LEAP Report as part of their event-specific presentation/interview.

3. Specific LEAP Report regulations can be found in the LEAP Program section of this guide and on the TSA website.

EVALUATION

1. Points earned for the portfolio, patterns, and prototypes

2. The content and quality of the LEAP report and interview, and a presentation/interview (semifinalists only)

3. Points earned for the semifinalist presentation/interview will be added to the portfolio score to determine the final ranking of the top ten (10) finalists.

Refer to the official rating form for more information.

STEM INTEGRATION

This event aligns with the STEM educational standards of Science, Technology, Engineering, and Mathematics.

CAREERS RELATED TO THIS EVENT

- Fashion layout editor
- Fashion magazine editor
- Fashion Merchandiser
- Model
- Tailor

FASHION DESIGN AND TECHNOLOGY
2019 & 2020 OFFICIAL RATING FORM
HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

☐ Portfolio is present.
☐ Patterns are present.
☐ Prototypes are present.
☐ Completed LEAP Report is present.
☐ ENTRY NOT EVALUATED

DOCUMENTATION (90 points)				Record scores in the column spaces below.
CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Portfolio components (X1)	Some parts of the portfolio are missing; the portfolio is unorganized, messy, and lacks quality.	Most components of the portfolio are present, organized, and adequate in quality.	All components of the portfolio are included; strong effort and quality of work are evident.	
Summary of research (X1)	The summary is too brief and/or lacks the appropriate details expected for the event.	The summary of the research is sufficient; most of the key details are included.	The summary is organized, clear, and concise, with appropriate and necessary details included.	
Interpretation of theme (X1)	The interpretation of the theme is very weak and unconvincing.	The interpretation of the theme is clear, with some appropriate justification.	The interpretation of the theme is clear, concise, and thorough, with convincing justification.	
Explanation of garment prototypes (X1)	The explanation is unclear, poorly organized, and/or does not accurately describe the garment prototypes.	The explanation is loosely organized, with adequate attempts to describe the garment prototypes and their production.	The explanation is clear, concise, and/or demonstrates extensive knowledge of garment prototypes and production.	
Design process sketches (X2)	Sketches are poorly executed and/or lack necessary details in the design process.	Sketches are complete as drawn and include most notations and references to the design process.	Sketches are well executed, organized, and clearly represent the design process.	
Computer drawings for final design (X2)	Computer drawings fail to accurately portray the final design; there are major omissions of important details.	Computer drawings somewhat accurately illustrate the final design, with many important details included.	Computer drawings of the final design are clear, accurate, and effectively portray the final product.	
Resources/ references (X1)	Research is inadequate, with very few credible resources and references provided and/or documented.	Research is adequate, with most important resources and references adequately documented.	Research is comprehensive, and all resources and references are properly documented.	
DOCUMENTATION SUBTOTAL (90 points)				

PATTERNS (30 points)

Record scores in the column spaces below.

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Two or more hand-made garment patterns (X2)	Patterns are poorly constructed, and/or are missing key components.	Patterns are generally well constructed; some key attributes and designs are included.	Patterns are designed to detail standards and are of production quality.	
Creativity, originality, and difficulty (X1)	Patterns lack creativity, and/or originality, and/or difficulty in execution.	Patterns are of good quality and demonstrate some degree of difficulty and originality.	Patterns are of industry standard; they clearly demonstrate originality, creativity, and skill.	
			PATTERNS SUBTOTAL (30 points)	

QUALITY OF GARMENTS (30 points)

Record scores in the column spaces below.

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Proper sewing/ construction techniques used/ evident (X2)	Prototype construction fails to meet accepted standards and/or techniques of construction..	Prototype construction meets acceptable standards and construction techniques.	Prototype construction is of high quality and indicates use of a variety of appropriate techniques.	
Use of notions (buttons, zippers, snaps, embroidery, embellishments, etc) (X1)	Little or no use of notions is evident in the garments.	An adequate choice and variety of notions are appropriately used in the garments.	An excellent choice and variety of notions are used that enhance the overall appearance and quality of the garments.	
			PATTERNS SUBTOTAL (30 points)	

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

PRELIMINARY SUBTOTAL (150 points)

SEMIFINAL PRESENTATION (70 points)

Record scores in the column spaces below.

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Organization (X1)	Participants seem unorganized and unprepared for the presentation.	Participants are generally prepared for the presentation.	The presentation is logical, well organized, and easy to follow.	
Knowledge (X2)	Participants seem to have little understanding of the concepts in their project; answers to questions may be vague.	Participants exhibit an adequate understanding of the concepts in their project.	Participants show clear evidence of a thorough understanding of the project.	

SEMIFINAL PRESENTATION (70 points) – continued

Articulation (X1)	The presentation provides an unclear, unorganized, and/or illogical description of the project.	The presentation offers a somewhat logical and easy-to-understand project description.	The presentation provides a clear, concise, and easy-to-follow description of the project.	
Delivery (X1)	The team is verbose and/or uncertain in its presentation/interview; participants' posture, gestures, and lack of eye contact diminish the interview.	The team is somewhat well-spoken and distinct in its presentation/interview; participants' posture gestures, and eye contact are acceptable.	The team is well-spoken and distinct in its presentation/interview; participants' posture, gestures, and eye contact result in a polished, natural, and effective interview.	
Quality of prototype on model (X2)	The prototype does not appear to fit and/or is inappropriate for the person modeling (color, style, textures, etc).	The prototype fits neatly and is generally well-made for the person modeling.	The prototype clearly is made and designed for the model—fitting nicely, with appropriate style, colors, textures, etc.	
			SEMIFINAL PRESENTATION SUBTOTAL (70 points)	
Time violation (a deduction of five (5) points total will be incurred for exceeding the semifinalist presentation time limit). Record the deduction in the space to the right.				

Record scores in the column spaces below.

SEMIFINAL LEAP INTERVIEW (22 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
LEAP Report/ Interview (10% of total event points)	The team's efforts are not clearly communicated, lack detail, and/or are unconvincing; few, if any, attempts are made to identify and/or incorporate the SLC Practices and Behaviors.	The team's efforts are adequately communicated, include some detail, are clear, and/or are generally convincing; identification and/or incorporation of the SLC Practices and Behaviors is adequate.	The team's efforts are clearly communicated, fully-detailed, and convincing. Identification and/or incorporation of the SLC Practices and Behaviors is excellent.	
			SEMIFINAL LEAP INTERVIEW SUBTOTAL (22 points)	
Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right. Indicate the rule violated: _____				

SEMIFINAL SUBTOTAL (92 points)	

To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary. **TOTAL (242 points)**	

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____   Signature: _____

FASHION DESIGN AND TECHNOLOGY EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Judge:

1. Preliminary round, two (2) or more

2. Semifinal round, two (2) or more

3. Timekeeper

MATERIALS

A. Coordinator's packet, containing:

1. Event guidelines, one (1) copy for the coordinator and for each judge

2. TSA Event Coordinator Report

3. List of judges/assistants

4. Pre-populated flash drives for judges

5. Stick-on labels for entries, as needed

6. Stopwatch, one (1)

7. Results envelope

8. Racks for hanging garments

9. Tables for entries

10. Envelope for LEAP Reports

11. LEAP Interview Judging Protocol

B. Tables and chairs for judges

C. Chairs for audience

D. One (1) table, approximately six feet (6') long, for judges

RESPONSIBILITIES

AT THE CONFERENCE

1. Attend the mandatory coordinator's meeting at the designated time and location.

2. Report to the CRC room and obtain the coordinator's packet; check the contents.

3. Review the event guidelines and check to see that enough judges and assistants have been scheduled.

4. Inspect the area in which the event is being held and check for appropriate set-up including sufficient number and size of tables.

5. At least one (1) hour before the event is scheduled to begin, meet with judges/assistants to review time limits, procedures, and regulations. If questions arise that cannot be answered, speak to the event manager before the event begins.

EVENT CHECK-IN

1. Collect entries and LEAP Reports from participants at the time and place stated in the conference program.

2. Anyone reporting who is not on the entry list may check in only after official notification is received from the CRC.

3. Late entries are considered on a case-by-case basis and only when the delay is caused by events beyond participant control.

PRELIMINARY ROUND

1. Judges independently evaluate each entry.

2. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

   a. To deduct twenty percent (20%) of the total possible points in this round or

   b. To disqualify the entry

   c. The event coordinator, judges, and CRC manager must all initial either of these actions on the rating form.

3. Judges determine twelve (12) semifinalists and discuss and break any ties.

4. Review and submit the semifinalist results and all related items/forms in the results envelope to the CRC room for posting.

5. Create and post a semifinalist sign-up sheet for each team's presentation.

SEMIFINAL ROUND

1. Conduct semifinalist presentations.

2. Allow the first team to enter the event room, and provide two (2) minutes for set-up of materials.

3. The event coordinator or assistant introduces the team by entry number only.

4. No nametags or clothing that give any indication of the hometown, school, or chapter are allowed.

5. Each team will be allowed three (3) minutes for the presentation and three (3) minutes to answer interview questions.

6. Each team is allowed two (2) minutes to remove all materials.

7. The LEAP interview will be conducted immediately following the semifinalist presentation/interview and will last a maximum of five (5) additional minutes.

8. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

   a. To deduct twenty percent (20%) of the total possible points in this round or

   b. To disqualify the entry

   c. The event coordinator, judges, and CRC manager must all initial either of these actions on the rating form.

9. Judges determine the ten (10) finalists and discuss and break any ties. (Determine the procedure for breaking ties before the onsite competition begins.)

10. Review and submit the finalist results and all items/forms in the results envelope to the CRC room.

11. If necessary, manage security and the removal of materials from the event area.

FLIGHT ENDURANCE

OVERVIEW

Participants analyze flight principles with a rubber band-powered model aircraft. Participants have the opportunity to build, fly, and adjust (trim) a model to make long endurance flights inside a contained airspace. Models must be of fixed-wing design and comply with all event specifications. Rotary-wing aircraft and aerostat (lighter than air) aircraft are NOT permitted.

ELIGIBILITY

Two (2) individuals per chapter may participate, one (1) entry per individual.

TIME LIMITS

1. Participants are provided a minimum of thirty (30) minutes for trim flights at the event site.

2. Semifinalists will participate in a LEAP interview that will last a maximum of five (5) minutes.

LEAP

An individual LEAP Report is required for this event and must be submitted at event check-in (see LEAP Program).

ATTIRE

TSA competition attire is required for this event.

PROCEDURE

PRELIMINARY ROUND

1. Participants report at the time and place stated in the conference program to sign up for flight heats and submit a LEAP Report.

2. Participants arrive at the competition site for trim flying during the time designated for their heat. Time allotted for the trim portion of the event may be extended according to the number of participants and site scheduling.

3. Participants have two (2) opportunities to fly their models for official times.

4. Participants attend a pilot's meeting to review the sequence for making the official flights.

5. In an orderly fashion, participants wind their models and proceed to a group timer for permission to fly.

6. Participants place their models on the floor and wait for the release signal from the timer. Timing begins when the model rises off the ground.

7. Flight time ends when models hit the floor/ground or when they come to rest on an obstruction.

8. The timekeeper will record two (2) official flight times for each participant.

9. Immediately following the second flight, the participant will hand his/her motor to the judge for weighing.

10. Portfolios and models will be placed on flight boxes for judging.

11. Judges will begin with the top flight times and will evaluate models, portfolios, and flight boxes until the top (12) twelve semifinalists have been determined.

12. Semifinalists will be posted (in random order) by the CRC.

SEMIFINAL ROUND

1. Semifinalist teams will report at the time and place stated in the conference program to sign up for a semifinalist LEAP interview.

2. The top ten (10) finalists will be announced at the awards ceremony.
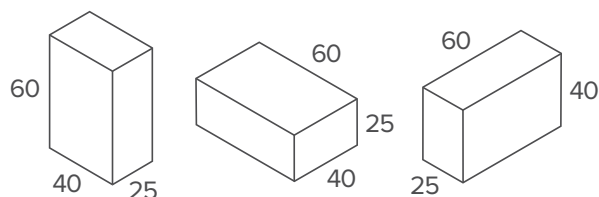
REGULATIONS

PRELIMINARY ROUND

A. Flight Endurance is an individual event.

1. No one may assist the participant in any way during either trim or official flights.

2. Violation of this regulation will result in disqualification.

B. Documentation materials (comprising "a portfolio") are required and must be secured in a clear front report cover. The report cover must include the following single-sided, 8½" x 11" pages, in this order:

1. LEAP Report

2. Title page with the event title, the conference city and state, and the year; one (1) page

3. A flight log (see official sample that follows), with the previous ten (10) flights signed off on by the participant's advisor.

4. The technical attributes of the design and a description and identification of parts

5. The modifications and an explanation of why each was developed

6. A technical review of the flight log that explains the trim adjustments and modifications required to improve endurance. Experts from the Academy of Model Aeronautics (AMA) and the National Free Flight Society (NFFS) may scrutinize this information for validity.

7. A graphic flow chart with pictures and design principles used in building and adjusting the model plane used for successful flights

8. Scaled engineered drawings of all structural parts of the plane

Flight Log:

Participant ID#:			Dates:		
Flight #	# of winds	Time aloft	Flight pattern	Trim adjustment	Advisor sign off
#1					
#2					
#3					
#4					
#5					
#6					
#7					
#8					
#9					
#10					

C. The model and its parts must be contained in a flight box that does not exceed 25cm x 40cm x 60cm. Flight box hardware, such as hinges, handles, and wheels, are not measured.

D. **Models that violate any part of Regulation C will be disqualified.**

E. Models:

1. Models are to be made of any materials that are typically found in model construction. This includes, but is not limited to: wood, foam, foam board, and plastics.

   a. Hardeners are permitted but are not required.

   b. **The use of any materials that are deemed unsafe will not be tested and will be disqualified.**

2. Models must use commercially available "fix-pitch" propeller or "fixed-pitch" propeller assembly: minimum of 140mm to a maximum of 170mm in diameter.

   a. Propellers may be trimmed, shaped, balanced, or re-pitched, but must remain fixed in pitch.

   b. Variable-pitch propellers and/or mechanisms are NOT permitted.

3. Fuselage dimension: minimum of 325mm in length, measured with prop assembly attached.

4. Wingspan: maximum of 45cm horizontally projected, wing chord 9cm projected.

5. Rubber motor: maximum weight of motor is 1.50 grams, including the O-rings.

   a. No length measurement is made.

   b. Spare motors are allowed during the official flights.

   c. Two (2) rubber O-rings may be used on the rubber motor loop for easier handling of wound motors.

6. Model weight: minimum of 7.0 grams, maximum of 21.0 grams.

   a. Models are weighed without motors attached.

   b. Clay is permitted for trim ballast.

   c. Model is weighed with clay ballast.

7. Steel wire may be used only for the propeller shaft, motor hook, landing gear, and the connection between fuselage and tail. Small plastic tubes, such as coffee stirrers, may be used.

8. The two (2) wheels must be a minimum of 15mm in diameter, made of plastic or wood, and they must roll freely by the weight of the plane on a smooth surface.

F. Acceptable flight support equipment includes the following:

1. Mechanical rubber motor winders or battery-powered motor winders may be used. No AC-powered winders are allowed.

2. A winding stooge may be used to anchor the model while the motor is being wound. A person may not serve as a winding stooge.

3. A poster board launching platform will be provided.

G. When at rest, the landing gear must support the model without the fuselage and/or propeller touching the floor or launching pad.

H. Only minor repairs are allowed during trim and time trials.

SEMIFINAL ROUND

A. The LEAP Report

1. Participants document the leadership skills the team has developed and demonstrated while working on this event, and on a non-competitive event leadership experience.

2. Semifinalists will respond to questions about the content of their LEAP Report as part of their event-specific presentation/interview.

3. Specific LEAP Report regulations can be found in the LEAP Program section of this guide and on the TSA website.

EVALUATION

1. The duration of flight

    a. A bonus of ten (10) seconds is added to the flight time per flight if the model successfully lands on its wheels and comes to a rest on them.

    b. Ties are broken by determining the longest single flight time.

2. The documentation

3. The flight log

4. The LEAP requirements and interview (semifinalists only)

Refer to the official rating form for more information.

NOTES

Two organizations—the Academy of Model Aeronautics (AMA) and the National Free Flight Society (NFFS)—welcome your inquiries and offer suggestions, help, and technical information concerning model aircraft and flight technology.

Contact the AMA: www.modelaircraft.org.
Contact NFFS: www.freeflight.org.

STEM INTEGRATION

This event aligns with the STEM educational standards of Science, Technology, Engineering, and Mathematics.

CAREERS RELATED TO THIS EVENT

- Aeronautical engineer
- Aircraft systems engineer
- Physics teacher

FLIGHT ENDURANCE
2019 & 2020 OFFICIAL RATING FORM
HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

☐ Portfolio is present.
☐ Model is present.
☐ Flight box is present.
☐ Completed LEAP Report is present.
☐ ENTRY NOT EVALUATED

DOCUMENTATION (60 points)				Record scores in the column spaces below.
CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Portfolio components (X1)	Portfolio is unorganized and/or missing three or more components.	Portfolio is organized adequately, with most, if not all, components present.	No components are missing in the portfolio, and content and organization are clearly evident.	
Technical attributes (X1)	Attributes of the design are very sketchy in nature.	Attributes of the design are included and adequately reflect basic knowledge of flight design.	Clear and precise attributes of the design are given; an in-depth knowledge of flight design is exhibited.	
Description and identification of parts (X1)	The majority of the parts are not described, sourced, or identified accurately; scaled engineered drawings are incomplete or missing.	Most parts are described and sourced accurately; scaled engineered drawings include most details.	All parts are described and sourced completely and accurately; engineering drawings are complete.	
Modifications and technical review of flight log (X1)	Only one modification is noted, and/or an explanation of why the modification was made is missing.	Modifications are given with adequate explanations for how they improved flight endurance.	Modifications and an explanation of why they were made are provided; a clear and precise explanation for how they improved the flight endurance is provided.	
Graphic flow chart (X1)	Graphic flow chart is unclear; the majority of the design principles are not addressed or are missing; pictures are missing.	Graphic flow chart is partially clear; most of the design principles are addressed and/or present; some pictures are missing.	Graphic flow chart is clearly followed; all design principles are addressed; no pictures are missing.	
Flight log (X1)	The flight log is incomplete; the advisor's signature is not included.	The flight log is generally complete; the advisor's signature is present.	The flight log is complete, with the advisor's signature; a thorough understanding of the flight log's purpose is evident.	
DOCUMENTATION SUBTOTAL (60 points)				

FLIGHT TIMES (60 points)

Flight times recorded to the nearest tenth (.1) of a second.

Duration of flight #1	Seconds	
Duration of flight #2	Seconds	
Landing bonus – add ten (10) seconds for each successful landing	Seconds	
Total flight scores (combine flight #1, flight #2, and bonus for landing/s)	Seconds	

1st	2nd	3rd	4th	5th & 6th	7th & 8th	9th-12th	13th – 16th	
60 Points	55 Points	50 Points	45 Points	40 Points	35 Points	30 Points	20 Points	

SUBTOTAL FLIGHT SCORE (60 points)	

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right. Indicate the rule violated: _____	

PRELIMINARY SUBTOTAL (120 points)	

Record scores in the column spaces below.

SEMIFINAL LEAP INTERVIEW (12 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
LEAP Report/ Interview (10% of total event points)	The individual's efforts are not clearly communicated, lack detail, and/or are unconvincing; few, if any, attempts are made to identify and/or incorporate the SLC Practices and Behaviors.	The individual's efforts are adequately communicated, include some detail, are clear, and/or are generally convincing; identification and/or incorporation of the SLC Practices and Behaviors is adequate.	The individual's efforts are clearly communicated, fully-detailed, and convincing; identification and/or incorporation of the SLC Practices and Behaviors is excellent.	

SEMIFINAL LEAP INTERVIEW SUBTOTAL (12 points)	

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right. Indicate the rule violated: _____	

SEMIFINAL SUBTOTAL (132 points)	

To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary.	**TOTAL (132 points)**	

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____   Signature: _____

FLIGHT ENDURANCE
EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Assistants, two (2) or more

C. Judges:

1. Preliminary round, two (2) or more

2. Semifinal found, two (2) or more

D. Timekeepers, two (2)

MATERIALS

A. Coordinator's packet, containing:

1. Event guidelines, one (1) copy for the coordinator and for each judge

2. TSA Event Coordinator Report

3. List of judges/assistants

4. Pre-populated flash drives for judges

5. Results envelope

6. Envelope for LEAP Reports

7. LEAP Interview Judging Protocol

B. Marking pens (felt tip, fine point)

C. Two (2) metric tape measures

D. Two (2) rolls of caution tape

E. 125 zip lock bags

F. Three (3) launch pads (poster board, 30" x 40")

G. Signs for door(s) reading Do Not Open, Flight in Progress, Knock for Entry

H. Three (3) helium balloons

I. One (1) fishing reel with line

J. Stopwatches, three (3)

K. Electronic gram scale (to .01 gram)

RESPONSIBILITIES

AT THE CONFERENCE

1. Attend the mandatory coordinator's meeting at the designated time and location.

2. Report to the CRC room and obtain the coordinator's packet; check the contents.

3. Review the event guidelines and check to see that enough judges and assistants have been scheduled.

4. Inspect the area in which the event will take place for appropriate set-up.

5. At least one (1) hour before the event is scheduled to begin, meet with judges/assistants to review time limits, procedures and regulations. If questions arise that cannot be answered, speak to the event manager before the event begins.

EVENT CHECK-IN

1. Check in participants, collect LEAP Reports, and evaluate models for special compliance during the scheduled trim session (completed flight log is inspected).

2. Anyone reporting who is not on the entry list may check in only after official notification is received from the CRC.

3. Late entries are considered on a case-by-case basis and only when the delay is caused by events beyond participant control.

4. Secure models in the holding area so that they remain safe until the scheduled time for the official flights.

PRELIMINARY ROUND

1. Distribute a list of entrants assigned to each designated judge/timer.

2. Each flight is recorded to the nearest one-tenth (.1) of a second.

3. After the second flight, the times are added together.

4. Up to three (3) groups may fly simultaneously in the assigned area for the event, with consideration for the safety of the models and participants.

5. Models and flight boxes of all participants are checked again. Models showing deviations may be disqualified.

6. Judges independently assess each entry and determine twelve (12) semifinalists.

7. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

   a. to deduct twenty percent (20%) of the total possible points in this round or

   b. to disqualify the entry

   c. The event coordinator, judges, and CRC manager must all initial either of these on the rating form.

8. Review and submit semifinalist results and all related items/forms to the CRC for posting.

SEMIFINAL ROUND

1. Inspect the area in which the interviews are to take place. Ensure that there is a table and seating for participants and judges.

2. Meet with semifinalist judges to review the LEAP Judging Protocol. If questions arise that cannot be answered, speak to the event manager before the semifinalist presentations begin.

3. Conduct semifinalist LEAP interviews. Interviews should be a maximum of five (5) minutes in length.

4. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

   a. To deduct twenty percent (20%) of the total possible points in this round or

   b. To disqualify the entry

   c. The event coordinator, judges, and CRC manager must all initial either of these on the rating form.

5. Judges determine the ten (10) finalists, and discuss and break any ties. (Determine the procedure for breaking ties before the onsite competition begins.)

6. Review and submit the finalist results and all items/forms in the results envelope to the CRC room.

7. If necessary, manage security and the removal of materials from the event area.

FORENSIC SCIENCE

OVERVIEW

Participants take a written test of basic forensic science theory to qualify as semifinalists. Semifinalist teams will examine a mock crime scene and demonstrate their knowledge of forensic science and crime scene analysis. Participants will be expected to survey the scene and use proper techniques to collect evidence from the mock crime scene. Teams will then collect their data and perform a detailed written analysis of the crime scene.

ELIGIBILITY

One (1) team of two (2) individuals per chapter may participate.

TIME LIMITS

1. One (1) hour is allotted to complete the written test.

2. Semifinalists are allotted twenty (20) minutes to review the crime scene and gather evidence. Time commences when all participants are in the crime scene room and concludes after twenty (20) minutes.

3. An additional twenty (20) minutes is allowed for semifinalist teams to write their analysis. Time begins when a team enters the analysis room and concludes at the end of twenty (20) minutes.

LEAP

A team LEAP Report is required for this event and must be submitted at event check-in (see LEAP Program).

ATTIRE

TSA competition attire is required for this event.

PROCEDURE

PRELIMINARY ROUND

1. Team members report for the written test at the time and place stated in the conference program, and submit their team LEAP Report.

2. A written forensic science test is administered to all team members at the same time.

3. Twelve (12) teams with the highest averaged scores are selected as semifinalists for the onsite problem.

4. A list of twleve (12) semifinalists (in random order) is posted.

SEMIFINAL ROUND

1. Semifinalist teams report to sign up for a time slot for the onsite problem at the time and place stated in the conference program.

2. Each team will be given a copy of the onsite problem to solve and is required to:

   a. Demonstrate three to four (3-4) techniques/procedures for evidence collection using their toolkits.

   b. Write an analysis of the crime scene (see Mock Crime Scene Analysis form).

3. Semifinalists will be judged on their LEAP Report and interview.

4. The top ten (10) finalists will be announced during the awards ceremony.

REGULATIONS

PRELIMINARY ROUND

A. Team members take the written test individually.

B. These same two (2) team members will compete in the semifinalist round, should the team qualify.

SEMIFINAL ROUND

A. No reference may be made concerning the name of the team, the team members, or their school.

B. Team members are to write their team identification number in the top right corner of the written analysis.

C. Each written analysis must be the result of the team's own effort.

D. No reference materials may be used during this event.

E. No observers are allowed in the event or preparation rooms during the event.

F. Teams are required to bring their own toolkit.

Required tools:

1. roll of string
2. safety glasses (2 pairs)
3. tape measure (10 m)
4. lift backing cards (with scale)
5. tweezers
6. scissors
7. crime scene template
8. flashlight
9. pen or fine point marker (for labeling)
10. pencils
11. duster and dust (for fingerprinting)
12. fingerprint lifting tape (or clear packing tape, NOT Scotch tape)

Optional tools:

13. Clipboard(s)
14. Blank sheets of paper (for note taking)

G. In order to provide a written report/analysis for the onsite problem, participants must be able to complete (at a minimum) the following:

1. Collection of fingerprints
2. Collection of trace evidence
3. Creation of a proportional drawing that accurately represents the crime scene. Note: The crime scene template in the toolkit may be used to create the drawing, but the drawing does not need to be to scale.
4. Blood spatter pattern analysis

H. The LEAP Report

1. Participants document the leadership skills they have developed and demonstrated while working on this event, and on a non-competitive event leadership experience.

2. Semifinalists will respond to questions about the content of their LEAP Report as part of their event-specific presentation/interview.

3. Specific LEAP Report regulations can be found in the LEAP Program section of this guide and on the TSA website.

EVALUATION

PRELIMINARY ROUND

1. The written test scores of the individual team members (scored will be averaged and recorded as a single team score on the rubric).

2. Twelve (12) teams with the highest scores will be selected as the semifinalists for the onsite problem.

SEMIFINAL ROUND

1. A team's performance on the onsite problem

2. The content and quality of the LEAP Report and interview

Refer to the official rating form for more information.

STEM INTEGRATION

This event has connections to the STEM areas of Science, Technology, Engineering, and Mathematics.

CAREERS RELATED TO THIS EVENT

This competition connects to one or more of the careers below:

- Crime scene investigator
- Forensic anthropologist
- Forensic pathologist
- Forensic engineering scientist

HIGH SCHOOL FORENSIC SCIENCE
MOCK CRIME SCENE ANALYSIS

Use the space below to record/describe the processes/techniques used
to collect evidence from the mock crime scene and any applicable conclusions.

Submitted by:

_____

Competitor signature   Competitor signature

FORENSIC SCIENCE
2019 & 2020 OFFICIAL RATING FORM
HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

☐ Toolkit is present
☐ Completed LEAP Report is present
☐ ENTRY NOT EVALUATED

WRITTEN TEST SCORE (50 points)

Average of the two team member's written test scores.   **WRITTEN TEST SCORE SUBTOTAL (50 points)**

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

PRELIMINARY SUBTOTAL (50 points)

ANALYSIS OF CRIME SCENE (80 points)

Record scores in the column spaces below.

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Primary survey/ walkthrough (X1)	No initial survey is conducted; no verbal or written attempt is made to document/record the crime scene; furniture or other items are touched or moved.	A partial attempt at an initial survey is made; there is some evidence of a verbal assessment of the scene, and a few notes are taken; minor disruption is made to the crime scene.	A thorough survey of the scene is conducted to prioritize evidence collection; verbal assessment of the scene is made and notes are taken; no furniture or items are moved.	
Processing the scene (X1)	Little to no investigation of the scene is evident; no sketches or diagrams are created; proper procedure is not followed for evidence collection, and/ or there are obvious signs of contamination.	A mostly thorough investigation of the scene is conducted and some sketches or diagrams are created; proper procedure is followed for most of the evidence collection, and there are limited signs of contamination.	A thorough investigation of the scene is conducted and sketches or diagrams are created; proper procedure is followed for evidence collection, and there are no obvious signs of contamination.	
Evidence collection (X2)	Three or more pieces of evidence are missing, and/or some of the collected items are not those specified.	Most pieces of evidence from the team's materials list are included and are correct.	All pieces of evidence in the team's materials list are included and are correct.	

ANALYSIS OF CRIME SCENE (80 points) – continued				
Technique (X2)	Little to no indication of proper technique is used in collecting the evidence.	Some indication of proper technique is used in collecting the evidence.	Proper technique is used in collecting most or all of the evidence.	
Crime scene analysis (X2)	Written analysis is weak and/ or contains personal theories or conclusions; analysis does not clearly provide a detailed summary of the scene, processing, and evidence collection.	Written analysis is somewhat complete and contains limited personal theories or conclusions; analysis provides a somewhat detailed summary of the scene, processing, and evidence collection.	Written analysis is strong and does not contain personal theories or conclusions; analysis clearly provides a detailed summary	
			ANALYSIS OF CRIME SCENE SUBTOTAL (80 points)	

Record scores in the column spaces below.

SEMIFINAL LEAP REPORT (13 points)				
CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
LEAP Report (10% of total event points)	The team's efforts are not clearly communicated, lack detail, and are unconvincing; few, if any, attempts are made to identify and incorporate the SLC Practices.	The team's efforts are adequately communicated, include some detail, are clear, and are generally convincing; identification and incorporation of the SLC Practices are satisfactory.	The team's efforts are clearly communicated, fully-detailed, and convincing; identification and incorporation of the SLC Practices are excellent.	
			SEMIFINAL LEAP REPORT SUBTOTAL (13 points)	

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right. Indicate the rule violated: _____	

SEMIFINAL SUBTOTAL (93 points)	

To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary. **TOTAL (143 points)**	

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____   Signature: _____

FORENSIC SCIENCE EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Judges:

1. Preliminary round, two (2) or more

2. Semifinal round, two (2) or more

C. Timekeepers for recording start/stop times, one (1) per event room

D. Monitors, one (1) per event room

MATERIALS

A. Coordinator's packet containing:

1. Event guidelines, one (1) copy for the coordinator and each judge

2. TSA Event Coordinator Report

3. List of judges/assistants

4. Pre-populated flash drives for judges

5. Results envelope with coordinator forms

6. Envelopes for LEAP Reports

7. LEAP Interview Judging Protocol

B. Stopwatches for timekeepers, one (1) per room

C. Blank Mock Crime Scene Analysis forms

D. Tables and chairs in the analysis room

E. Copies of the semifinalist problem, (1) one per team and (1) per judge

F. Required evidence for the mock crime scene (based on the semifinalist problem)

RESPONSIBILITIES

AT THE CONFERENCE

1. Attend the mandatory coordinator's meeting at the designated time and location.

2. Report to the CRC room and check the contents of the coordinator's packet.

3. Review the event guidelines and check to see that enough judges/assistants have been scheduled.

4. Inspect the area(s) in which the event is being held for appropriate set-up, including room size, chairs, tables, outlets, etc. Notify the event manager of any potential problems.

5. At least one (1) hour before the event is scheduled to begin, meet with judges/assistants to review time limits, procedures, and regulations. If questions arise that cannot be answered, speak to the event manager before the event begins.

PRELIMINARY ROUND

1. Begin the event at the scheduled time by closing the doors and checking the entry list.

2. All participants and judges should be in the room at this time.

3. Anyone reporting who is not on the entry list may check in only after official notification is received from the CRC.

4. Late entries are considered on a case-by-case basis and only when the delay is caused by events beyond participant control.

5. Monitor the one (1)-hour written test.

6. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

    a. To deduct twenty percent (20%) of the total possible points in this round or

    b. To disqualify the entry

    c. The event coordinator, judges and CRC manager must all initial either of these actions on the rating form.

7. Judges determine the twelve (12) semifinalists.

8. Review and submit semifinalist results and all related items/forms in the results envelope to the CRC for posting.

SEMIFINAL ROUND

1. Set up the mock crime scene in the designated room one (1) hour prior to the semifinalist sign-up time.

2. Facilitate semifinalist sign-up times at the designated location.

   a. This may be the same room used for teams to write their analysis.

   b. Sign-ups should not take place in the same room that is prepared for the crime scene.

3. When each team enters the crime scene room, distribute the problem.

4. Time begins when the problem is handed to each team.

5. Allow twenty (20) minutes for each team to review the crime scene in order to collect items, data, and/or other information necessary for preparing an analysis.

6. At the end of the twenty (20)-minute period, escort each team to the room designated for writing the analysis.

7. Provide twenty (20) minutes for each team to complete the written crime scene analysis.

8. Collect all materials, including any notes, prior to dismissing the participants.

9. Judges determine the ten (10) finalists. Any ties should be broken by using the highest average team score on the written test.

10. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

    a. To deduct twenty percent (20%) of the total possible points in this round or

    b. To disqualify the entry

    c. The event coordinator, judges and CRC manager must all initial either of these actions on the rating form.

11. Review and submit the finalist results and all related items/forms in the results envelope to the CRC room.

12. Manage security and removal of all materials from the crime scene area.

FUTURE TECHNOLOGY AND ENGINEERING TEACHER

OVERVIEW

While the need for student proficiency in technology (as one area of STEM) is increasing, the number of qualified technology education teachers is decreasing. To help address this imbalance, this event will encourage participants to 1) investigate technology education preparation programs in higher education, and 2) test their potential as a future technology educator.

ELIGIBILITY

Two (2) individuals per chapter may participate.

TIME LIMITS

1. Semifinalists will make a presentation of no more than ten (10) minutes in length.

2. A maximum of three (3) minutes will be allowed for set-up.

3. After the presentation, the participant must remove all materials within two (2) minutes.

4. One (1) point will be deducted for each ten (10)-second interval over the allotted time for the presentation, set up, and/or clean-up.

5. The LEAP interview will be conducted as part of the semifinalist presentation and will last a maximum of five (5) additional minutes following the participant's clean-up.

LEAP

An individual LEAP Report is required for this event and must be submitted at event check-in (see LEAP Program).

ATTIRE

TSA competition attire is required for this event.

PROCEDURE

PRELIMINARY ROUND

1. In preparation for this event, participants thoroughly research and select two (2) accredited colleges or universities that offer technology education teacher preparation programs.

2. Each participant will submit his/her portfolio and a LEAP Report at the time and place stated in the conference program.

3. Entries will be reviewed by judges. Neither students nor advisors are present at this time.

4. A list of twelve (12) semifinalists (in random order) is posted.

SEMIFINAL ROUND

1. Each semifinalist will sign up for a scheduled time to present his/her lesson plan/activity.

2. The event coordinator will introduce each participant by identification number only and in order of scheduled times.

3. Each time slot includes three (3) minutes for set up and two (2) minutes to remove materials/equipment.

4. The LEAP interview will be conducted as part of the semifinalist presentation.

5. Portfolios will be retrieved by the event coordinator and provided to the event semifinalists during semifinals. All other portfolios should be picked up at the time and location listed in the conference program.

6. The top ten (10) finalists will be announced during the awards ceremony.

Technology Student Association (TSA) High School Competitive Events Guide for the 2019 and 2020 National TSA Conferences

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REGULATIONS

PRELIMINARY ROUND

A. Research Summary

1. Using no more than two (2) pages, one (1) side only, participants summarize the information derived from the research about each of the colleges or universities and their technology amd engineering education programs.

2. Participants should take into consideration geographic location and environment, academic requirements, cost, campus life, setting, and the size and housing facilities of each school.

3. Advice from parents, family members, guidance counselors, and technology and engineering teachers is recommended, as is a search on the Internet of colleges and universities that offer technology and engineering education degree programs

B. Essay

1. Each participant must complete an essay, one (1) page (single-sided), explaining why s/he is a good candidate to become a technology education teacher.

2. Personality traits, goals, and interests should be included in the essay.

3. The essay must be similar to a college application essay.

4. The essay must be typewritten and free of spelling and grammatical errors.

C. Lesson Plan

1. A lesson plan describing the rationale, goals and objectives, standards correlation, and a description of the lesson and activity—including assessment—must be submitted.

2. The lesson plan must be clearly labeled with the grade level for which it is intended.

3. The ITEEA Standards for Technological Literacy must be used. Available online at www.iteea.org/Publications/StandardsOverview.aspx

D. The research summaries, essay, and lesson plan/activity must be the result of the participant's own efforts and not purchased or open source material. General content from either may be used, but it must be cited.

E. All parts of the entry must be contained in the documentation.

F. Documentation materials (comprising "a portfolio") are required and should be secured in a clear front report cover. The report cover must include the following single-sided, 8½" x 11" pages, in this order:

1. LEAP Report

2. Title page with the event title, the conference city and state, the year, and the participant's identification number; one (1) page

3. Table of contents; pages as needed

4. College research summaries; one (1) page maximum for each college

5. College essay; one (1) page

6. Lesson plan/activity; pages as needed

7. Copies of handouts; pages as needed

8. References and resources; pages as needed

SEMIFINAL ROUND

A. Topics for the lesson plan/activity must correlate to the ITEEA standards for technological literacy.

1. Use the International Technology and Engineering Educators Association ITEEA website at www.iteea.org/Publications/StandardsOverview.aspx.

2. Topics also must reflect Science, Technology, Engineering, and Mathematics (STEM) initiatives and integration.

3. Lesson plans/activities that explore knowledge, creativity, and skills in the following areas are suggested:

   a. Medical technology

   b. Agricultural and biotechnology

   c. Power and energy technology

   d. Information and communication technology

   e. Transportation technology

   f. Manufacturing technology

   g. Construction technology

B. Copies of the lesson plan and of all handouts, materials, and resources must be prepared and distributed to the judges, who will act as students in the classroom.

C. Audio-visual materials such as charts, graphs, posters, displays, flip charts, transparencies, and models may be included.

D. Any audio visual equipment required for the presentation must be provided by the participant, including

   1. power strip with surge protector

   2. an extension cord

E. Activities that typically would follow the teaching lesson will be described by the presenter near the conclusion of the ten (10)-minute lesson.

F. Participants are not allowed to watch or hear the presentations of other participants.

G. Participants are encouraged to interact with the judges, who will act as students in the classroom.

H. One (1) point will be deducted for each ten (10)-second interval over the allotted time for the presentation, set up, and/or clean-up.

I. The LEAP Report

   1. Participants document the leadership skills they have developed and demonstrated while working on this event, and on a non-competitive event leadership experience.

   2. Semifinalists will respond to questions about the content of their LEAP Report as part of their event-specific presentation/interview.

   3. Specific LEAP Report regulations can be found in the LEAP Program section of this guide and on the TSA website.

EVALUATION

PRELIMINARY ROUND

   1. The portfolio

   2. The developed lesson plan/activity

SEMIFINAL ROUND

   1. The presentation of the lesson

   2. The appropriateness of the lesson/activity for the designated grade level

   3. The poise of the participant during the presentation

   4. The interaction of the participant with the students (judges acting as students)

   5. The enthusiasm and motivation of the participant

   6. The LEAP Report and interview

Refer to the official rating form for more information.

STEM INTEGRATION

This event aligns with the STEM educational standards of Science, Technology, Engineering, and Mathematics .

CAREERS RELATED TO THIS EVENT

- Technology education teacher
- STEM teacher
- University professor
- Professional development trainer

FUTURE TECHNOLOGY AND ENGINEERING TEACHER

2019 & 2020 OFFICIAL RATING FORM

HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

- ☐ Two (2) college Technology Education Teacher Training Programs research summaries are present.
- ☐ A college essay is present.
- ☐ An original, complete lesson plan is present.
- ☐ Completed LEAP Report is present.
- ☐ ENTRY NOT EVALUATED

DOCUMENTATION (70 points)

Record scores in the column spaces below.

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Portfolio components (X1)	The portfolio is unorganized and/or is missing a number of components.	The portfolio is adequate, with most components included.	The portfolio is completely organized and contains all components.	
College search summaries (X1)	Only one (1) college technology education program is identified; the summary is inadequate.	Two college technology education programs are adequately summarized.	Two college technology education programs are documented, with excellent summaries.	
College essay (X1)	The essay is too short, and/or not typewritten and printed, and/or poorly written, and/or there are many spelling and grammatical errors.	The essay is generally well written, typewritten and printed, and the correct length, but it contains several spelling and grammatical errors.	The essay is well written, typewritten and printed, the correct length, and contains no spelling or grammatical errors.	
Lesson plan components (X2)	The lesson plan is missing several of the stated components, including the standards correlation and/or instructional design focus; it is not creative or unique.	The lesson plan includes all of the stated components, and it is adequately organized, with an instructional design focus; it has some unique and creative aspects.	The lesson plan includes all of the stated components; it is well organized and has an instructional design focus; it is creative and unique.	
Handouts (X1)	Handouts are poorly developed and do not have an impact on the lesson and activity.	Handouts are relatively well developed and have some impact on the lesson and activity.	The handouts are effective and greatly impact the lesson and activity.	
Resources and references (X1)	A minor attempt is made to document resources and references.	Several resources and references are documented.	There is clear evidence of many applicable resources and references.	
DOCUMENTATION SUBTOTAL (70 points)				

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

PRELIMINARY SUBTOTAL (70 points)	

SEMIFINAL PRESENTATION (85 points)

Record scores in the column spaces below.

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Organization (X1)	The presentation lacks organization; it is difficult to follow or understand.	The presentation is somewhat organized.	The presentation is clearly organized and easy to follow; it flows smoothly to the conclusion.	
Introduction (X1)	The introduction is weak, with little effort made to emphasize the topic and/or to generate interest and enthusiasm for the topic.	Sufficient effort is evident in the introduction, which somewhat creates a level of interest.	The introduction is effective, stimulating, and creates interest on the part of observers.	
Instructional competence (X2)	The presenter's delivery of content lacks confidence.	The presenter's delivery of content is generally professional and enthusiastic.	The presenter's delivery of content is professional, enthusiastic, confident, and full of personality.	
Voice/language (X1)	The participant conveys an inconsistent use of proper grammar, word pronunciation, and acceptable pitch and tone.	The participant generally uses proper grammar and pronunciation, and varies the use of tone and pitch.	The participant uses smooth and effective articulation, proper grammar, correct pronunciation, and varied tone and pitch throughout the presentation.	
Innovation/ creativity (X1)	The presentation fails to convey innovation or originality.	The presentation is somewhat original and innovative in its delivery and topic development.	The presentation is imaginative and innovative in its delivery and topic development.	
Knowledge (X1)	Minimal knowledge of the subject is evident in the presentation; the content does not relate to the topic, and/or the participant does not convey an understanding of the topic.	Knowledge of the subject is evident, and the presenter relates and conveys a somewhat clear understanding of the topic.	Complete knowledge and understanding of the subject and relationship to the topic are conveyed throughout the introduction.	
LEAP Report/ Interview (15 points; 10% of total event points)	The individual's efforts are not clearly communicated, lack detail, and/or are unconvincing; few, if any, attempts are made to identify and/or incorporate the SLC Practices and Behaviors.	The individual's efforts are adequately communicated, include some detail, are clear, and/or are generally convincing; identification and/or incorporation of the SLC Practices and Behaviors is adequate.	The individual's efforts are clearly communicated, fully-detailed, and convincing; identification and/or incorporation of the SLC Practices and Behaviors excellent.	
SEMIFINAL PRESENTATION SUBTOTAL (85 points)				

FUTURE TECHNOLOGY AND ENGINEERING TEACHER

TIME DEDUCTIONS	
A one (1)-point deduction will be incurred for each ten (10)-second interval over the allotted times for set up, presentation, or clean up.	
Total time for presentation	
Total time for set-up	
Total time for clean up	
Presentation deduction	
Set-up deduction	
Clean up deduction	
TOTAL TIME DEDUCTION	
Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right. Indicate the rule violated: _____	

BONUS			
CRITERIA	Minimal performance	Adequate performance	Exemplary performance
	1-4 points	5-8 points	9-10 points
For the inclusion of audio/visual materials in the presentation (X1)	Audio/visuals are included, but they only slightly enhance the presentation.	Audio/visual materials are varied and moderately enhance the presentation.	Appropriate materials and audiovisuals are used and effectively enhance the presentation.

SEMIFINAL SUBTOTAL (85 points)	

To arrive at the TOTAL score, add the **PRELIMINARY SUBTOTAL** and the **SEMIFINAL SUBTOTAL**.　　　**TOTAL (165 points)**	

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____　　Signature: _____

FUTURE TECHNOLOGY AND ENGINEERING TEACHER EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Judges:
1. Preliminary round, two (2) or more
2. Semifinal round, two (2) or more

C. Assistants, two (2)

MATERIALS

A. Coordinator's packet, containing:
1. Event guidelines, one (1) copy for the coordinator and for each judge
2. TSA Event Coordinator Report
3. List of judges/assistants
4. Pre-populated flash drives for judges
5. Stick-on labels for entries, as needed
6. Stopwatch
7. Results envelope
8. Envelope for LEAP Reports
9. LEAP Interview Judging Protocol

B. Tables and chairs for participants and judges

C. Copy of ITEEA publication *Standards for Technological Literacy*

RESPONSIBILITIES

AT THE CONFERENCE

1. Attend the mandatory coordinator's meeting at the designated time and location.
2. Report to the CRC room and obtain the coordinator's packet; check the contents.
3. Review the event guidelines and check to see that enough judges/assistants have been scheduled.
4. Inspect the area or room in which the event is being held for appropriate set-up, including room size, chairs, tables, outlets, etc. Notify the event manager of any potential problems.

5. At least one (1) hour before the event is scheduled to begin, meet judges/assistants to review time limits, procedures, regulations, and all other details related to the event. If questions arise that cannot be answered, speak to the event manager before the event begins.

EVENT CHECK-IN

1. Check in the entries at the time stated in the conference program.
2. Anyone reporting who is not on the entry list may check in only after official notification is received from the CRC.
3. Late entries are considered on a case-by-case basis and only when the delay is caused by events beyond participant control.
4. Participants check in portfolios. The entry number sticker should be placed in the upper right-hand corner of the portfolio's cover and LEAP Reports.

PRELIMINARY ROUND

1. Judges read, individually evaluate entries, and determine twelve (12) semifinalists.
2. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and a CRC manager to determine either:
   a. To deduct 20% of the total possible points or
   b. To disqualify the entry
   c. The event coordinator, judges, and CRC manager must all initial either of these actions on the rating form.
3. Review and submit semifinalist results to the CRC for posting.

SEMIFINAL ROUND

1. Semifinalists sign up for an interview at the time and place stated in the conference program.

2. Make sure the presentation room is set up correctly.

3. The coordinator will retrieve the semifinalists portfolios and provide them to the semifinalists during the semifinalist lesson/activity presentations.

4. Conduct the semifinalist presentations.

5. The LEAP interview will be conducted as part of the semifinalist presentation and will last a maximum of five (5) additional minutes.

6. Judges determine the ten (10) finalists and discuss and break any ties. (Determine the procedure for breaking ties before the onsite competition begins.)

7. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and a CRC manager to determine either:

   a. To deduct 20% of the total possible points or

   b. To disqualify the entry

   c. The event coordinator, judges, and CRC manager must all initial either of these actions on the rating form.

8. Review and submit the finalist results and all items/forms in the results envelope to the CRC room.

9. If necessary, manage security and the removal of materials from the event area.

MUSIC PRODUCTION

OVERVIEW

Modern music production has become integrated with technology in a synthesis of technical, artistic, and creative skills. Exploring the link between original, creative ideas and the tools used to implement them increases the development of a person's technical and expressive abilities.

Participants produce an original musical piece that is designed to be played during the National TSA Conference closing general session. The musical piece should be energizing, interesting, and of a spirit consistent with the Technology Student Association.

ELIGIBILITY

Three (3) teams per state may participate. Teamwork is strongly encouraged, but an individual may participate solo in this team event.

TIME LIMITS

PRELIMINARY ROUND

1. The musical piece must be more than one (1) minute and less than three (3) minutes in length.
2. There will be a five (5)-point deduction for each five (5) seconds under the one (1)-minute minimum and a five (5)-point deduction for each 15 seconds over the three (3)-minute maximum length.
3. The time starts with the first sound and continues until the last sound ends.

SEMIFINAL ROUND

1. Semifinalists are interviewed for up to ten (10) minutes to explain the technical aspects and creative process of their work.
2. The LEAP interview will be conducted as part of the semifinalist presentation/interview and will last a maximum of five (5) additional minutes.

LEAP

An individual or team LEAP Report is required for this event and must be submitted at event check-in (see LEAP Program).

ATTIRE

TSA competition attire is required for this event.

PROCEDURE

PRELIMINARY ROUND

1. Participants check in their entries (portfolio, CD, and LEAP Report) at the time and place stated in the conference program.
2. Entries are reviewed by judges. Neither students nor advisors are present at this time.
3. A list of twelve (12) semifinalists (in random order) will be posted.

SEMIFINAL ROUND

1. No more than two (2) representatives from each semifinalist team may report to the event area for the interview at the time and place stated in the conference program.
2. Each semifinalist team explains its portfolio and musical piece to the judges and discusses the purpose, value, and creative process of its work.
3. The LEAP interview will be conducted as part of the semifinalist presentation.
4. The top ten (10) finalists will be announced at the awards ceremony.

REGULATIONS

PRELIMINARY ROUND

A. All musical pieces must be submitted on audio CD.
B. Lyrics may accompany the musical piece but are not required.
C. The musical piece must be greater than one (1) minute and less than three (3) minutes in length.
   1. There will be a five (5)-point deduction for each five (5) seconds under the one (1)-minute minimum and a five (5)-point deduction for each 15 seconds over the three (3)-minute maximum length.
   2. There will be a five (5)-point deduction for each fifteen (15) seconds over the three (3)-minute maximum length.

D. All entries become the property of TSA for non-profit promotional purposes and will not be returned after judging.

E. All musical pieces must be the original work of the team and must have been completed within the current school year.

F. Free, non-copyrighted sounds, loops, or other musical elements may be incorporated into musical pieces. The sources of these elements and the way in which they are used in the musical piece must be described in the portfolio, and the track list must illustrate these elements.

G. Each actual instrument, voice, and/or synthesized instrument track used in the final music piece must be illustrated in a timeline format in the portfolio.

H. Where applicable, all ideas, sounds, and loops from other sources must be cited. If copyrighted material is used, proper written permission must be included (see the Student Copyright Checklist). NOTE: Failure to follow this procedure results in disqualification.

I. The CD and documentation materials are turned in to the event coordinator at the time and place stated in the conference program. The documentation portfolio should be complete, well written, and professional in organization and appearance

J. Documentation materials (comprising a "portfolio") are required and should be secured in a clear front report cover. The report cover must include the following single-sided, 8½" x 11" pages, in this order:

1. LEAP Report

2. Title page with the title of the musical piece, the event title, the conference city and state, and the year; one (1) page

3. Table of contents; pages as needed

4. Plan of Work log that indicates preparation for the event, as noted by date, task, time involved, team member responsible, and comments (see Forms Appendix or TSA website); one (1) page

5. Purpose and description of the musical piece; one (1) page

6. Self-evaluation of the piece using criteria from the official rating form; one (1) page

7. Lyrics; pages as needed (not required)

8. Audio composition track list: Each actual instrument, voice, and/ or synthesized instrument track used in the final music piece must be illustrated graphically using a timeline format similar to that shown below.

9. When musical elements are used that were NOT created by the team, the source, effects applied, the way each element was incorporated into the song, and how each element corresponds to the musical piece's track list must be included; pages as needed. Failure to include this section results in disqualification.

10. List of hardware, software, and instruments used in the development of the musical piece; one (1) page

11. List of references that includes sources for materials (non-copyrighted); pages as needed

12. Completed Student Copyright Checklist, as applicable (see Forms Appendix or TSA website)

SEMIFINAL ROUND

A. LEAP Requirements

1. Teams document the leadership skills the team has developed and demonstrated while working on this event, and on a non-competitive event leadership experience.

2. Semifinalists will respond to questions about the content of their LEAP Report as part of their event-specific presentation/interview.

3. Specific LEAP Report regulations can be found in the LEAP Program section of this guide and on the TSA website.

EVALUATION

PRELIMINARY ROUND

1. The musical piece

2. The accompanying documentation

3. Depending upon the stated purpose, musical pieces are judged on coherence, style, creativity, and artisanship, as well as technical attributes, creativity, organization, and their overall effect.

4. Additionally, the musical piece and portfolio should reflect familiarity with the technologies used in musical production.

SEMIFINAL ROUND

1. The event-specific presentation and interview

2. The content and quality of the LEAP Report and interview

Refer to the official rating form for more information.

STEM INTEGRATION

This event aligns with the STEM educational of Science, Technology, Engineering, and Mathematics.

CAREERS RELATED TO THIS EVENT

- Artist
- Audio designer or engineer
- Audio operator or technician
- Broadcast technician
- Music composer

MUSIC PRODUCTION

2019 & 2020 OFFICIAL RATING FORM

HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

☐ The portfolio is present.
☐ The track timeline is included in the portfolio and meets the required format.
☐ The CD is present and plays on a standard CD player.
☐ Completed LEAP Report is present.
☐ ENTRY NOT EVALUATED

DOCUMENTATION (40 points)				Record scores in the column spaces below.
CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Portfolio components (X1)	The portfolio is unorganized and/or missing three or more components.	The portfolio is adequately organized and includes most, if not all, components.	All components of the portfolio are included, and the organization of the content is clearly evident.	
Purpose and description (X1)	An unclear purpose and description of the music production idea and generation are provided.	The purpose and description are explained adequately.	A clear and concisely written purpose and description of the music production are included.	
Plan of Work log and self-evaluation (X1)	The Plan of Work log and/or self-evaluation are incomplete, and/or missing key components.	The Plan of Work log and/or self-evaluation are somewhat complete and incorporate reflections and efforts of the team.	A complete and concisely written Plan of Work log and self-evaluation are provided and incorporate the efforts and reflections of the team.	
Track timeline (X1)	The track timeline is incomplete and/or not created correctly; the timeline does not correlate with the actual music production.	The track timeline is largely complete and attempts to correlate with the actual music production.	The track timeline is of exemplary quality; it correlates completely with the music production and is easy to follow.	
DOCUMENTATION SUBTOTAL (40 points)				

Record scores in the column spaces below.

MUSICAL PIECE (60 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Creativity and uniqueness (X1)	The musical idea is overly familiar or is a cliché; no variety or exploration of musical elements (range, timbre, dynamics, tempo, rhythm, and melody) are evident.	The work involves some original aspects or manipulations of musical ideas; it explores and includes at least one or more musical elements.	The piece includes highly original, unusual, or imaginative musical ideas; it explores and includes at least two or more musical elements.	
Artisanship (X1)	The piece gives no sense of a completed musical idea; there is no clear beginning, middle, or end section; the form appears random, rather than organized.	One musical element has been used to organize the musical ideas and overall form, which are somewhat coherent.	The piece presents at least one complete musical idea; the piece has a coherent and organized form with a clear beginning, middle, and end; musical elements are used to organize the musical ideas and form.	
Energy and style (X1)	The piece lacks liveliness, vitality, and vigor; there is no flair, elegance, or grace to the form.	The piece generates an initial level of energy that appeals to the listener; the style is somewhat distinctive.	The liveliness and forcefulness of the piece excite the listener; the style is truly unique and electrifying.	
Appropriateness (X1)	The musical idea or concept is not appropriate and acceptable for use in the event.	The musical idea or concept presented is acceptable and somewhat fitting.	The musical idea or concept presented is fitting and serves as an excellent example of the type of work expected.	
Overall appeal (X2)	The work does not present an effective general impression; the musical ideas do not hold the listener's interest.	The work includes some interesting musical ideas; the general impression is pleasant and moderately effective.	There is strong, interesting, and effective audio appeal; the work is designed to be enjoyed by the listeners.	
			MUSICAL PIECE SUBTOTAL (60 points)	

TIME DEDUCTIONS

There will be a five (5) point deduction for each fifteen (15) seconds under the minimum time or each fifteen (15) seconds over the maximum time allowed for the visualization.

Total time under		Five (5)-second intervals under		Under time deduction	
Total time over		Fifteen (15)-second intervals over		Over time deduction	
				TOTAL TIME DEDUCTION	

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

PRELIMINARY SUBTOTAL (100 points)

MUSIC PRODUCTION

SEMIFINAL INTERVIEW (54 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Organization (X1)	The team/individual seems unprepared and unorganized for the interview.	The team/individual is adequately prepared and organized for the interview.	The interview with judges is logically organized and impressive.	
Knowledge (X1)	The team/individual seems to have very little understanding of the concepts and gives vague interview answers.	The team/individual has a generalized understanding of the concepts discussed and answers questions well.	There is clear evidence of a thorough understanding of the concepts discussed.	
Articulation (X1)	The interview is full of illogical thoughts that lack understanding and clarity.	The interview is somewhat logical, clear, and concise.	A concise, logical, and clear explanation of the entry is given in the interview.	
Delivery (X1)	The team/individual is verbose and/or uncertain in the interview; posture, gestures, and lack of eye contact diminish the delivery.	The team/individual is somewhat well-spoken and clear in the interview; posture, gestures, and eye contact result in an acceptable delivery.	The team/individual is well-spoken and distinct in the interview; posture, gestures, and eye contact result in a polished, natural, and effective delivery.	
LEAP Report/ Interview (14 points; 10% of total event points)	The individual's or team's efforts are not clearly communicated, lack detail, and/or are unconvincing; few, if any, attempts are made to identify and/or incorporate the SLC Practices and Behaviors.	The individual's or team's efforts are adequately communicated, include some detail, are clear, and/or are generally convincing; identification and/or incorporation of the SLC Practices and Behaviors is adequate.	The individual's or team's efforts are clearly communicated, fully-detailed, and convincing; identification and/or incorporation of the SLC Practices and Behaviors is excellent.	
			SEMIFINAL INTERVIEW SUBTOTAL (54 points)	

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

SEMIFINAL SUBTOTAL (54 points)	

To arrive at the TOTAL score, add the PRELIMINARY SUBTOTAL and the SEMIFINAL SUBTOTAL.　　**TOTAL (154 points)**	

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____　　Signature: _____

MUSIC PRODUCTION EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Judges:

    1. Preliminary round, two (2) or more

    2. Semifinal round, two (2) or more

MATERIALS

A. Coordinator's packet, containing:

    1. Event guidelines, one (1) copy for the coordinator and for each judge

    2. TSA Event Coordinator Report

    3. List of judges/assistants

    4. Pre-populated flash drives for judges

    5. Stick-on labels for entries, as needed

    6. One (1) stopwatch per group of judges

    7. Results envelope

    8. Envelope for LEAP Reports

    9. LEAP Interview Judging Protocol

B. Tables and chairs for judges

C. CD player capable of playing an audio CD, as needed

D. Extension cords (25' minimum length), as needed

E. Power bar with surge protection, as needed

RESPONSIBILITIES

AT THE CONFERENCE

1. Attend the mandatory coordinator's meeting at the designated time and location.

2. Report to the CRC room and obtain the coordinator's packet; check the contents.

3. Review the event guidelines and check to see that enough judges/assistants have been scheduled.

4. Inspect the area(s) in which the event is being held for appropriate set-up, including room size, chairs, tables, outlets, etc. Notify the event manager of any potential problems.

5. At least one (1) hour before the event is set to begin, meet with judges/assistants to review time limits, procedures, and regulations. If questions arise that cannot be answered, speak to the event manager before the event begins.

EVENT CHECK-IN

1. Check in the entries and collect LEAP Reports at the time stated in the conference program.

2. Anyone reporting who is not on the entry list may check in only after official notification is received from the CRC.

3. Late entries are considered on a case-by-case basis and only when the delay is caused by events beyond participant control.

4. Place an entry number on each CD and in the upper right-hand corner of the portfolio. Secure the entries in the designated area.

PRELIMINARY ROUND

1. Judges independently assess the entries.

2. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

    a. To deduct twenty percent (20%) of the total possible points in this round or

    b. To disqualify the entry

    c. The event coordinator, judges and CRC manager must all initial either of these actions on the rating form.

3. The number of judges depends on the number of entries. There are two (2) judges for every twenty (20) entries for the first evaluation round.

4. Judges review the entries, to determine twelve (12) semifinalists. The semifinalist list is posted.

SEMIFINAL ROUND

1. Semifinalists report at the time and location stated in the conference program to be interviewed.

2. Semifinalists are interviewed for up to ten (10) minutes to explain the technical aspects and creative process of their work. The LEAP interview will be conducted as part of the semifinalist event interview and will last a maximum of five (5) additional minutes.

3. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

   a. To deduct twenty percent (20%) of the total possible points in this round or

   b. To disqualify the entry

   c. The event coordinator, judges and CRC manager must all initial either of these actions on the rating form.

4. Judges independently assess the semifinalists, discuss and break any ties, and determine ten (10) finalists. (Determine the procedure for breaking ties before the onsite competition begins.)

5. Review and submit the finalist results and all items/forms in the results envelope to the CRC room.

6. Take all CDs, portfolios, extension cords, and supplies to the CRC room. Return all equipment to the appropriate personnel.

ON DEMAND VIDEO

OVERVIEW

Participants have the opportunity to use video skills, tools, and processes to communicate, entertain, inform, analyze and/or illustrate a topic, idea, subject, or concept. An extremely powerful and ubiquitous medium, video production has great potential, strengths, and limitations that should be understood by all.

Participants write, film, and edit a sixty (60)-second video during the National TSA Conference in this onsite event. Required criteria, such as props and a line of dialogue, make the competition more challenging and will be revealed at the event orientation meeting.

ELIGIBILITY

One (1) team of two to six (2-6) members per chapter may participate, one (1) entry per team.

TIME LIMITS

PRELIMINARY ROUND

1. The video must be no longer than sixty (60) seconds in length. A deduction of five (5) points will be incurred for exceeding the time limit.

2. Participants have forty-eight (48) hours, beginning at the event orientation meeting, to complete the entire production.

SEMIFINAL ROUND

1. Semifinalists will participate in a LEAP interview that will last a maximum of five (5) minutes.

LEAP

A team LEAP Report is required for this event and must be submitted at event check-in (see LEAP Program).

ATTIRE

TSA competition attire is required for this event.

PROCEDURE

PRELIMINARY ROUND

1. Participants report to the event area at the time and place stated in the conference program.

2. Participants must submit a LEAP Report prior to receiving the onsite problem materials and information.

3. The event coordinator distributes the materials, information, directions, and deadlines to each team.

4. Each team supplies its own video production and editing equipment to complete its production.

5. Each team will be responsible for uploading their video solution as well as a completed Student Copyright Checklist to an internet server as determined at the conference.

6. Entries are reviewed by judges. Neither students nor advisors are present at this time.

7. A list of twelve (12) semifinalists (in random order) will be posted by the CRC.

SEMIFINAL ROUND

1. Semifinalist teams will report at the time and place stated in the conference program to sign up for a semifinalist LEAP interview.

2. Judges evaluate the interviews.

3. The top ten (10) finalists will be announced at the awards ceremony.

REGULATIONS

PRELIMINARY ROUND

A. Video entries must be submitted in MP4 format suitable for being played in VLC Media Player.

1. For more information regarding VLC Media Player, visit www.videolan.org.

2. Teams are strongly encouraged to view their completed entry in VLC Media Player before online submission to be sure their video plays as designed.

3. The completed Student Copyright Checklist must be submitted in Portable Document Format (PDF) suitable for viewing in Adobe Acrobat Reader.

4. Failure to include the Student Copyright Checklist will result in disqualification.

5. National TSA will NOT provide wireless Internet. Students may provide Internet access using a hotspot from a mobile device.

B. Participants film their footage, which must be appropriate for the TSA community, only at officially sanctioned conference locations, as described by the event coordinator.

1. Teams are not allowed to film in sleeping rooms, restrooms, restaurants, or elevators/escalators.

2. Participants may not disturb any event in progress, enter a restricted evaluation area, interrupt a conference function, or participate in behavior unbecoming of a conference participant.

3. At the event meeting, the event coordinator will explain any further filming restrictions on the specific property.

4. Failure to follow these instructions will result in disqualification.

C. All entries become the property of TSA and will not be returned after judging.

D. Teams may use no more than one (1) video camera for the video production.

E. Teams must edit their projects on a nonlinear editing system or their camera. Teams are responsible for providing their own editing equipment.

F. All video footage must be the original work of the team and must have been completed during the event timeline.

G. Where applicable, all ideas, test images and sound from other sources must be cited. Copyrighted materials may NOT be used. NOTE: Failure to follow this procedure results in disqualification.

SEMIFINAL ROUND

A. The LEAP Report

1. Participants document the leadership skills developed and demonstrated while working

on this event, and on a non-competitive event leadership experience.

2. Semifinalists will respond to questions about the content of the LEAP Report as part of the LEAP interview, which will be conducted as part of the semifinalist presentation.

3. Specific LEAP Report regulations can be found in the LEAP Program section of this guide and on the TSA website.

EVALUATION

PRELIMINARY ROUND

The completed video production.

1. Depending on the stated purpose, videos are judged on story concept, artistic and/or social value, camera technique, transition and video pace, as well as technical attributes, creativity and organization, and the overall effect of the solution.

2. The video also must incorporate the specified prop(s) and dialogue presented during the event meeting.

SEMIFINAL ROUND

The content and quality of the LEAP Report and interview.

Refer to the official rating form for more information.

STEM INTEGRATION

This event aligns with the STEM educational standards of Science, Technology, Engineering, and Mathematics.

CAREERS RELATED TO THIS EVENT

- Actor
- Audio/video operator or technician
- Cinematographer
- Film/video editor
- Screen editor
- Script writer

ON DEMAND VIDEO
2019 & 2020 OFFICIAL RATING FORM
HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

☐ The video is included, in the correct format and is capable of being played using VLC Media Player.
☐ Student Copyright Checklist is included and in the correct format.
☐ Completed LEAP Report is present.
☐ ENTRY NOT EVALUATED

PRODUCTION (100 points)

CRITERIA	Minimal performance 1-4 points	Adequate performance 5-8 points	Exemplary performance 9-10 points	Record scores in the column spaces below.
Camera handling (X1)	Serious problems with focus, steadiness, and framing are evident.	Most shots are clearly focused and framed, with adequate close-ups included.	Steady and creative shots that enhance the video are utilized, and excellent close-ups are included.	
Lighting (X1)	Numerous shots are improperly lit; bleaching, shadows, or unbalanced conditions may be evident in some shots; there is no evidence of an attempt to correct problems.	Most shots are properly lit, either through ambient lighting or the use of techniques to correct poor lighting conditions.	All shots are well lit, either through ambient lighting or the use of techniques to correct poor lighting conditions.	
Audio (X1)	Audio may be unclear, distorted, or washed out from poor signal-to-noise ratio; there is evidence of the use of a built-in camera microphone that detracts from the message.	The audio is clear, with consideration given to a good signal-to-noise ratio; background or ambient noise may occasionally be a distraction.	The audio is clear and recorded with good signal-to-noise ratio, displaying skillful microphone choice, placement, and technique.	
Continuity and pacing (X2)	The story sequencing is confusing; shots are too long or "clipped," with edit points appearing "glitchy."	The pace and timing are well structured; clips move along and tell the story, with moderate use of transitions.	Shots logically pace the story along in an interesting way, with an excellent and purposeful use of transitions.	
Video effectiveness (X2)	The video does not meet project goals, presents an unclear message, and/or is sloppy overall.	The video topic is presented with insights; the video adequately meets the objective.	The video is clearly focused, with a rich variety of supporting material.	
Aesthetics and artisanship (X1)	The work is unorganized and sloppy.	The work provides an organized and logical presentation of essential issues.	The work provides an exemplary use of layout and design principles to logically communicate important data.	
Use of required props (X1)	Props incorporated in the video appear as an afterthought.	Props incorporated in the video add some artistic value and tend to further the plot.	Props are integral to the production's plot and artistic value.	
Use of required dialogue (X1)	The line of dialogue is not well incorporated in the production, and/or the dialogue is not in sync with the plot.	The line of dialogue is adequately incorporated and somewhat essential to the production's plot.	The line of dialogue is communicated effectively and is integral to the production's plot.	
PRODUCTION SUBTOTAL (100 points)				

ON DEMAND VIDEO

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right. Indicate the rule violated: _____	
A time violation (a deduction of five [5] points) will be incurred for exceeding the sixty (60)-second time limit for the length of the video. Record the deduction in the space to the right.	

PRELIMINARY SUBTOTAL (100 points)

SEMIFINAL LEAP INTERVIEW (10 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
LEAP Report/ Interview (10% of the total event points)	The team's efforts are not clearly communicated, lack detail, and/or are unconvincing; few, if any, attempts are made to identify and/or incorporate the SLC Practices and Behaviors.	The team's efforts are adequately communicated, include some detail, are clear, and/or are generally convincing; identification and/or incorporation of the SLC Practices and Behaviors is adequate.	The team's efforts are clearly communicated, fully-detailed, and convincing. Identification and/or incorporation of the SLC Practices and Behaviors is excellent.	

SEMIFINAL LEAP INTERVIEW SUBTOTAL (10 points)

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right. Indicate the rule violated: _____	

To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary. **TOTAL (110 points)**	

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____   Signature: _____

ON DEMAND VIDEO
EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Judges:

1. Preliminary round, two (2) or more

2. Semifinal round, two (2) or more

MATERIALS

A. Coordinator's packet, containing:

1. Event guidelines, one (1) copy for the coordinator and for each judge

2. TSA Event Coordinator Report

3. List of judges/assistants

4. Pre-populated flash drives for judges

5. One (1) stopwatch per group of judges

6. Marking pens, three (3)

7. Results envelope

8. Envelope for LEAP Reports

9. LEAP Interview Judging Protocol

B. Tables and chairs for judges

C. Computer installed with VLC Media Player software and capable of viewing PDF files is needed for each judge team in addition to the rubric/scoring computer

D. Extension cords (25' minimum length), as needed

RESPONSIBILITIES

AT THE CONFERENCE

1. Attend the mandatory coordinator's meeting at the designated time and location.

2. Report to the CRC room and obtain the coordinator's packet; check the contents.

3. Review the event guidelines and check to see that enough judges/assistants have been scheduled.

4. Inspect the area(s) in which the event is being held for appropriate set-up, including room size, chairs, tables, outlets, etc. Notify the event manager of any potential problems.

EVENT CHECK-IN/PRELIMINARY ROUND

1. Prior to the event meeting, the coordinator should tour the conference facilities and develop a list of restricted areas and/or specific restrictions for the event. This list should be shared with the event manager prior to the event meeting. The coordinator should mention at the event meeting that teams must be courteous to all guests in common areas or designated filming areas.

2. Meet with all participants at the scheduled time and location to deliver the event-specific criteria, including required props and dialogue.

   a. Ensure that all participants understand regulations regarding equipment allowed, behavior, deadlines, and submission requirements.

   b. Collect the LEAP Reports from each team.

   c. Anyone reporting who is not on the coordinator's report may check in only after official notification is received from the CRC.

   d. Late entries are considered on a case-by-case basis and only when the delay is caused by events beyond participant control.

3. At least one (1) hour before the judging is scheduled to begin, meet with judges/assistants to review time limits, procedures, and regulations. If questions arise that cannot be answered, speak to the event manager before the event begins.

4. Judges independently evaluate the entries.

5. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

   a. To deduct 20% of the total possible points or

   b. To disqualify the entry

   c. The event coordinator, judges and CRC manager must initial either of these actions on the rating form.

6. Each group of evaluators averages its scores to determine the top five (5) entries from that group. The number of evaluator groups depends on the number of entries. In this case, there are two (2) or more evaluators for every twenty (20) entries. The top five (5) entries from each group advance to the semifinalist round.

7. Review and submit the semifinalist results and all items/forms in the results envelope to the CRC room.

8. Semifinalists will be posted by the CRC.

SEMIFINAL ROUND

1. Inspect the area in which the interviews are to take place. Ensure that there is a table and seating for participants and judges   .

2. Meet with semifinalist judges to review the LEAP Judging Protocol. If questions arise that cannot be answered, speak to the event manager before semifinalist interviews begin.

3. Evaluation of the semifinalist event entries can take place at a separate time (before/after the interviews) in order to allow time for judges to view and score the videos/documentation.

4. Conduct semifinalist LEAP interviews. Interviews should be a maximum of five (5) minutes in length.

5. Judges independently assess the semifinalist entries.

6. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

   a. To deduct 20% of the total possible points or

   b. To disqualify the entry

   c. The event coordinator, judges and CRC manager must initial either of these actions on the rating form.

7. Judges determine the ten (10) finalists and discuss and break any ties. (Determine the procedure for breaking ties before the onsite competition begins.)

8. Review and submit the finalist results and all items/forms in the results envelope to the CRC room.

9. If necessary, manage security and the removal of materials from the area.

PHOTOGRAPHIC TECHNOLOGY

OVERVIEW

Participants have the opportunity to demonstrate understanding of and expertise in using photographic and imaging technology processes to convey a message. Semifinalists record images and then utilize graphic editing software to prepare a solution to an onsite challenge. The current year's theme will be posted on the TSA website under Competitions/Themes and Problems.

ELIGIBILITY

One (1) individual per chapter may participate; one (1) entry per individual.

TIME LIMITS

Semifinalists will be allowed two (2) hours to complete the first stage, and two (2) hours to complete the second stage of the semifinalist round.

Semifinalists also participate in a LEAP interview that lasts five (5) minutes.

LEAP

An individual LEAP Report is required for this event and must be submitted at event check-in (see LEAP Program).

ATTIRE

TSA competition attire is required for this event.

PROCEDURE

PRELIMINARY ROUND

1. Participants check in their entry and submit a LEAP Report at the time and place stated in the conference program.

2. Entries are reviewed by judges. Neither students nor advisors are present at this time.

3. A list of twelve (12) semifinalists (in random order) is posted.

SEMIFINAL ROUND

1. Semifinalists report to the event area at the time and place stated in the conference program, with all of the required equipment and software noted in the event Regulations.

2. During the semifinalist round, participants will rotate through a series of stations where they will perform tasks to demonstrate their knowledge and skills of the use of photographic equipment and techniques, such as lighting equipment (e.g., continuous lighting kit [such as the one shown here: https://amzn.to/2v0RYx8m or equivalent, provided by National TSA] and/or off-camera flash units [provided by the participant]), as well as their creativity in staging and photographing a subject in a studio-like environment.

3. As part of the station rotation, semifinalists will also participate in an interview which will include questions regarding LEAP.

4. Semifinalists will be given 30 minutes at each station to set up lights and camera, position their subject, and take their photographs, or do their interview.

5. At the end of the allotted time, competitors will rotate to the next station. Once a competitor has completed his or her time in a station, s/he may not revisit it.

6. When the first two (2) hours of the contest have elapsed, competitors will move to their editing computers and will have two (2) hours to select and edit ONE (1) photo from each station to submit for judging.

7. The original photos, along with their edited versions are to be placed in a multimedia presentation and saved to two USB flash drives for judging.

8. At the conclusion of the allotted editing time, the multimedia presentation is to be saved to both USB flash drives and the drives are to be turned into the event coordinator for judging.

9. Judges independently assess the entries, including each participant's LEAP Report.

10. The top ten (10) finalists will be announced at the awards ceremony.

REGULATIONS

PRELIMINARY ROUND

A. Participants prepare a photographic portfolio addressing the annual theme posted on the national TSA website.

B. Participants must submit their photographic images and required documentation as a single, multi-page PDF document on a USB flash drive at the time and place designated in the conference program

C. The USB flash drive must be labeled with the name of the competition (PHOTOGRAPHIC TECHNOLOGY) and the participant's identification number.

D. The entry must contain: Five (5) separate images, each no larger than 8" x 10" or no smaller than 3" x 5".

1. Of the five (5) images, two (2) must be color images, two (2) must be black and white images, and one (1) image can be of the participant's choice.

2. Note: Sepia tones, blue tones, or coloring of any type, other than black and white, are counted as color images.

E. Subjects for each of the images may include (but are not limited to) action shots, still-lifes, product shots, portraits, special effects shots (composites, successive printing, ghost images, sandwiching, silhouettes, etc.), wildlife, landscapes, etc.

F. All images submitted for judging must be the sole work of the individual participant; this includes images used in special effects photography.

G. Any image submitted that combines images must have the unaltered images included in the Resources/References section of the entry.

H. Each image (none larger than 8" x 10") must be included in the single, multi-page PDF document.

I. ALL recognizable individuals (i.e., face is visible) selected and pictured in the images must give their written consent before the images can be used in this event.

J. All consent forms must be included in the single, multi-page PDF documentation portfolio as described below. NOTE: If consent forms are missing, the entry will not be judged.

K. Each image submitted should include a typewritten statement no longer than one-half (½) page in length (typewritten in a san serif, 12-point font [such as Arial or Calibri] for readability) with the following information:

1. Camera make (Nikon, Canon, Panasonic, Sony, etc.)

2. Camera model (CoolPix, Rebel, 5D, etc.)

3. F-stop at which the photograph was taken

4. Exposure time

5. ISO speed

6. Focal length

7. A brief description of the image, how the photographer interprets it to meet the challenge criteria, and what edits were made to the original image to arrive at the final product. This statement should NOT appear on the same page as the final image.

8. Include detailed information about the process/special effects applied to the image.

L. The single, multi-page PDF document must be a finished size of 8½" x 11" with the pages arranged in this order:

1. LEAP Report

2. Title page with the event title, the conference city and state, and the year; one (1) page

3. Table of contents; pages as needed

4. Color Image #1 – a single color image no larger than 8" x 10" and no smaller than 3" x 5"; one (1) page

5. A written statement about Color Image #1 containing the information detailed in Regulation K; one (1) page

6. Color Image #2 – a single color image no larger than 8" x 10" and no smaller than 3" x 5"; one (1) page

7. A written statement about Color Image #2 containing the information detailed in Regulation K; one (1) page

8. Black and White Image #1 – a single black and white image no larger than 8" x 10" and no smaller than 3" x 5"; one (1) page

9. A written statement about Black and White Image #1 containing the information detailed in Regulation K; one (1) page

10. Black and White Image #2 – a single black and white image no larger than 8" x 10" and no smaller than 3" x 5"; one (1) page

11. A written statement about Black and White Image #2 containing the information detailed in Regulation K; one (1) page

12. Student's Choice Image – image should be no larger than 8" x 10" and no smaller than 3" x 5"; one (1) page

13. A written statement about Student's Choice Image containing the information detailed in Regulation K; one (1) page

14. Consent forms – Recognizable individuals (i.e., face is visible) selected and pictured in the images must give their written consent before the images can be used in this event; failure to provide consent forms for recognizable individuals will result in disqualification.

15. List of resources and references used. Photos used in special effects photos (composite images, ghosted images, etc.) are to be placed in this section and should note the associated photo; pages as needed.

M. All prints used in Photographic Technology should be appropriate for viewing at the National TSA Conference. Any entry that includes images depicting inappropriate or unacceptable behavior will result in disqualification.

SEMIFINAL ROUND

A. Semifinalists are required to provide their own camera equipment, including:

1. A tripod

2. Portable, off-camera flash unit (e.g., a speedlight)

3. Cameras must have a timer feature and/or remote trigger, off camera flash capability, and the ability to be mounted to a tripod.

4. Cell phone cameras are not permitted.

B. Semifinalists may bring any other related accessories that they feel they may need (i.e., filters, reflectors, extra batteries, etc.) to use in the onsite competition.

C. Semifinalists must also bring a computer (laptop is preferred) with graphic editing software installed.

D. Participants will use the graphic editing software (e.g., Lightbox, Photoshop, Fireworks, etc.), to edit their images. Semifinalists should edit the images as necessary to achieve the desired result.

E. Each semifinalist must have a method to transfer the images to the computer for editing (such as a media reader).

F. No internet access will be provided, nor will competitors be allowed to bring and/or use mobile hotspots to access the internet during the competition.

G. Semifinalists must bring two (2) USB flash drives to compete in the semifinal round of the event.

H. Each USB flash drive must be labeled with the participant's identification number and the name of the competition.

I. Examples of tasks that participants may be asked to perform include, but are not limited to: photographing a product for commercial use, green screen shots, macro photography, portraiture, or staging a still life photo using provided materials.

1. Where required by the onsite challenge, lighting kits (with the exception of off-camera flash units), backdrops, props and models will be provided by TSA.

J. Semifinalists should edit the image as necessary to achieve the desired result; a copy of the original image and the edited copy must be saved to both USB flash drives.

K. When preparing their multimedia presentation, semifinalists must include the following information:

1. Camera make (Nikon, Canon, Panasonic, Sony, etc.)

2. Camera model (CoolPix, Rebel, 5D, etc.)

3. F-stop at which each photograph was taken

4. Exposure time of each photograph

5. ISO speed of each photograph

6. Focal length of the lens for each photograph

7. For each image presented, participants must also write a brief statement (one to two sentences in length) on how the photographer believes the image meets the challenge (e.g., "I chose a standard formal portrait style in black and white to focus attention on the subject's face.").

   a. The statement must also include the edits made to the original image to arrive at the final image.

   b. This statement should NOT appear on the same page/slide as the image.

   c. The text should be in a san-serif, 12-point font (such as Arial or Calibri) for easy readability.

L. The LEAP Report

1. Participants document the leadership skills developed and demonstrated while working on this event, and on a non-competitive event leadership experience.

2. Semifinalists will respond to questions about the content of the LEAP Report as part of the LEAP interview, which will be conducted as part of the semifinalist presentation.

3. Specific LEAP Report regulations can be found in the LEAP Program section of this guide and on the TSA website.

EVALUATION

1. Points earned for the required images and documentation (preliminary and semifinal rounds)

2. Scores on required images and the documentation portfolio determine the twelve (12) semifinalists.

3. The content and quality of the LEAP Report and interview

4. Points earned through the onsite event determine the final ranking

Refer to the official rating form for more information.

STEM INTEGRATION

This event aligns with the STEM educational standards of Science, Technology, Engineering, and Mathematics.

CAREERS RELATED TO THIS EVENT

- Advertising or public relations executive
- Graphic designer
- Photographer
- Publisher
- Sales manager

PHOTOGRAPHIC TECHNOLOGY

2019 & 2020 OFFICIAL RATING FORM

HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

- ☐ Portfolio (a single [multi-page] document in PDF format is present on the flash drive
- ☐ Consent forms are present in the portfolio (if necessary)
- ☐ Portfolio contains the correct number of images (none larger than 8" x 10")
- ☐ Resources/References list is present in the portfolio
- ☐ Completed LEAP Report is present
- ☐ ENTRY NOT EVALUATED

PORTFOLIO (60 points)				Record scores in the column spaces below.
CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Principles and elements of design and composition and creativity (X1)	There is little or no evidence of an understanding or creative use of compositional elements (line, shape, form, value, space, texture, color, framing, emphasis, balance, unity, contrast, movement/rhythm and pattern/repetition).	Images demonstrate some knowledge and creative use of compositional elements (line, shape, form, value, space, texture, color, framing, emphasis, balance, unity, contrast, movement/rhythm and pattern/repetition).	Images clearly demonstrate excellent and creative use of a variety of compositional elements (line, shape, form, value, space, texture, color, framing, emphasis, balance, unity, contrast, movement/ rhythm and pattern/ repetition).	
Technical quality (X1)	Photos are out of focus; blurriness is unintentional and does not contribute to the overall composition; photos display incorrect exposure values, white balance, and/or range of tones; there is little or no consideration given to lighting and/or special effects.	Photos are in focus; photos display correct exposure values, white balance, and/or range of tones; images exhibit some attention to lighting and/or the use of special effects.	Photo subject(s) are in sharp focus; blurriness is used effectively to enhance the composition; photos display correct exposure values, white balance, and/or range of tones; images are enhanced by attention to lighting and/or the use of special effects.	
Emotional Impact (X1)	The images are flat and lack emotional depth; viewers are not drawn into the scene; images do not clearly convey the theme/challenge.	The images show some emotional depth; viewers make an emotional connection with the images/pictures and are drawn into the scene or learn something from the subject(s); images convey the competition theme/challenge.	The images show emotional depth; viewers make an instant emotional connection with the pictures and are drawn into the scene or learn something from the subject(s); images cleary convey the competition theme/challenge.	
Written statements (X1)	A written statement may or may not accompany each photo, and/or the statement includes only some of the photo's meta data (camera make/model, f/stop, exposure time, ISO speed, focal length), and/or an explanation of the relevance of the image to the challenge is not present and/or is written poorly.	A written statement accompanies each photo; the statement includes most of the photo's meta data (camera make/model, f/stop, exposure time, ISO speed, focal length); an explanation of the relevance of the image to the challenge is included.	A written statement accompanies each photo; the statement includes the photo's meta data (camera make/model, f/stop, exposure time, ISO speed, focal length); an explanation of the relevance of the image to the challenge is presented in a clear and concise manner.	

PORTFOLIO (60 points) – continued

Resources/ References (X2)	A reference list is present, but graphic and/or software packages used are not mentioned, and/or MLA format is not used, and/or the citations are inadequate.	A reference list is present and the primary software packages used are included; MLA format is used for an adequate number of resources.	Detailed and concise resources/ references are provided; all software packages used are included; MLA format is used for the citations.	
PORTFOLIO SUBTOTAL (60 points)				

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right. Indicate the rule violated: _____	

PRELIMINARY SUBTOTAL (60 points)	

SEMIFINAL CHALLENGE (60 points)

Record scores in the column spaces below.

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Principles and elements of design/ composition and creativity (X1)	There is little or no evidence of an understanding or creative use of compositional elements (line, shape, form, value, space, texture, color, framing, emphasis, balance, unity, contrast, movement/rhythm and pattern/repetition).	Images demonstrate some knowledge and creative use of compositional elements (line, shape, form, value, space, texture, color, framing, emphasis, balance, unity, contrast, movement/rhythm and pattern/repetition).	Images clearly demonstrate excellent and creative use of a variety of compositional elements (line, shape, form, value, space, texture, color, framing, emphasis, balance, unity, contrast, movement/ rhythm and pattern/repetition).	
Technical skill (X2)	Participants do not demonstrate knowledge of and understanding of how to utilize photographic equipment and techniques such as lighting equipment, and/ or off-camera flash, or do not use it altogether in the onsite challenge; participants show little or no creativity in stanging and photographing subjects.	Participants demonstrate some knowledge of and understanding of how to utilize photographic equipment and techniques such as lighting equipment, and/or off-camera flash, or use it only minimally in the onside challenge; participants show some creativity in stanging and photographing subjects.	Participants clearly demonstrate knowledge and understanding of how to utilize photographic equipment and techniques such as lighting equipment, and/or off-camera flash and use it creatively in the onsite challenge; participants show creativity in stanging and photographing subjects; participants show a high level of skill in the use of the tools to create high quality images.	
Technical quality (X1)	Photos are out of focus; blurriness is unintentional and does not contribute to the overall composition; photos display incorrect exposure values, white balance, and/or range of tones; there is little or no consideration given to lighting and/or special effects.	Photos are in focus; photos display correct exposure values, white balance, and/or range of tones; images exhibit some attention to lighting and/or the use of special effects.	Photo subject(s) are in sharp focus; blurriness is used effectively to enhance the composition; photos display correct exposure values, white balance, and/or range of tones; images are enhanced by attention to lighting and/or the use of special effects.	
Emotional Impact (X1)	The images are flat and lack emotional depth; viewers are not drawn into the scene; images do not clearly convey the theme/challenge.	The images show some emotional depth; viewers make an emotional connection with the images/pictures and are drawn into the scene or learn something from the subject(s); images convey the competition theme/challenge.	The images show emotional depth; viewers make an instant emotional connection with the pictures and are drawn into the scene or learn something from the subject(s); images cleary convey the competition theme/challenge.	

SEMIFINAL CHALLENGE (60 points) – continued

Written Statements (X1)	A written statement may or may not accompany each photo, and/or the statement includes only some of the photo's meta data (camera make/model, f/stop, exposure time, ISO speed, focal length), and/or an explanation of the relevance of the image to the challenge is not present and/or is written poorly.	A written statement accompanies each photo; the statement includes most of the photo's meta data (camera make/model, f/stop, exposure time, ISO speed, focal length); an explanation of the relevance of the image to the challenge is included.	A written statement accompanies each photo; the statement includes the photo's meta data (camera make/model, f/stop, exposure time, ISO speed, focal length); an explanation of the relevance of the image to the challenge is presented in a clear and concise manner.	
SEMIFINAL CHALLENGE SUBTOTAL (60 points)				

SEMIFINAL LEAP INTERVIEW (12 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
LEAP Report/ Interview (10% of total event points)	The individual's or team's efforts are not clearly communicated, lack detail, and/or are unconvincing; few, if any, attempts are made to identify and/or incorporate the Student Leadership Challenge Practices and Behaviors.	The individual's or team's efforts are adequately communicated, include some detail, are clear, and/or are generally convincing; identification and/or incorporation of the Student Leadership Challenge Practices and Behaviors is adequate.	The individual's or team's efforts are clearly communicated, fullydetailed, and convincing; identification and/ or incorporation of the SLC Practices and Behaviors is excellent.	
SEMIFINAL LEAP INTERVIEW SUBTOTAL (12 points)				

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right. Indicate the rule violated: _____	

SEMIFINAL SUBTOTAL (72 points)	

To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary. **TOTAL (132 points)**	

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____   Signature: _____

PHOTOGRAPHIC TECHNOLOGY EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Assistants for check-in, two (2)

C. Judges:

    1. Preliminary round for portfolios, two (2) or more

    2. Semifinal round, two (2) or more

MATERIALS

A. Coordinator's packet, containing

    1. Event guidelines, one (1) copy for the coordinator and for each judge

    2. TSA Event Coordinator Report

    3. List of judges/assistants

    4. Pre-populated flash drives for judges

    5. Stick-on labels for entries, as needed

    6. Results envelope

    7. Envelope for LEAP Reports

    8. LEAP Interview Judging Protocol

B. Tables for entries

C. Tables and chairs for judges

D. Semifinalist event information sheet

E. Event time line and presentation schedule

F. LED projector and laptop with appropriate software to review semifinalist presentations

RESPONSIBILITIES

AT THE CONFERENCE

1. Attend the mandatory coordinator's meeting at the designated time and location.

2. Report to the CRC room and obtain the coordinator's packet; check the contents.

3. Review the event guidelines and check to see that enough judges/assistants have been scheduled.

4. Inspect the area(s) in which the event is being held for appropriate set-up, including room size, chairs, tables, outlets, etc. Notify the event manager of any potential problems.

5. At least one (1) hour before the event is scheduled to begin, meet with judges/assistants to review time limits, procedures, and regulations. If questions arise that cannot be answered, speak to the event manager before the event begins.

EVENT CHECK-IN

1. Check in the entries and collect LEAP Reports at the time stated in the conference program.

2. Anyone reporting who is not on the coordinator's report may check in only after official notification is received from the CRC.

3. Late entries are considered on a case-by-case basis and only when the delay is caused by events beyond participant control.

4. Collect entries for evaluation and secure them in the designated area.

5. Place an entry number on the protective sleeve holding the USB flash drive, or the flash drive itself.

PRELIMINARY ROUND

1. Judges independently assess the entries.

2. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

    a. To deduct 20% of the total possible points or

    b. To disqualify the entry

    c. The event coordinator, judges and CRC manager must all initial either of these actions on the rating form.

3. Judges determine twelve (12) semifinalists.

4. Review and submit the semifinalist results and all related items/forms to the CRC room for posting.

SEMIFINAL ROUND

1. Perform basic set up of equipment necessary for the completion of the semifinal task and distribute the description of the Photographic Technology semifinalist assignment, specific instructions, and timeline to each semifinalist.

2. At the completion of the semifinalist round, collect USB flash drives. Ensure that each is properly marked with the participant's identification number.

3. Immediately following the collection of flash drives, each semifinalist will participate in a LEAP interview that will last a maximum of five (5) minutes.

4. Following completion of the second stage of this round, judges evaluate the entries.

5. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

    a. To deduct 20% of the total possible points or

    b. To disqualify the entry

    c. The event coordinator, judges and CRC manager must all initial either of these actions on the rating form.

6. Judges determine the ten (10) finalists and discuss and break any ties. (Determine the procedure for breaking ties before the onsite competition begins.)

7. Review and submit the finalist results and all items/forms in the results envelope to the CRC room.

8. If necessary, manage security and the removal of materials from the area.

PREPARED PRESENTATION

OVERVIEW

Participants have the opportunity to develop and deliver an oral presentation using a digital slide deck on an assigned topic provided onsite.

ELIGIBILITY

Three (3) individuals per state may participate.

TIME LIMITS

1. Each presentation must be no less than three (3) minutes and no more than five (5) minutes.

2. A maximum of five (5) minutes is allowed for set-up.

3. At the conclusion of a presentation, participants must have all devices ready to exit the room within three (3) minutes.

4. A time deduction (noted in the rubric) will be incurred for not adhering to any time designations/restrictions.

5. The semifinalist LEAP interview will take place immediately following each semifinalist presentation and will last a maximum of five (5) minutes.

LEAP

An individual LEAP Report is required for this event and must be submitted at event check-in.

ATTIRE

TSA competition attire is required for this event.

PROCEDURE

PRELIMINARY ROUND

1. Participants report to the event area at the time and place stated in the conference program to sign up for a presentation time and submit a LEAP Report.

2. Participants report to the designated area to receive the assigned topic for the presentation. The assigned topic will be given to the participants at one (1) hour intervals based on the participant's presentation time.

3. Participants report to the holding area, as stated in the conference program, fifteen (15) minutes prior to the assigned presentation time.

4. The event coordinator introduces each participant by number and in order of scheduled times. The schedule allows time for set-up and removal of equipment.

5. A list of twleve (12) semifinalists (in random order) is posted.

SEMIFINAL ROUND

1. Semifinalists report to the event area at the time and place stated in the conference program. Each semifinalist will sign up for a presentation time.

2. Semifinalists will present on the same topic as in the preliminary round and will follow the same presentation procedure as above.

3. The semifinalist LEAP interview will take place immediately following each semifinalist presentation.

4. Judges independently assess each participant's presentation, including the LEAP Report.

5. The top ten (10) finalists will be announced during the awards ceremony.

REGULATIONS

PRELIMINARY ROUND/SEMIFINAL ROUND

A. Each presentation must be the result of the participant's own efforts.

B. The topic for the Prepared Presentation event is given to participants twenty-four (24) hours prior to their presentation time.

C. The presentation must include the use of a digital slide deck.

D. The slide deck must include a minimum of five (5) slides.

E. Participants are not allowed to hear other participants' presentations.

F. It is the participant's responsibility to provide any audio/visual equipment needed for the presentation, including a laptop computer and projector. If a participant is using equipment that requires electricity, s/he must bring a 25' extension cord.

G. Participants will not be permitted to compete without an electronic device for presentation.

H. A table (approximately six feet [6'] long) and a projection screen will be provided by national TSA for participant use, as needed.

I. Participant scores are penalized one (1) point per ten (10)-second interval for speaking over or under the allotted time.

   1. The same penalty is used for set-up and takedown.

   2. Set-up time begins when the participant is called into the room and ends when the participant is ready to deliver the presentation; takedown time begins when the presentation is concluded and ends when the participant has all devices ready to exit the room.

   3. The presentation time starts when the presentation begins and ends when the presentation is concluded.

J. No observers are allowed in the event or preparation rooms during heats, although they are allowed to sit in the audience of the performance during the finals.

   1. No talking or gesturing is permitted.

   2. Observers are NOT allowed to enter or leave during a presentation.

   3. There is no applause until the presentation has concluded.

   4. No form of visual recording (such as photographic or video) or audio recording by any observer (including family, friends, or advisors of the participants) is permitted.

K. The LEAP Report

   1. Participants document the leadership skills developed and demonstrated while working on this event, and on a non-competitive event leadership experience.

   2. Participants will respond to questions about the content and quality of the LEAP Report as part of the LEAP interview, which will be conducted as part of the semifinalist presentation.

   3. Specific LEAP Report regulations can be found in the LEAP Program section of this guide and on the TSA website.

EVALUATION

   1. The quality of the presentation

   2. Appropriate use of a slide deck

   3. The content and quality of the LEAP Report and interview

Refer to the official rating form for more information.

STEM INTEGRATION

This event aligns with the STEM educational standards of Science, Technology, Engineering, and Mathematics.

CAREERS RELATED TO THIS EVENT

- Broadcast media specialist
- Lawyer
- Management consultant
- Motivational speaker
- Public relations executive

PREPARED PRESENTATION

2019 & 2020 OFFICIAL RATING FORM

HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

☐ A slide deck is present.
☐ Items required to execute the slide deck are present.
☐ Completed LEAP Report is present.
☐ ENTRY NOT EVALUATED

DOCUMENTATION (30 points) — Record scores in the column spaces below.

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Introduction (X1)	The introduction is weak, with little effort made to highlight and/or generate interest and enthusiasm for the topic.	The introduction is adequate and creates a general level of interest.	The introduction is effective, stimulating, and inspires observers.	
Body (X1)	The body of the presentation is poorly organized; the content does not properly cover or represent the topic theme.	The body of the presentation is somewhat clear and effective and creates an interesting premise.	The body of the presentation speech is clear, effective, and delivered in an exceptionally interesting manner; the presentation is memorable.	
Conclusion (X1)	The conclusion fails to summarize or clarify the information provided in the presentation.	The conclusion adequately summarizes the content and theme of the presentation topic.	The conclusion is effective, interesting, and memorable; it fully brings finality to the presentation.	
DOCUMENTATION SUBTOTAL (30 points)				

STAGE PRESENCE (30 points) — Record scores in the column spaces below.

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Appearance (X1)	Participant's appearance is unprofessional, sloppy, and inappropriate.	Participant's appearance is adequate, appropriate, and somewhat professional.	Participant's appearance is exceptional, appropriate, and professional.	
Confidence (X1)	Participant appears nervous during presentation; poor posture, poor eye contact, and lack of confidence are evident.	Participant is generally poised, displays eye contact, and is confident, with little sign of nervousness.	Participant "commands" the room, and is exceptionally poised, confident, and positive.	

PREPARED PRESENTATION

STAGE PRESENCE (30 points) – continued				
Articulation (X1)	Participant conveys an inconsistent use of proper grammar, word pronunciation, and acceptable pitch and tone.	Participant generally uses proper grammar and pronunciation, and varies the use of tone and pitch.	Smooth and effective articulation, proper grammar, correct pronunciation, and varied tone and pitch are used throughout the speech.	
			STAGE PRESENCE SUBTOTAL (30 points)	

ORGANIZATION (40 points)				
CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Effectiveness and quality of presentation (X1)	The presentation is poorly prepared, not interesting, and not representative of the stated theme.	The presentation is adequate, and the observer can generally understand the theme.	The presentation is exceptional and memorable; the observer can easily understand and relate to the theme.	
Organization (X1)	The presentation is difficult to follow or understand.	The presentation is adequately organized and delivered.	The presentation is organized and easy to follow; the delivery is exceptional.	
Quality of the slide deck (X1)	The presentation slide deck is of minimal quality; slides are unprofessional and/or inappropriate and do not enhance the content of the presentation; the participant does not have the minimum number of slides required.	The presentation slide deck is adequate; the slides generally relate to the theme of the presentation; the participant has used the minimum number of slides required.	The slide deck is exceptional and enhances the theme and content of the presentation without distracting the observers from the overall content of the presentation; the participant exceeds the minimum number of slides required.	
Use of the slide deck (X1)	The participant reads from the slide deck; the use of the slide deck detracts from the overall presentation; the participant struggles with transitions between slides while delivering the presentation.	The participant tends to rely on the slide deck for much of the presentation; the participant adequately handles transitions between slides while delivering the presentation.	The participant effectively uses the slide deck to enhance the overall presentation; transitions between slides are smooth, effective, and well-timed.	
			ORGANIZATION SUBTOTAL (40 points)	

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

TIME DEDUCTIONS

One (1) point per ten (10)-second interval is to be deducted for speaking under the three (3) minutes or over the five (5) minutes allotted for the presentation. The same one (1)-point per ten (10)-second interval penalty applies to more than five (5) minutes for set up and three (3) minutes for take down. Presentation time commences when the presenter begins speaking.

Total time for presentation		Presentation deduction		
Total time for set-up		Set-up deduction		
Total time for take down		Take down deduction		
			TOTAL TIME DEDUCTIONS	

PRELIMINARY SUBTOTAL (100 points)	

SEMIFINAL LEAP INTERVIEW (10 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
LEAP Report/ Interview (10% of total event points)	The individual's efforts are not clearly communicated, lack detail, and/or are unconvincing; few, if any, attempts are made to identify and/or incorporate the SLC Practices and Behaviors.	The individual's efforts are adequately communicated, include some detail, are clear, and/or are generally convincing; identification and/or incorporation of the SLC Practices and Behaviors is adequate.	The individual's efforts are clearly communicated, fully-detailed, and convincing; identification and/or incorporation of the SLC Practices and Behaviors is excellent.	

SEMIFINAL LEAP INTERVIEW SUBTOTAL (10 points)	

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

SEMIFINAL SUBTOTAL (10 points)	

PREPARED PRESENTATION

To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary.	TOTAL (110 points)	

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____   Signature: _____

PREPARED PRESENTATION
EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Judges:

1. Preliminary round, two (2) or more per heat/event room

2. Semifinal round, two (2) or more, preferably those who did NOT judge the initial round

C. Timekeeper, one (1) per heat/event room for the preliminary round and one (1) for the semifinal round

MATERIALS

A. Coordinator's packet, containing:

1. Event guidelines, one (1) copy for the coordinator and for each judge

2. TSA Event Coordinator Report

3. List of judges/assistants

4. Pre-populated flash drives for judges

5. Stopwatch, one (1) per event room

6. Results envelope

7. Envelope for LEAP Reports

8. LEAP Interview Judging Protocol

B. Prepared sign-up list indicating ten (10)-minute intervals for each preliminary heat to accommodate all registered participants

C. Prepared sign-up list indicating fifteen (15)-minute intervals for the semi-finalist round

D. Assigned theme (to be distributed twenty-four [24] hours before the assigned presentation time), one (1) copy per participant and judge

E. Tables and chairs for two (2) judges and one (1) timekeeper per heat/event room

F. Chairs for audience for semifinalist round

G. Table for participant use, approximately 6' long, one (1) per heat/event room

H. Projection screen, one (1) per heat/event room

I. Podium, one (1) per heat/event room

RESPONSIBILITIES

AT THE CONFERENCE

1. Attend the mandatory coordinator's meeting at the designated time and location.

2. Report to the CRC room and obtain the coordinator's packet; check the contents.

3. Review the event guidelines and check to see that enough judges/assistants have been scheduled.

4. Inspect the area(s) in which the event is being held for appropriate set-up, including room size, chairs, tables, screens, outlets, etc. Notify the event manager of any potential problems. Set up the projection screen.

5. At least one (1) hour before the event is scheduled to begin, meet with judges/assistants to review time limits, procedures, and regulations. If questions arise that cannot be answered, speak to the event manager before the event begins.

EVENT CHECK-IN

1. Begin the event at the scheduled time and check the entry list.

2. Anyone reporting who is not on the entry list may check in only after official notification is received from the CRC.

3. Late entries are considered on a case-by-case basis and only when the delay is caused by events beyond participant control.

4. Collect LEAP Reports from participants during the initial event time sign-ups at the time and place stated in the conference program.

5. Participants will sign up for heats according to the time provided in the conference program.

6. Participants who do not report to sign up for heats may be disqualified. Any exceptions must be approved by the CRC.

PREPARED PRESENTATION

PRELIMINARY ROUND

1. Participants will report to the designated time and place stated in the conference program to receive the topic for presentation.

2. Topics will be given to participants twenty-four (24) hours prior to presentation times.

3. At the scheduled time, take the first participant to the event room and provide five (5) minutes for set-up of equipment.

4. The event coordinator or assistant introduces each participant by entry number only. No nametags that give any indication of the hometown, school, or chapter are allowed.

5. Approximately every ten (10) minutes, the coordinator or designated assistant sends a participant to the event coordinator or assistant in the event room.

6. The participant is allowed three (3) minutes to remove all equipment.

7. Following the last participant's presentation, the judges determine the twelve (12) semifinalists, making adjustments for time penalties.

8. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:
   a. To deduct 20% of the total possible points or
   b. To disqualify the entry
   c. The event coordinator, judges and CRC manager must initial either of these actions on the rating form.

9. Review and submit semifinalist results and all related items/forms to the CRC room for posting.

SEMIFINAL ROUND

1. Inspect the area(s) in which the event is being held for appropriate set-up, including room size, chairs, tables, screens, outlets, etc. Notify the event manager of any potential problems. Set up the projection screen.

2. At least one (1) hour before the event is scheduled to begin, meet with judges/assistants to review time limits, procedures, and regulations. If questions arise that cannot be answered, speak to the event manager before the event begins.

3. Repeat the presentation process in the preliminary round for scoring the semifinal round.

4. Include an additional five (5) minutes per time slot (semifinalist round only) to allow for each semifinalist to participate in the semifinalist LEAP interview immediately following their semifinalist presentation.

5. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:
   a. To deduct 20% of the total possible points or
   b. To disqualify the entry
   c. The event coordinator, judges and CRC manager must initial either of these actions on the rating form.

6. Judges determine the ten (10) finalists and their ranking, and discuss and break any ties. (Determine the procedure for breaking ties before the onsite competition begins.)

7. Review and submit the finalist results and all items/forms in the results envelope to the CRC room.

8. If necessary, manage security and the removal of materials from the event area.

PROMOTIONAL DESIGN

OVERVIEW

Participants have the opportunity to use computerized graphic communications layout and design skills in the production of a promotional resource for TSA.

Participants produce an original multi-piece marketing folder to be used for TSA chapter recruitment, or as an introductory packet for new TSA advisors/teachers. This promotional pocket folder should be mailable and would include four to five (4-5) separate and different items. The folder must contain items that provide details about TSA, its history, its co-curricular relationship with Engineering and Technology pathway courses, its membership guidelines and instructions for joining, the competitive events program, signature events, service projects, STEM connections, leadership training activities, and sample chapter membership recruitment items. Promotional Folder content examples might include: a pamphlet, post card, letter, small poster, business card, and a PDF of a color graphic for branding promotional gifts. The complete Promotional Folder must demonstrate a unity of design that repeats throughout the included items.

Semifinalists respond to an onsite problem with a solution that demonstrates their ability to use a computer to design and edit materials for in-house publication.

ELIGIBILITY

Three (3) individuals per state may participate, one (1) entry per individual.

TIME LIMITS

1. Semifinalists have a thirty (30)-minute set-up time before the onsite portion of the event, and two (2) hours to complete the onsite problem.

2. The semifinalist LEAP interview will take place immediately following the completion of the onsite portion of the event and will last a maximum of five (5) minutes.

LEAP

An individual LEAP Report is required for this event and must be submitted at event check-in (see LEAP Program).

ATTIRE

TSA competition attire is required for this event.

PROCEDURE

PRELIMINARY ROUND

1. Participants check in their entries and submit a LEAP Report at the time and place stated in the conference program.

2. Entries are reviewed by judges.

3. A list of twelve (12) semifinalists (in random order) will be posted.

SEMIFINAL ROUND

1. Semifinalists report to the event area at the time and place stated in the conference program for the onsite component of the event.

2. Semifinalists are provided with an onsite publishing problem.

3. A final color output of each semifinalist entry is saved as a PDF file, turned in on a USB flash drive, and judged.

4. The semifinalist LEAP interview will take place immediately following the completion of the onsite portion of the event.

5. Judges independently assess the entries, including each semifinalist's LEAP Report and interview.

6. The top ten (10) finalists will be announced during the awards ceremony.

REGULATIONS

PRELIMINARY ROUND

A. Each entry must include a student-designed standard two-pocket folder.

1. The folder may be produced by the participant or purchased from an office supply store.

2. The folder must be made of cardstock with a cover image (either printed directly to the cover or printed on a separate sheet of paper, then glued to it to simulate the look of the final project).

3. The folder must include two pockets, and a business card slit.

4. The folder must include 4-5 printed promotional publication items (chosen by the designer).

5. One of the submitted items must be the folder that contains the rest of the portfolio. The folder must measure 9½" x 12" closed, and 19" x 12" open.

B. The printed items contained in the folder must follow the below guidelines:

1. The printed items contained in the folder should be designed in color (three [3] minimum) on white 8½" x 11" paper (maximum size).

2. Colored paper, preprinted, or designed paper may not be used.

3. Clip art may be used, however, no templates may be used.

4. If it is determined that the product submitted is a template, the entry will be disqualified.

5. Items that may be considered for the additional three (3) or four (4) portfolio items might include: a pamphlet, post card, letter, small poster, business card, PDF of graphic for branding promotional gifts, such as mugs or a t-shirt; (these actual items are not submitted).

6. The complete packet should demonstrate a unity of design that repeats throughout the portfolio.

7. The content of all items must be appropriate for viewing at the National TSA Conference. Any entry that includes images depicting sex, drugs, tobacco, alcohol, gangs, cults, etc., will be disqualified.

8. The folder containing all the elements is identified using only the participant's identification number.

9. Entries should not include any other identifying information. (The name of the chapter may only be identified when the challenge calls for promotion of the local chapter, as in fundraising.)

10. These items must be included in the folder:

    a. Proof of permission to use copyrighted image(s) must be included (see Student Copyright Checklist in the Forms Appendix or on the TSA website).

    b. A release form must be present if photographs of individuals are used (see Photo Consent and Release form).

    c. Clipart must be documented. Failure to do so results in disqualification. (No permission is needed for the use of the TSA logo by affiliated chapters.) Refer to the TSA Branding Guide on the TSA website.

SEMIFINAL ROUND

A. Semifinalists supply their own computer work station with USB port, power strip/surge protector, extension cord, and software for the onsite portion of the event.

1. A laptop computer is recommended.

2. Any semifinalist who does not provide these items will not be allowed to compete in the onsite event.

B. The purpose of the onsite entry is to create a printable product.

C. Clip art may be used.

D. No templates may be used.

E. All onsite work is developed, saved as a PDF file on a USB flash drive, and submitted using only the participant's identification number.

F. Semifinalists leave the event room only with permission from the event coordinator.

G. The onsite entry should be saved and submitted when the work is completed and/or when time elapses.

H. All entries become the property of TSA and will not be returned after judging.

I. The LEAP Report

    1. Participants document the leadership skills developed and demonstrated while working on this event, and on a non-competitive event leadership experience.

    2. Semifinalists will respond to questions about the content of the LEAP Report as part of the LEAP interview.

    3. Specific LEAP Report regulations can be found in the LEAP Program section of this guide and on the TSA website.

EVALUATION

PRELIMINARY ROUND

The promotional folder cover and contents

SEMIFINAL ROUND

    1. The semifinalist problem

    2. The content and quality of the LEAP Report and interview

Refer to the official rating form for more information.

STEM INTEGRATION

This event has connections to the STEM standards of Science, Technology, Engineering, and Mathematics.

CAREERS RELATED TO THIS EVENT

- Advertising executive
- Graphic designer
- Marketing manager
- Printer
- Public relations manager

PROMOTIONAL DESIGN

2019 & 2020 OFFICIAL RATING FORM

HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

☐ Entry is submitted in the designated folder (9½" x 12" when closed).
☐ Entry contains the required four to five (4-5) items.
☐ No obvious templates are present in the entry.
☐ All permission forms are present.
☐ Completed LEAP Report is present.
☐ ENTRY NOT EVALUATED

STATIC ENTRY (110 points)

PROMOTIONAL FOLDER COVER (Cover Graphic) (40 points)

Record scores in the column spaces below.

CRITERIA	Minimal performance 1-4 points	Adequate performance 5-8 points	Exemplary performance 9-10 points	
Appropriateness of graphic design (X1)	The design has little connection to or is inadequate in conveying the essence of the design challenge; logo(s) are poorly placed or of poor quality.	The design has a general connection to the challenge; logo(s) are present.	The design is appropriate and effectively addresses the theme; logo(s) are present and appropriately placed.	
First impressions (sharp, clean edges of graphics and fonts; entry is clear of smudges, smears, pencil or other extraneous marks) (X1)	The design is messy and/ or damaged, and leaves an unfavorable impression.	The design is neat, with adequate attention to detail.	The design is eye-catching and compelling; attention to detail is very evident.	
Use of color (X1)	The graphic has less than three colors; colors used clash or distract from the graphic.	The graphic has three colors, and they generally work well together.	The effective choice of colors creates an appealing graphic.	
Fonts (readable, have eye appeal, appropriate dimension and placement) (X1)	Font choice, size, and placement are ineffective in creating an aesthetically pleasing design.	Font choice and size are appropriate and incorporated somewhat effectively in the design.	Font choice and size are appropriate, and the location of text is effectively incorporated in the aesthetics of the design.	
PROMOTIONAL FOLDER COVER SUBTOTAL (40 points)				

PROMOTIONAL FOLDER CONTENTS (70 points)

Record scores in the column spaces below.

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Appropriateness of graphic products (X1)	The included graphic products have little connection to the intent of the folder's target audience.	The included graphic products are appropriate to the intended audience and have generally useful content.	The included graphic products clearly connect with the intention of the promotional packet and its intended audience, providing useful, related content	
Unity of design (X1)	The complete packet has little obvious unity of design throughout the included items.	The complete packet demonstrates a general sense of unity of design throughout the included items.	The complete packet demonstrates an obvious unity of design that repeats throughout the included items.	
Incorporation of graphic design principles (alignment, contrast, unity, white space, balance, and proportion) (X1)	The included graphic products incorporate or embody few, if any, of the design principles.	The included graphic products are somewhat pleasing but may be missing one or two design principles; the products have a layout that is generally aesthetically pleasing.	The included graphic products are clearly unique and aesthetically pleasing, with all graphic design principles incorporated in the overall design and layout.	
Grammar/spelling (X1)	Many misspelled words are present, and grammar is poor.	Spelling and grammar are mostly correct.	Proper grammar and spelling are evident.	
Graphic images (X1)	Images have little connection to the essence of the challenge; logo(s) are poorly placed or of poor quality.	Images have general connections to the challenge; logo(s) are present.	Images are appropriate and effectively address the challenge; logo(s) are present and appropriately placed.	
Use of color (X1)	Graphic has less than three colors; colors used clash or distract from the graphic.	Graphic has three colors, and they generally work well together.	The effective choice of colors creates an appealing graphic.	
Fonts (readable, have eye appeal, appropriate dimension and placement) (X1)	Font choice, text size, and placement are ineffective in creating an aesthetically pleasing design.	Font choice is appropriate and incorporated somewhat effectively in the design.	Font choice and size are appropriate, and the location of text is effectively incorporated in the aesthetics of the design.	
PROMOTIONAL FOLDER CONTENTS SUBTOTAL (70 points)				

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

PRELIMINARY SUBTOTAL (110 points)

PROMOTIONAL DESIGN

SEMIFINAL PROBLEM (40 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Layout and design (X1)	The design inadequately incorporates the design principles of alignment, consistancy, contrast, unity, or white space.	The design incorporates most design principles; overall layout is generally aesthetically pleasing.	An aesthetically pleasing design is provided, with all design principles incorporated in the layout and design.	
Solution to project (X1)	Three or more attributes of the solution's criteria are missing.	Most attributes of the solution's criteria are included.	All attributes of the solution's criteria are evident.	
Effectiveness (X1)	The solution inadequately conveys the intended message, and/or it contains unrelated text/graphics.	The solution conveys the intended message appropriately, and it uses text and/or graphics generally well.	The solution's message is easily understood and interpreted, with exceptional use of related graphics and text.	
Originality (X1)	The finished product is ordinary, plain, and unimaginative in design.	The finished product shows some effort to be imaginative and original.	The final product is truly unique and shows creativity.	
SEMIFINAL PROBLEM SUBTOTAL (40 points)				

SEMIFINAL LEAP INTERVIEW (15 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
LEAP Report/ Interview (10% of total event points)	The individual's efforts are not clearly communicated, lack detail, and/or are unconvincing. Few, if any, attempts are made to identify and/or incorporate the SLC Practices and Behaviors.	The individual's efforts are adequately communicated, include some detail, are clear, and/or are generally convincing. Identification and/or incorporation of the SLC Practices and Behaviors is adequate.	The individual's efforts are clearly communicated, fully-detailed, and convincing. Identification and/or incorporation of the SLC Practices and Behaviors is excellent.	
SEMIFINAL LEAP INTERVIEW SUBTOTAL (15 points)				

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right. Indicate the rule violated: _____	

SEMIFINAL SUBTOTAL (55 points)	

To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary. **TOTAL (165 points)**	

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____   Signature: _____

PROMOTIONAL DESIGN
EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Judges:

1. Preliminary round, two (2) or more

2. Semifinal round, two (2) or more

MATERIALS

A. Coordinator's packet, containing:

1. Event guidelines, one (1) copy for the coordinator and for each judge

2. TSA Event Coordinator Report

3. List of judges/assistants

4. Pre-populated flash drives for judges

5. Stick-on labels for entries, as needed

6. Results envelope

7. Envelope for LEAP Reports

8. LEAP Interview Judging Protocol

RESPONSIBILITIES

AT THE CONFERENCE

1. Attend the mandatory coordinator's meeting at the designated time and location.

2. Report to the CRC room and obtain the coordinator's packet; check the contents.

3. Review the event guidelines and check to see that enough judges/assistants have been scheduled.

4. Inspect the area(s) in which the event is being held for appropriate set-up, including room size, chairs, tables, outlets, etc.

5. At least one (1) hour before the event is scheduled to begin, meet with judges/assistants to review time limits, procedures, and regulations. If questions arise that cannot be answered, speak to the event manager before the event begins.

EVENT CHECK-IN

1. Check in the entries and collect LEAP Reports at the time stated in the conference program.

2. Anyone reporting who is not on the coordinator's report may check in only after official notification is received from the CRC.

3. Late entries are considered on a case-by-case basis and only when the delay is caused by events beyond participant control.

4. Place an entry number in the upper right-hand corner of the portfolio.

5. Secure the entries in the designated area.

PRELIMINARY ROUND

1. Judges independently evaluate each entry.

2. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

   a. To deduct twenty percent (20%) of the total possible points in this round or

   b. To disqualify the entry

   c. The event coordinator, judges, and CRC manager must all initial either of these actions on the rating form.

3. Judges determine the twelve (12) semifinalists.

4. Review and submit semifinalist results and all related items/forms to the CRC for posting.

SEMIFINAL ROUND

1. Inspect the area(s) in which the onsite activity is being held for appropriate set-up, including room size, chairs, tables, outlets, etc. Notify the event manager of any potential problems.

2. At least one (1) hour before the event is to begin, meet with your judges for the onsite activity to review time limits, procedures, and regulations. If questions arise that cannot be answered, speak to the event manager before the event begins.

3. Semifinalists report for the onsite problem.

4. Begin the event at the scheduled time by closing the doors and checking the entry list.

   a. All semifinalists and judges should be in the room at this time.

   b. Semifinalists not present may be disqualified.

5. Judges monitor the participants during the onsite activity.

6. Each participant (using his/her individual identification number) will save the final product in a PDF file on a USB flash drive.

7. Immediately following the collection of flash drives, each semifinalist will participate in a LEAP interview that will last a maximum of five (5) minutes.

8. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

   a. To deduct twenty percent (20%) of the total possible points in this round or

   b. To disqualify the entry

   c. The event coordinator, judges, and CRC manager must all initial either of these actions on the rating form.

9. Judges will determine the ten (10) finalists and their ranking, and discuss and break any ties. (Determine the procedure for breaking ties before the onsite competition begins.)

10. Review and submit the finalist results and all items/forms in the results envelope to the CRC room.

11. If necessary, manage security and the removal of materials from the area.

SCIENTIFIC AND TECHNICAL VISUALIZATION (SCIVIS)

OVERVIEW

Scientific and Technical Visualization (SciVis) is the representation of complex scientific and/or technical concepts in a visual form. Participants use either 2D or 3D computer graphics tools and design processes to communicate, inform, analyze, and/or illustrate a STEM topic, idea, subject, or concept.

ELIGIBILITY

Three (3) teams per state may participate, one (1) entry per team; a team of one (1) individual is allowed.

NOTE: Collaborative work as a team is strongly encouraged.

TIME LIMITS

PRELIMINARY ROUND

1. The visualization is to be two to four (2-4) minutes in length. There will be a five (5)-point deduction for each fifteen (15) seconds under two (2) minutes or over four (4) minutes.

2. The visualization time length is calculated from the start of the first image or sound to the end of the last image or sound.

SEMIFINAL ROUND

1. Semifinalists will be interviewed by the judges about their entry for a maximum of ten (10) minutes.

2. The semifinalist LEAP interview will be conducted immediately following the event-specific interview and will last a maximum of five (5) additional minutes.

LEAP

An individual or team LEAP Report is required for this event and must be submitted at event check-in (see LEAP Program).

ATTIRE

TSA competition attire is required for this event.

PROCEDURE

PRELIMINARY ROUND

1. Participants check in their entries and submit a LEAP Report at the time and place stated in the conference program.

2. Entries are reviewed by judges. Neither students nor advisors are present at this time.

3. A list of twelve (12) semifinalists (in random order) is posted.

SEMIFINAL ROUND

1. No more than two (2) representatives from each semifinalist team may report to the event area for the interview at the time and place stated in the conference program.

2. Each semifinalist team answers questions about their portfolio from the judges, discussing the purpose, value, research and design, and development process of its work.

3. The semifinalist LEAP interview will be conducted immediately following the event-specific interview.

4. The top ten (10) finalists will be announced at the awards ceremony.

REGULATIONS

PRELIMINARY ROUND

A. All entries must be the original work of the participant or team.

1. Where applicable, all ideas, text, images, and sound from other sources must be cited.

2. If copyrighted material is used, proper written permission must be included.

3. Failure to follow this procedure results in disqualification.

B. All entries become the property of TSA and will not be returned after judging.

C. Documentation:

1. A USB flash drive must be submitted with the documentation materials at check-in.

2. Documentation materials (comprising a "portfolio") are required and must be secured in a clear front report cover. The report cover must include the following single-sided, 8½" x 11" pages, in this order:

   a. USB flash drive (containing the visualization) in a secure holder or sealed sleeve at the front of the portfolio.

   b. LEAP Report

   c. Title page with the event title, the conference city and state, and the year; one (1) page

   d. Table of contents; pages as needed

   e. Purpose of visualization; one (1) page

   f. Hand-sketched storyboard that documents the flow and progression of the visualization with written notes; special effects, audio cues, dialogue, transitions, and scene duration should be incorporated into the storyboard; pages as needed

   g. Written description of what the visualization illustrates or demonstrates; one (1) page

   h. List of references that includes sources for materials, copyrighted and otherwise; pages as needed. (The term "Fair Use" and similar terms are not acceptable citations when creating the list of references.)

   i. Permission letters for copyrighted material; pages as needed

   j. List of software and hardware used in the development of the visualization; one (1) page

   k. Plan of Work log that indicates preparation for the event, as noted by date, task, time involved, the initials of the team member(s) responsible, and comments (see Forms Appendix or TSA website); pages as needed

   l. Completed and signed Student Copyright Checklist (see Forms Appendix or TSA website); one (1) page

D. Visualization:

   1. Visualizations must be turned in on a USB flash drive in either an MPEG or Quick Time file format.

   2. A PowerPoint presentation or PowerPoint slide show are not acceptable formats for this event.

   3. Each visualization must advance automatically once it has been opened and started by the judges. A splash screen is acceptable, provided the "PLAY" command is easily visible.

   4. The visualization may be an animation, such as a biological cell dividing or a group of static images that explain the concept.

   5. No posters or models will be accepted.

   6. Live action video is not allowed, including "whiteboard" style entries.

   7. All work must be included in the portfolio and on a USB flash drive.

   8. The visualization is not to be under two (2) or over four (4) minutes in length.

   9. There will be a five (5)-point deduction for each fifteen (15) seconds under the minimum time or for each fifteen (15) seconds over the maximum time.

   10. Sound may accompany the visualization.

   11. Absolutely no purchased content may be used in any part of the visualization. (Purchased content includes, but is not limited to, texture, models, and royalty free music.)

SEMIFINAL ROUND

A. The semifinalist team may involve no more than two (2) members in the event-specific and LEAP interview.

B. The LEAP Report

   1. Participants document the leadership skills they have developed and demonstrated while working on this event, and on a non-competitive event leadership experience.

   2. Participants will respond to questions about the content of the LEAP Report as part of the LEAP interview.

   3. Specific LEAP Report regulations can be found in the LEAP Program section of this guide and on the TSA website.

EVALUATION

PRELIMINARY ROUND

1. The portfolio
2. The visualization

SEMIFINAL ROUND

1. The event-specific interview
2. The content and quality of the LEAP Report and interview

STEM INTEGRATION

This event aligns with the STEM educational standards of Science, Technology, Engineering, and Mathematics.

CAREERS RELATED TO THIS EVENT

- Computer animator
- Game designer
- Instructional technologist
- Software engineer

SCIENTIFIC AND TECHNICAL VISUALIZATION (SCIVIS)

2019 & 2020 OFFICIAL RATING FORM

HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

- ☐ The portfolio is present.
- ☐ The USB flash drive is present.
- ☐ The visualization is playable.
- ☐ Completed LEAP Report is present.
- ☐ ENTRY NOT EVALUATED

DOCUMENTATION (40 points)

Record scores in the column spaces below.

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Portfolio components (X1)	The portfolio is unorganized and/or missing three or more components.	The portfolio has most components and is adequately organized.	All components are present, and content and organization are clearly evident.	
Purpose and description (X1)	The purpose and description of the visualization idea generation are unclear.	The purpose and description are explained appropriately and adequately.	The purpose and description of the visualization are clear and concisely written, and compelling.	
Storyboard (X2)	The storyboard is sloppy, seems to have been thrown together after the creation of the visualization, and/or it does not correlate with the visualization.	The storyboard is drawn appropriately and largely correlates with the completed visualization.	The storyboard is of exceptional aesthetic and artistic quality and clearly correlates with the visualization, including timings.	
DOCUMENTATION SUBTOTAL (40 points)				

VISUALIZATION (70 points)				Record scores in the column spaces below.
CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Communication of visualization (X2)	It is difficult to understand the concept being communicated; an illogical explanation is presented.	The concept is communicated generally adequately.	The concept is communicated in an organized, clear, and concise manner.	
Creativity (X2)	The visualization lacks creativity; no, or very few, design principles are integrated in the visualization.	Some elements of creativity are expressed, with most design principles integrated.	The visualization exudes creativity; essential design principles and elements are integrated.	
Aesthetics and artisanship (X1)	Unorganized, sloppy work is evident; the visualization seems to be an afterthought and/or thrown together.	A largely organized presentation of layout and design principles is evident.	An exemplary use of layout and design principles to logically communicate important data is evident.	
Graphical representations (X1)	Graphical representations do not help to clarify visualization, or they are of little significance to the project.	Graphical representations are appropriate and help supplement the visualization by providing clarity to the project.	Graphical representations are of excellent quality; and clarify abstract concepts.	
Originality (X1)	The visualization lacks imagination, originality, and artistic detail.	The visualization is somewhat effective, inventive, and inspiring.	The visualization is inspiring, inventive, resourceful, and motivating.	
VISUALIZATION SUBTOTAL (70 points)				

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

TIME DEDUCTIONS	
There will be a five (5) point deduction for each fifteen (15) seconds under the minimum time or each fifteen (15) seconds over the maximum time allowed for the visualization.	
Total time for visualization	
Visualization time deduction	
TOTAL TIME DEDUCTION	

PRELIMINARY SUBTOTAL (110 points)

SCIENTIFIC AND TECHNICAL VISUALIZATION (SCIVIS)

SEMIFINAL INTERVIEW (66 points)				Record scores in the column spaces below.
CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Organization (X1)	The team/individual seems unprepared and unorganized for the interview.	The team/individual is somewhat prepared and organized in its interview.	The team is well-prepared and any questions asked by judges are answered concisely.	
Knowledge (X2)	The team/individual seems to have little understanding of its chosen topic.	The team/individual has a generalized understanding of its chosen topic.	There is clear evidence of a thorough understanding of the chosen topic.	
Articulation (X1)	The interview is full of illogical thoughts that lack clarity.	The interview is somewhat logical, and/or clear, and concise.	A concise, logical, clear explanation of the entry is given.	
Delivery (X1)	The team/individual is verbose and/or uncertain in the interview; posture, gestures, and lack of eye contact diminish the delivery.	The team/individual is somewhat well-spoken and clear in the interview; posture gestures, and eye contact result in an acceptable delivery.	The team/individual is well-spoken and distinct in the interview; posture, gestures, and eye contact result in a polished, natural, and effective delivery.	
LEAP Report/ Interview (16 points; 10% of total event points)	The individual's or team's efforts are not clearly communicated, lack detail, and/or are unconvincing; few, if any, attempts are made to identify and/or incorporate the SLC Practices and Behaviors.	The individual's or team's efforts are adequately communicated, include some detail, are clear, and/or are generally convincing; identification and/or incorporation of the SLC Practices and Behaviors is adequate.	The individual's or team's efforts are clearly communicated, fully-detailed, and convincing; identification and/or incorporation of the SLC Practices and Behaviors is excellent.	
SEMIFINAL INTERVIEW SUBTOTAL (66 points)				

Time violation (a deduction of five (5) points total will be incurred for exceeding the semifinalist presentation time limit). Record the deduction in the space to the right.	

SEMIFINAL SUBTOTAL (66 points)	

To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary. **TOTAL (176 points)**	

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____   Signature: _____

SCIENTIFIC AND TECHNICAL VISUALIZATION (SCIVIS) EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Assistant for check-in, one (1)

C. Judges:

1. Preliminary round, two (2) or more for initial review of entries. If more than 20 entries, provide 2 additional evaluators to conduct heats.

2. Semifinal round, two (2) or more for interviews

MATERIALS

A. Coordinator's packet, containing:

1. Event guidelines, one (1) copy for the coordinator and for each judge

2. TSA Event Coordinator Report

3. List of judge/assistants

4. Pre-populated flash drives for judges

5. Results envelope

6. Envelope for LEAP Reports

7. LEAP Interview Judging Protocol

B. Tables for entries

C. Tables and chairs for initial judges

D. Tables and chairs for semifinalist judges and participants

E. Extension cords and power-bars with protection for judges, as needed

RESPONSIBILITIES

AT THE CONFERENCE

1. Attend the mandatory coordinator's meeting at the designated time and location.

2. Report to the CRC room and obtain the coordinator's packet; check the contents.

3. Review the event guidelines and check to see that enough judges and assistants have been scheduled.

4. Inspect the area in which the portfolios are being placed for appropriate set-up including sufficient number and size of tables.

5. At least one (1) hour before the event is scheduled to begin, meet with judges/assistants to review time limits, procedures, and regulations. If questions arise that cannot be answered, speak to the event manager before the event begins.

EVENT CHECK-IN

1. Check in the entries at the time stated in the conference program.

2. Notify the event manager immediately of any team that is not on the coordinator's report.

3. Anyone reporting who is not on the entry list may check in only after official notification is received from the CRC.

4. Late entries are considered on a case-by-case basis and only when the delay is caused by events beyond participant control.

PRELIMINARY ROUND

1. The number of judges depends upon the number of entries. Heats of 20 entries may be used at the coordinator's discretion.

2. Judges independently assess the entries.

3. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and a CRC manager to determine either:

a. To deduct twenty percent (20%) of the total possible points in this round or

b. To disqualify the entry

c. The event coordinator, judges, and CRC manager must all initial either of these actions on the rating form.

4. Judges determine the twelve (12) semifinalist teams.

5. Review and submit the semifinalist results and all related items/forms in the results envelope to the CRC room for posting.

6. Create semifinalist sign-up sheet for each team's presentation.

SEMIFINAL ROUND

1. Inspect the area in which the interviews are to take place. Ensure that there is a table and seating for the interviews.

2. At least one (1) hour before the event is scheduled to begin, meet with judges/assistants to review time limits, procedures, and regulations. If questions arise that cannot be answered, speak to the event manager before the event begins.

3. Semifinalists report to the event area at the time and place stated in the conference program.

4. Each semifinalist team signs up for an interview time about its visualization.

5. During the interview, the semifinalist team representatives will explain their work and answer any questions the judges may ask.

6. As part of the semifinalist interview, semifinalists will participate in a LEAP interview that will last a maximum of five (5) additional minutes.

7. Judges independently assess the twelve (12) semifinalists.

8. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and a CRC manager to determine either:

    a. To deduct twenty percent (20%) of the total possible points in this round or

    b. To disqualify the entry

    c. The event coordinator, judges, and CRC manager must all initial either of these actions on the rating form.

9. Judges determine the ten (10) finalists and their ranking, and discuss and break any ties. (Determine the procedure for breaking ties before the onsite competition begins.)

10. Review and submit the finalist results and all items/forms in the results envelope to the CRC room.

11. Collect all USB flash drives and portfolios and give them to the event manager.

12. If necessary, manage security and the removal of equipment and materials from the area.

SOFTWARE DEVELOPMENT

OVERVIEW

Participants have the opportunity to use knowledge of cutting-edge technologies, algorithm design, problem-solving principles, effective communication, and collaborative teamwork to design, implement, test, and document a software development project. The project should have educational or social value.

ELIGIBILITY

One (1) team per chapter may participate.

TIME LIMITS

1. Teams are allowed up to five (5) minutes for their presentation.
2. Semifinalists will participate in a LEAP interview that will last a maximum of five (5) minutes.

LEAP

A team LEAP Report is required for this event and must be submitted at event check-in (see LEAP Program).

ATTIRE

TSA competition attire is required for this event.

PROCEDURE

PRELIMINARY ROUND

1. Teams submit their documentation, sign up for a presentation time, and submit LEAP Reports at the time and place stated in the conference program.
2. Teams report to the event area at the time and place stated in the conference program for their scheduled presentation.
3. Teams will give a live demonstration of the functionality of their project, describe the design process, and discuss the value of the project. No more than three (3) team members may present to the judges, for up to five (5) minutes.
4. Judges may ask questions after the presentation is finished.

5. Teams will remove their project and equipment from the area at the completion of their presentation.
6. A list of twelve (12) semifinalists (in random order) will be posted.

SEMIFINAL ROUND

1. Semifinalist teams will report at the time and place stated in the conference program to sign up for a semifinalist LEAP interview.
2. Judges independently evaluate the LEAP Report and interview.
3. The top ten (10) finalists will be announced at the awards ceremony.

REGULATIONS

PRELIMINARY ROUND

A. Documentation materials (comprising "a portfolio") are required and should be secured in a clear front report cover. The report cover must include the following single-sided, 8½" x 11" pages, in this order:

1. LEAP Report
2. Title page with the event title, the conference city and state, and the year; one (1) page
3. Table of contents; pages as needed
4. Research about the problem; one (1) page
5. Description of the team's project, including:
   a. the problem
   b. solution for the problem
   c. an explanation of the project's educational and social value; up to two (2) pages
6. Plan of Work log that indicates preparation for the event, as noted by date, task, time involved, team member(s) responsible, and comments (see Forms Appendix or TSA website); one (1) page
7. Documentation of the use of a software development process, including the following:
   a. Project requirements; one (1) page
   b. High-level software design; one (1) page
   c. Testing, including code output and desired results; pages as needed

    d. End-user product documentation; pages as needed

8. Team's self-evaluation (of its work) and the project's future prospects; one (1) page

9. List of references used for the project

10. A completed copy of the Student Copyright Checklist (see Forms Appendix or TSA website)

B. All portfolios and presentations become the property of TSA and will not be returned after the event.

C. Teams must provide all necessary hardware to demonstrate their project.

1. This may include a laptop computer, mobile device(s), computer mouse, and/or 20' extension cord.

2. The setup should not exceed 2' x 2' x 2'.

D. National TSA will NOT provide wireless Internet. Students may provide Internet access using a hotspot from a mobile device, however, students should have an alternate presentation plan in case access is unavailable.

SEMIFINAL ROUND

A. The LEAP Report

1. Teams document the leadership skills the team developed and demonstrated while working on this event, and on a non-competitive event leadership experience.

2. Teams will respond to questions about the content of the LEAP Report.

3. Specific LEAP Report regulations can be found in the LEAP Program section of this guide and on the TSA website.

EVALUATION

PRELIMINARY ROUND

1. The quality of work

2. The overall benefit showcased in the participant portfolio

3. The technical skill exhibited in the project

4. The ability to demonstrate and describe the team's software design process

5. How well the problem identified is solved by the software project

SEMIFINAL ROUND

The content and quality of the LEAP Report and interview

Refer to the official rating form for more information.

STEM INTEGRATION

This event aligns with the STEM educational standards of Science, Technology, Engineering, and Mathematics.

CAREERS RELATED TO THIS EVENT

- Graphic designer
- Software engineer

SOFTWARE DEVELOPMENT

2019 & 2020 OFFICIAL RATING FORM

HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

☐ Portfolio is present.
☐ Student Copyright Checklist is present and complete.
☐ Completed LEAP Report is present.
☐ ENTRY NOT EVALUATED

DOCUMENTATION (40 points)

Record scores in the column spaces below.

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Portfolio components (X1)	The portfolio is unorganized and/or is missing three or more components.	The portfolio is somewhat organized; most components are adequate.	The portfolio is organized, complete, and includes all required components.	
Research (X1)	The research is inadequate, and/or very few credible sources are referenced.	The research is adequate, and it includes a few credible sources.	The research is comprehensive, and credible resources are included.	
Description of project (X1)	A description of the project, including an explanation of the problem and the solution for the problem, is poorly presented.	A description of the project, with an explanation of the problem and its solution, is adequate.	A description of the project is clear, concise, and fully addresses the problem and solution.	
Plan of Work log and self-evaluation (X1)	The Plan of Work log and the self-evaluation are incomplete and/or missing key components.	The Plan of Work log and self-evaluation are mostly complete, but they may be overgeneralized.	The Plan of Work log and the self-evaluation are complete and concisely written; they include the reflections of all team members.	
DOCUMENTATION SUBTOTAL (40 points)				

SOFTWARE DESIGN (60 points)

Record scores in the column spaces below.

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Software coding practices (X2)	The project is inadequately developed in terms of general software coding practices (requirements, design, implementation, and testing).	The project is developed following most general software coding practices (requirements, design, implementation, and testing).	The project is extremely well developed and followed general software coding practices (requirements, design, implementation and testing).	
Complexity (X1)	The software design exhibits little complexity; it appears as a "bare bones" effort.	The software design exhibits some degree of complexity.	The software design is complex, resulting in a highly functional product.	

SOFTWARE DESIGN (60 points) – continued

Creativity (X1)	The work lacks creativity; it is evident there was little original thought in developing the project.	Some elements of creativity are expressed; the solution is somewhat original.	The work exudes creativity; the product is highly original.
Technical skill (X1)	Little technical skill is exhibited in the software; the levels of software development are not fluid and/or are illogical.	A beyond-basic degree of technical skill is exhibited in the software's design and construction; the software flows somewhat effectively from level to level.	The software exhibits mastery of software design skill that few at this level possess; the software flow is constant and logical.
Effectiveness (X1)	The software design does not appropriately provide a solution to the intended problem.	The design loosely provides a solution to the intended problem, but it doesn't fully address the problem presented.	The solution to the problem is clear in the software design; the solution is at the forefront of software creation.
		SOFTWARE DESIGN SUBTOTAL (60 points)	

Record scores in the column spaces below.

PRESENTATION (60 points)

CRITERIA	Minimal performance 1-4 points	Adequate performance 5-8 points	Exemplary performance 9-10 points
Organization (X1)	The team seems unprepared and unorganized for the presentation and questions from judges.	The team is prepared for its presentation to judges and answers questions adequately.	The team's presentation is logical, organized, and effective; the team answers judges' questions well.
Knowledge (X1)	Team members seem to have very little understanding of the concepts in their project; they provide vague answers to judges' questions.	All team members have a general understanding of the concepts discussed and answer questions adequately.	There is clear evidence that all team members have a thorough understanding of the concepts presented in their project.
Articulation (X1)	The team's presentation is full of illogical thoughts that lack understanding and clarity.	The team's presentation is somewhat logical, clear, and concise.	The team provides a concise, logical, and clear explanation of its project.
Delivery (X1)	The team is verbose and/or uncertain in its presentation/ interview; participants' posture, gestures, and lack of eye contact diminish the delivery.	The team is somewhat well-spoken and clear in its presentation/ interview; participants' posture, gestures, and eye contact result in an acceptable delivery.	The team is well-spoken and distinct in its presentation/interview; participants' posture, gestures, and eye contact result in a polished, natural, and effective delivery.
Team participation (X1)	Only one team member communicates with judges; there is no participation from other team members.	Team members participate generally equally and adequately understand the concepts of the project.	All team members fully understand the concepts of the project and share an equal role in answering judges' questions.
Software demonstration (X1)	Team members are unable to successfully demonstrate their software product.	Team members are able to partially demonstrate the functionality of their software product.	Team members are successful and effective in their project demonstration.
		PRESENTATION SUBTOTAL (60 points)	

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

PRELIMINARY SUBTOTAL (160 points)

SEMIFINAL LEAP INTERVIEW (16 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
LEAP Report/ Interview (10% of total event points)	The team's efforts are not clearly communicated, lack detail, and/or are unconvincing; few, if any, attempts are made to identify and/or incorporate the SLC Practices and Behaviors.	The team's efforts are adequately communicated, include some detail, are clear, and/or are generally convincing; identification and/or incorporation of the SLC Practices and Behaviors is adequate.	The team's efforts are clearly communicated, fully-detailed, and convincing; identification and/or incorporation of the SLC Practices and Behaviors is excellent.	
SEMIFINAL LEAP INTERVIEW SUBTOTAL (16 points)				

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

SEMIFINAL SUBTOTAL (16 points)

To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary.   **TOTAL (176 points)**

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____   Signature: _____

SOFTWARE DEVELOPMENT EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Judges:

1. Preliminary round, two (2) or more
2. Semifinal round, two (2) or more

MATERIALS

A. Coordinator's packet, containing:

1. Event guidelines, one (1) copy for the coordinator and for each judge
2. TSA Event Coordinator Report
3. List of judges/assistants
4. Pre-populated flash drives for judges
5. Stick-on labels for entries, as needed
6. Results envelope
7. Envelope for LEAP Reports
8. LEAP Interview Judging Protocol

B. Chairs, as needed for judging

C. Stopwatch for timing semifinalist presentations

RESPONSIBILITIES

AT THE CONFERENCE

1. Attend the mandatory coordinator's meeting at the designated time and location.
2. Report to the CRC room and obtain the coordinator's packet; check the contents.
3. Review the event guidelines and check to see that enough judges/assistants have been scheduled.
4. Inspect the area(s) in which the event is being held for appropriate set-up, including room size, chairs, tables, outlets, etc. Notify the event manager of any potential problems.
5. At least one (1) hour before the event is scheduled to begin, meet with judges/assistants to review time limits, procedures, and regulations. If questions arise that cannot be answered, speak to the event manager before the event begins.

EVENT CHECK-IN

1. Check in the entries and LEAP Reports at the time stated in the conference program.
2. Anyone reporting who is not on the coordinator's report may check in only after official notification is received from the CRC.
3. Late entries are considered on a case-by-case basis and only when the delay is caused by events beyond participant control.
4. Place an entry number in the upper right-hand corner of each portfolio.
5. Position entries for evaluation and viewing by judges.
6. Secure the entries in the designated area.
7. Inspect the area in which the presentations are to be held. There must be a table and seating for at least five (5) people.

PRELIMINARY ROUND

1. Conduct presentations. Judges should be sure to ask questions.
2. Judges independently evaluate the entries.
3. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:
   a. To deduct twenty (20%) of the total possible points in this round or
   b. To disqualify the entry
   c. The event coordinator, judges and CRC manager must initial either of these actions on the rating form.
4. Judges determine the twelve (12) semifinalists.
5. Review and submit the semifinalist results and any related items/forms in the results envelope to the CRC room for posting.

SEMIFINAL ROUND

1. Inspect the area in which the interviews are to take place. Ensure there is a table and seating for interviews.

2. At least one (1) hour before the event is to begin, meet with semifinalist judges to review time limits, procedures, and regulations. If questions arise that cannot be answered, speak to the event manager begore the event begins.

3. Semifinalists will participate in a LEAP interview that will last a maximum of five (5) minutes.

4. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

   a. To deduct twenty (20%) of the total possible points in this round or

   b. To disqualify the entry

   c. The event coordinator, judges and CRC manager must initial either of these actions on the rating form.

5. Judges determine the top ten (10) finalists in rank order, and discuss and break any ties. (Determine the procedure for breaking ties before the onsite competition begins.)

6. Review and submit the finalist results and all items/forms in the results envelope to the CRC room.

7. Manage security and the removal of materials from the area.

STRUCTURAL DESIGN AND ENGINEERING

OVERVIEW

Participants work as a team to build a designated structure. Teams apply the principles of structural design and engineering through research, design, construction, destructive testing, and assessment to determine the design efficiency of the structure.

Details about the structure and information related to it will be posted on the TSA website under Competitions/ Themes and Problems. The onsite semifinalist problem will be a variation of the pre-conference problem posted on the TSA website.

ELIGIBILITY

One (1) team of two (2) members per chapter is allowed to participate, one (1) entry per team.

SAFETY EYEWEAR

1. Participants are required to wear safety-approved eyewear during the onsite phase of this event.

2. Prescription eyewear will need to have side shields to be considered safety eyewear.

3. Should a team member remove the eyewear and fail to replace it, s/he will be reminded once.

4. If there is a second infraction, the team will be asked to leave the competition.

5. Sunglasses are not suitable.

TIME LIMITS

PRELIMINARY ROUND

Pre-built structures must be started and completed during the current school year.

SEMIFINAL ROUND

1. Onsite structures must be started, completed, and checked in during the three (3) hours allowed for design and construction.

2. Semifinalist participants with time conflicts must present a written explanation of the conflict to the event coordinator at least one (1) hour before the construction time noted in the conference schedule. Work must begin during the time scheduled for the event.

3. During the construction time, each team will participate in a LEAP interview that will last a maximum of five (5) minutes.

LEAP

A team LEAP Report is required for this event and must be submitted at event check-in (see LEAP Program).

ATTIRE

TSA competition attire is required for this event.

PRELIMINARY ROUND

PRE-BUILT STRUCTURE REGULATIONS

A. The structure and documentation portfolio must be submitted at the designated time and place noted in the conference program.

B. Documentation materials (comprising "a portfolio") are required and should be secured in a clear front report cover. The report cover must include the following single-sided, 8½" x 11" pages, in this order:

1. LEAP Report

2. Title page with the event title, the conference city and state, and the year; one (1) page

3. Table of contents; one (1) page

4. All work must be completed by the team members only, and then verified by the team's chapter advisor using the *Team Verification* form, found on the TSA website under Competitions/Themes and Problems; one (1) page.

5. Students must complete and provide a copy of the *Analysis and Assessment* form, found on the TSA website under Competition Themes and Problems, for their submitted structural design; one (1) page.

C. Teams must provide a full-size, three (3)-view (front, top, and right end) drawing (hand or computer-generated) of their structure.

ONSITE DESTRUCTIVE TESTING OF PRE-BUILT STRUCTURES PROCEDURE

A. Open viewing of the onsite destructive testing of pre-built structures is allowed.

B. All structures will be assessed (using the evaluation rubric) prior to the onsite destructive testing.

C. Destructive testing will be completed using structural testing equipment, as designated by TSA.

D. When the destructive testing is completed, a list of twenty (20) semifinalist teams will be posted.

E. The twenty (20) semifinalist teams will take part in the onsite problem, which will feature the construction and destructive testing of a structure similar to the pre-conference structure.

SEMIFINAL ROUND

SEMIFINALIST ONSITE CONSTRUCTION AND DESTRUCTIVE TESTING PROCEDURE

A. Twenty (20) semifinalist teams, of two (2) members each, report to the event area at the time and place stated in the conference program.

B. Participants must provide and wear safety glasses for this portion of the event.

C. Participants are required to provide their own tool box.

1. The tool box must include identification (school name, address, and advisor cell phone number).

2. It must not exceed twenty (20) inches (508 mm) length x ten (10) inches (254 mm) width x ten (10) inches (254 mm) height

3. The box must contain all items needed to fabricate the solution. The following is a suggested list (note that some items are required):

   a. Cutting devices; NONE may be electric

   b. Adhesives

   c. Aerosol and electric applicators are not allowed

   d. A bottle of Uncure or Debonder is recommended

   e. Temporary fastening devices

      i. Straight pins

      ii. Clamps

      iii. Tape

   f. A cutting surface that prevents table-top marring (required)

   g. Rulers, straightedges, and/or measuring scales

   h. Abrasives sheets, sponges, boards

   i. Marking devices (pens, pencils, etc.) and sharpener

   j. Sheet of wax paper, as large as is needed for the competition (required)

   k. Pliers, wrenches, nut drivers, as needed

   l. Safety glasses and side shields, (required)

   m. Jigs and fixtures to assist with assembly and construction

D. Teams will be issued a packet of construction materials to use for fabrication of the designated structure. These materials will be withheld until the team's design drawing is complete.

1. Planning and fabrication supplies (these materials may not be part of the structure submitted for testing):

   a. Drawing paper with ¼" or ⅛" grids for sketching the structure

   b. Pin board

   c. A sheet of wax paper

   d. Structure label

E. Teams will be seated by a monitor.

F. The design problem will be explained and a list of directions for the construction process will be provided.

G. Teams will be allowed thirty (30) minutes to review the problem and create a sketch/drawing of their solution.

H. During the building of the team's structure, construction regulations must be observed.

I. Participants may leave early, but they must complete check-out as directed.

J. All work stops at the coordinator's signal.

K. Teams return all supplied items as directed, and clean and clear their work stations.

L. Teams must identify their structure with only their team identification number, using the label provided.

M. During the construction time, each team will participate in a LEAP interview that will last a maximum of five (5) minutes.

N. Structures are allowed to dry in a secure area until destructive testing time.

O. Structures are checked for rules violations and weighed before testing.

P. Destructive testing is completed by judges and is open for spectator viewing.

Q. When all testing is completed, the greatest failure weight of all tested structures is recorded on the rating form, the efficiency rating of individual structures is calculated, and ranking is determined.

R. Teams that fail to comply with the coordinator or monitor directions, after one (1) warning, will be issued a penalty of 20% of the team's total score.

S. Videotaping of the destructive testing of a structure is permitted, but only by a participant or representative of a respective team.

T. The LEAP Report

1. Teams document the leadership skills the team developed and demonstrated while working on this event, and on a non-competitive event leadership experience.

2. Teams will respond to questions about the content of the LEAP Report.

3. Specific LEAP Report regulations can be found in the LEAP Program section of this guide and on the TSA website.

PROCEDURE FOR EVALUATION OF STRUCTURES

A. All structures are weighed before testing and the weight is recorded on the scoring rubric.

B. A designated structural testing device will be used for testing each structure.

C. A specific testing block or attachment may be necessary, depending on the nature of the onsite problem. Any special or unusual configurations for the attachment will be posted with the design problem on the TSA website.

D. An increasing load is applied to the structure via the test block or attachment until the structure fails.

E. The failure weight is recorded on the evaluation rubric. (The failure weight is the greatest weight recorded during testing before the failure of the structure.)

F. The efficiency is determined by the failure weight x 4.54, divided by the weight of the structure in grams.

G. The efficiency is rounded off to three (3) decimal places and recorded on the evaluation rubric.

H. Each team's assessment form is reviewed.

I. The highest numeric efficiency determines the winner. In case of an efficiency tie, the greatest weight held by the tied entries will determine the winner.

J. Failure to comply: If a structure fails to comply with any regulation, a penalty reduction of 20% of the greatest weight held in the competition is subtracted from the team's failure weight. (This penalty factor will not be determined until all structures have been tested.)

STEM INTEGRATION

This event aligns with the STEM educational standards of Science, Technology, Engineering, and Mathematics.

CAREERS RELATED TO THIS EVENT

- Architect
- Civil engineer
- Engineering technician
- Mathematician
- Structural iron and steel work technician

STRUCTURAL DESIGN AND ENGINEERING
2019 & 2020 OFFICIAL RATING FORM
HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

☐ Team of two is present.
☐ The structure is present and identified.
☐ The Team Verification form is complete and present.
☐ The Analysis and Assessment form is complete and present.
☐ Drawings are present.
☐ Completed LEAP Report is present.
☐ There are no unapproved laminations present.
☐ ENTRY NOT EVALUATED

PRE-BUILT STRUCTURE (Construction)

Indicate N for noncompliant or C for compliant, for each regulation in the Construction section. One noncompliant mark will result in a 20% deduction; two noncompliant marks will result in disqualification.

Regulation	Noncompliant		Compliant	
Length of structure	The length of the structure is greater or less than the designated tolerance of the assigned construction length.		The length of the structure is within the designated tolerance of the assigned construction length.	
Width of structure	The width of the structure is greater or less than the designated tolerance of the assigned construction width.		The width of the structure is within the designated tolerance of the assigned construction width.	
Height of structure	The height of the structure is greater or less than the designated tolerance of the assigned construction height.		The height of the structure is within the designated tolerance of the assigned construction height.	
Placement on abutment	The structure cannot be appropriately placed on the abutment.		The structure can be appropriately placed on the abutment.	
Internal clearance	The testing apparatus and rod cannot be placed and passed through the center of the structure to allow for testing.		The testing apparatus and rod pass freely through the center of the structure to allow for testing.	
Other Construction Regulation				
Other Construction Regulation				
			DISQUALIFIED	
			PRE-BUILT STRUCTURE APPROVED FOR TESTING	

PRE-BUILT STRUCTURE (Construction) – continued

Record the mass (weight) of the structure (in grams) prior to testing.	
Record the failure weight in pounds.	
Record the maximum failure rate for all tested structures.	
If only one construction regulation is noncompliant, record a deduction of 20% of the maximum failure weight.	
Adjusted failure weight	
Determine the efficiency (shown to three decimal places) by multiplying the failure weight (or adjusted failure weight, as applicable) by 4.54 and then dividing by the mass (weight) of the structure.	

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

PRE-BUILT STRUCTURE TOTAL POINTS	

Go/No Go Specifications

☐ There are no unapproved laminations present.
☐ ENTRY NOT EVALUATED

ONSITE STRUCTURE (Qualification)

For the Onsite STRUCTURE: Indicate N for noncompliant or C for compliant, in the Qualification and Construction sections below. In the Qualification section, one noncompliant mark will result in disqualification. In the Construction section, one noncompliant mark will result in a 20% deduction; two noncompliant marks will result in disqualification.

Regulation	Noncompliant		Compliant	
Team of two	Only one team member is present.		Both team members are present.	
Safety eyewear	Warnings about eyewear are issued.		No warnings about eyewear are issued.	
Structure identification	The identification sticker is not attached.		The identification sticker is attached.	
Tools and fabrication supplies	Inappropriate tools or supplies are brought to the event.		Appropriate tools and supplies are brought to the event.	
Placement on abutment	The structure cannot be appropriately placed on the abutment.		The structure can be appropriately placed on the abutment.	
Internal clearance	The testing apparatus and rod cannot be placed and passed through the center of the structure to allow for testing.		The testing apparatus and rod pass freely through the center of the structure to allow for testing.	
Construction pins	Pins are still in place when the structure is submitted.		All pins have been removed from the structure.	
Other Construction Regulation				
Other Construction Regulation				
	TOTAL		**TOTAL**	

STRUCTURAL DESIGN AND ENGINEERING

ONSITE STRUCTURE (Construction)				
Regulation	**Noncompliant**		**Compliant**	
Length of structure	The length of the structure is greater or less than the designated tolerance of the assigned construction length.		The length of the structure is within the designated tolerance of the assigned construction length.	
Width of structure	The width of the structure is greater or less than the designated tolerance of the assigned construction width.		The width of the structure is within the designated tolerance of the assigned construction width.	
Height of structure	The height of the structure is greater or less than the designated tolerance of the assigned construction height.		The height of the structure is within the designated tolerance of the assigned construction height.	
			DISQUALIFIED	
			Onsite structure approved for testing	
			Record the mass (weight) of the structure (in grams) prior to testing.	
			Record the failure weight in pounds.	
			Record the maximum failure rate for all tested structures.	
			If only one construction regulation is noncompliant, record a deduction of 20% of the maximum failure weight.	
			Adjusted failure weight	
			Determine the efficiency (shown to three decimal places) by multiplying the failure weight (or adjusted failure weight, as applicable) by 4.54 and then dividing by the mass (weight) of the structure.	

ONSITE STRUCTURE TOTAL POINTS	

Record scores in the column spaces below.

SEMIFINAL LEAP INTERVIEW (20 points)				
CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
LEAP Report/ Interview (X2)	The team's efforts are not clearly communicated, lack detail, and/ or are unconvincing; few, if any, attempts are made to identify and/or incorporate the SLC Practices and Behaviors.	The team's efforts are adequately communicated, include some detail, are clear, and/or are generally convincing; identification and/or incorporation of the SLC Practices and Behaviors is adequate.	The team's efforts are clearly communicated, fully-detailed, and convincing; identification and/or incorporation of the SLC Practices and Behaviors is excellent.	
			SEMIFINAL LEAP INTERVIEW SUBTOTAL (20 points)	

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right. Indicate the rule violated: _____	

	SEMIFINAL SUBTOTAL	

To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary.	TOTAL	

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____   Signature: _____

STRUCTURAL DESIGN AND ENGINEERING EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Construction monitor, one (1) per twenty teams

C. A timekeeper

D. Judges:

    1. to evaluate pre-built structures, two (2) or more, as necessary

    2. to qualify structures after onsite construction, two (2) or more

    3. Destructive test judges, two (2) or more

        a. One (1) to weigh the structure, record structure weight, and record failure weight

        b. One (1) to bring the structure to the testing location, position the structure on the testing device, operate the tester, and then remove and store the structure following testing

MATERIALS

A. Coordinator's packet, containing:

    1. Event guidelines, one (1) copy each for the coordinator and judges

    2. TSA Event Coordinator Report

    3. List of judges/assistants

    4. Pre-populated flash drives for judges

    5. Results envelope

    6. Envelope for LEAP Reports

    7. LEAP Interview Judging Protocol

B. Semifinalist team packets provided by TSA containing construction materials and instructions

    1. Construction tools per team, to be used and returned to the event coordinator or helpers after constructions:

        a. Pin board as supplied, but generally a one-foot by two-foot (1' x 2') piece of fiber or foam board

        b. Grid paper with ¼" x ¼" or ⅛" x ⅛" grid on 17" x 22" paper for structure sketch (to remain with the completed structure when turned in)

        c. Wax paper to cover the pin board (to remain with the completed structure when turned in)

        d. Label for structure

    2. Balsa strips and sheets, as specified in the problem statement (on the national TSA website)

    3. Card stock, as specified in the problem statement (on the national TSA website)

    4. Instructions

C. Testing equipment, provided by TSA

D. Evaluation and recording equipment

    1. Gram scale (3-decimal place calculation)

    2. Tape measure or 2' rule

    3. Evaluation gauges

E. The testing equipment, selected by the event coordinator, provides a downward pull or force, and records the peak force in pounds.

F. Site requirements:

    1. Construction session

        a. Tables and chairs suitable for cutting and gluing

        b. Work area, at least 2' x 3' for each team (suggested space is two [2] teams per 6' x 2' or 8' x 2' table)

        c. One (1) chair per participant

        d. Tables for equipment check-out and check-in

        e. Tables and chairs for judges

        f. Secured area for drying of entries and storage of supplies

    2. Testing session:

        a. Tables for storage of structures

        b. Table for weighing

        c. Table for testing

        d. Table for recording

        e. Tables for storage of failed structures

        f. Chairs for spectators

        g. Barricade to separate testing area from spectators

RESPONSIBILITIES

PRE-CONFERENCE

1. Prepare the structure problem statement (including any necessary related information such as materials to be used for pre-built structures) for posting on the TSA website.

2. Prepare the onsite structure problem statement.

AT THE CONFERENCE

1. Attend the mandatory coordinator's meeting at the designated time and location.

2. Report to the CRC room and obtain the coordinator's packet; check the contents.

3. Review the event guidelines and check to see that enough judges/assistants have been scheduled.

4. Check to see that all event equipment and materials have been secured.

5. At least one (1) hour before the event is scheduled to begin, meet with judges/assistants to review time limits, procedures, and regulations. If questions arise that cannot be answered, speak to the event manager before the event begins.

EVENT CHECK-IN

1. Set up check-in for testing of pre-built structures.

2. Check in the pre-built entries, the portfolios and the LEAP Reports at the time stated in the conference program.

3. Anyone reporting who is not on the entry list may check in only after official notification is received from the CRC.

4. Late entries are considered on a case-by-case basis and only when the delay is caused by events beyond participant control.

PRELIMINARY ROUND/PRE-BUILT STRUCTURES

1. Coordinate and manage the onsite testing of pre-built structures, the recording of results, and the determination of the twenty (20) semifinalist teams.

2. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

   a. To deduct 20% of the total possible points or

   b. To disqualify the entry

   c. The event coordinator, judges, and CRC manager must all initial either of these actions on the rating form.

3. Review and submit semifinalist results to the CRC for posting.

4. Assemble semifinalist packets of construction materials and directions for the twenty (20) onsite semifinalist teams.

SEMIFINAL ROUND/ONSITE CONSTRUCTION

1. This portion of the event is not open to spectators. No individuals other than participants and event personnel will be allowed in the construction area.

2. Check-in will begin at the time noted in the conference program and will continue until all teams arriving on time have been checked in and seated. The event will begin at the posted time.

3. Both members of a team must be present during check-in.

4. No team is allowed to begin late unless its members have complied with the following: Participants with time conflicts must present a written explanation of the conflict to the event coordinator at least one (1) hour before the construction time noted in the conference program. Work must begin during the time frame scheduled for the event.

5. Assign team construction locations.

6. When all teams are seated, distribute instructions and review these, as well as any details for the assigned structure.

7. Teams will be allowed a maximum of three (3) hours to complete their structure. Thirty (30) minutes of this time is allotted for completing the design drawing, and two and one-half (2.5) hours, is allotted for actual construction.

8. When a team notifies a monitor that the required sketch is complete, and the monitor confirms this, the team will receive a materials packet and may begin the onsite construction phase of the event.

9. No additional supplies are provided during the event.

10. Call time at the end of the allotted three (3) hour time frame. All teams must stop working at this point.

11. Immediately following the completion of the semifinalist structures, each semifinalist team will participate in a LEAP interview that will last a maximum of five (5) minutes.

12. Establish the procedure for check-in and recording of finished structures, designate an area for storage, and allow for the return of construction materials.

TEAM CHECK-OUT

1. Teams must leave their work space clean. Failure to do so will result in a 20% penalty deduction.

2. Teams will check in excess supplies as directed by the monitors.

3. Teams place their structures in the storage area with the sketch as directed by the monitor. The structure must be identified with the team number only (using the label provided in the materials packet).

4. Once check-in is complete, all participants leave the competition area.

5. The structures are secured by the monitor and allowed to dry for a minimum of twelve (12) hours.

EVALUATION

1. Check all structures for regulations compliance. Structures that are in compliance will be tested without penalty.

   a. Weigh all structures before testing and record the weight on the evaluation rubric.

   b. Use the testing device, designated by TSA, to test each structure. (A specific testing block or attachment for the structure may be necessary for the onsite problem.)

   c. Apply an increasing load to the structure, via the test block or attachment, until the structure fails.

   d. Record the greatest failure weight on the rubric. This weight is the greatest weight recorded (of all the tested structures) during testing before failure of the structure.

   e. Determine each structure's efficiency by the greatest failure weight x 4.54, divided by the weight of the structure in grams; round off the efficiency to three (3) decimal places and record it on the rubric.

   f. The highest numeric efficiency determines the winner. In the case of an efficiency tie, the greatest weight held by the tied entries will determine the winner.

2. Structures will not be tested if:

   a. Two (2) or more construction regulations are found to be non-compliant before testing.

   b. The structure cannot be placed on the tester.

   c. The testing attachment cannot be properly placed within or on the structure.

   d. Straight pins are left in the structure.

   e. There is a failure to wear safety eyewear.

   f. Laminations contain more than two (2) pieces or members that are face to face in the same grain direction.

3. Structures with one (1) construction regulation non-compliance mark will be tested, but a 20% penalty will be noted on the rating form. (The penalty, a 20% reduction of the greatest weight held in the competition, is subtracted from the team's failure weight. This penalty factor will not be determined until all structures have been tested.)

4. Manage, with assistance from evaluators, the destructive testing of all structures that were not officially tested due to non-compliance.

5. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

   a. To deduct 20% of the total possible points or

   b. To disqualify the entry

   c. The event coordinator, judges, and CRC manager must all initial either of these actions on the rating form.

6. Review and submit the finalist results and all other items/forms in the results envelope to the CRC room.

7. Semifinalist teams may pick up their structures at a time designated by the event coordinator.

SYSTEM CONTROL TECHNOLOGY

OVERVIEW

Participants work as part of a team onsite to develop a computer-controlled model-solution to a problem, typically one from an industrial setting. Teams analyze the problem, build a computer-controlled mechanical model, program the model, explain the program and mechanical features of the model-solution, and leave instructions for judges to operate the device.

ELIGIBILITY

One (1) team of three (3) members per state may participate, one (1) entry per team.

TIME LIMITS

1. The competition consists of three phases.
   a. Phase 1: one (1)-hour setup
   b. Phase 2: fifteen (15)-minute analysis
   c. Phase 3: two and one half (2.5) hours for problem solution

2. The team's captain will be given one (1) hour to set up the team's equipment and reference materials.

3. Following the set-up time, teams will be given fifteen (15) minutes for problem analysis.

4. Following the problem analysis time, teams are provided two and one-half (2.5) hours for model development and programming.

5. All students will participate in a LEAP and problem solution interview at the conclusion of their programming.

LEAP

A team LEAP Report is required for this event and must be submitted at event check-in (see LEAP Program).

ATTIRE

TSA competition attire is required for this event.

PROCEDURE

PRELIMINARY ROUND

1. An orientation meeting for teams will take place at the beginning of the set-up time. Each team selects a team captain prior to the orientation meeting.

2. The captain checks in and submits a LEAP Report for the team during the set-up time meeting by submitting his/her participant identification number and the team's identification number for the written and model portions of the event.

3. The problem and the inventor's log are presented to teams at the beginning of the fifteen (15)-minute problem analysis session prior to model-building. Teams must complete their description or interpretation of the problem during this time.

4. Each team is given a maximum of two and one-half (2½) hours to construct a model that simulates realistic industrial processes to program the model, to test the solution, to describe the program and mechanical features of the model-solution, and to complete directions for judges to use to activate the model.

5. When finished, teams save their programs and leave them on-screen in operable form with the ability to be reset.
   a. Before leaving the event room, teams demonstrate the operation of the model with judges present. Judges may ask questions during the demonstration.
   b. After judges have observed the operation of a team's model, the team leaves the room. The coordinator determines the amount of time permitted for the team's demonstration based on the number of teams and the complexity of the problem.
   c. Evaluation of the solutions takes place without the teams present.

6. Team members will participate in an onsite LEAP interview during the project demonstration period.

7. Judges independently assess the entries, including each team's LEAP Report.

8. The top ten (10) finalists will be announced during the conference awards ceremony.

REGULATIONS

PRELIMINARY ROUND

A. Each team provides pencils and scrap paper along with its own materials kit, software, and laptop computer.

B. No reference materials or building cards are allowed.

C. Each team's material kit must be appropriate to build a system that can identify, secure, and move objects, and has light and/or sound outputs.

D. A problem will be developed based on the assumption that every material kit will contain at least:

1. Optical sensors, two (2)

2. Touch sensors, two (2)

3. Motors, two (2)

4. Audio AND light outputs, two (2) each

5. Gears, wheels, and axles appropriate to build a motorized vehicle and/or conveyor belt

6. Balls, blocks, and pegs that can be used as objects to be moved and manipulated

7. Velcro, tape, clamps and other materials to secure or move the above objects (balls, blocks, and pegs)

E. Participants provide their own hardware and software systems.

F. The following definitions are an integral part of the event regulations:

1. Repeatability—the device is programmed to reset automatically.

2. Functional control—the device/model must accomplish the task in an efficient manner and be user friendly.

3. Model-solution—the physical device must simulate the realistic processes used in industry.

4. Conservation of materials—the model reflects the best use of materials to solve the problem, without being overbuilt.

G. Programs must be written completely onsite. **Use or modification of any programs written prior to the competition will result in disqualification.**

Example Problem

An example of a problem for this event is provided below to help students understand and interpret a typical issue common to industry that might be used at a national conference.

A manufacturing company has asked your engineering firm to design an important component in its manufacturing process. The company specializes in the production of cylindrical items. Its manufacturing line is getting "jammed" because multiple cylindrical items are making their way to stations that can handle only one item at a time. Your design must include a "hopper" that will store items as they wait to make their way to a station. When a station is empty, a light should turn on; this will indicate to an operator to press a button that will send one cylinder into the station. After ten (10) seconds, the item will need to be moved to the next hopper, leaving the station empty and signaling the operator to send in another cylinder.

Example Requirements

- A minimum of three (3) cylindrical items of consistent size and shape must be included.

- A hopper must store these items until a button is pushed.

- Only one item can advance when the button is pushed.

- Ten (10) seconds must pass with the item at a station before it is moved to the next hopper.

- A light must signal the operator when the station is empty.

- No additional cylinder can be sent to a station if a cylinder already is in place.

H. The LEAP Report

1. Teams document the leadership skills developed and demonstrated while working on this event, and on a non-competitive event leadership experience.

2. Teams will respond to questions about the content of the LEAP Report as part of the semifinalist LEAP interview.

3. Specific LEAP Report regulations can be found in the LEAP Program section of this guide and on the TSA website.

EVALUATION

PRELIMINARY ROUND

1. The team's written work

2. Model function

3. Programming structure and efficiency

4. The content and quality of the LEAP Report and interview

Refer to the official rating form for more information.

STEM INTEGRATION

This event aligns with the STEM educational standards of Science, Technology, Engineering, and Mathematics.

CAREERS RELATED TO THIS EVENT

• CNC programmer
• Computer programmer
• Robotics engineer

Technology Student Association (TSA) High School Competitive Events Guide for the 2019 and 2020 National TSA Conferences

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SYSTEM CONTROL TECHNOLOGY INVENTOR'S LOG

TEAM CAPTAIN ID #

Use only the space provided. The description/interpretation of the problem must be completed DURING the problem analysis session.

Description or interpretation of the given problem:

The two parts below are to be completed AFTER the problem analysis session.

Description of the team solution (explain the unique features of the program and model):

Directions to evaluators to start the system:

SYSTEM CONTROL TECHNOLOGY

2019 & 2020 OFFICIAL RATING FORM

HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

☐ Completed LEAP Report is present
☐ ENTRY NOT EVALUATED

INVENTOR'S LOG (20 points)

Record scores in the column spaces below.

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Description of problem (X1)	The description is incomplete, and/or it is illogical and unorganized; the description is simply a restatement of the problem's guidelines.	The description includes a logical, but only general, understanding of the problem's guidelines; it restates the guidelines with an overall understanding of the problem.	An organized, logical, and concise description of the problem is provided; it includes all major aspects of the problem's guidelines, as well as original thoughts.	
Description of solution and activation instructions (X1)	The team's solution has little correlation with the final system creation; the solution is illogical in terms of the problem's guidelines; the directions to activate the solution are included, but they are incomplete.	The team's solution correlates generally with the final system creation; adequate directions to activate the solution are included.	A strong correlation between the team's written solution and final system creation is provided; the description of the solution is written clearly and concisely; instructions for the solution are included and written concisely.	
INVENTOR'S LOG SUBTOTAL (20 points)				

SOLUTION TO PROBLEM (60 points)

Record scores in the column spaces below.

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Realistic simulation (X1)	The simulation is not realistic; it has an abstract design that would be largely ineffective in its intended environment.	The simulation is somewhat realistic and logically designed; it may be adequately effective in its intended environment.	The simulation is realistic and is similar to a system that would be effective in its intended environment.	
Dependability of solution (X1)	The solution is not constructed with dependability in mind; when the system is operated, construction pieces fall off, etc.	Most of the parts of the solution are well constructed and dependable.	Every component of the solution is well constructed and dependable; practical construction techniques have been used.	

SOLUTION TO PROBLEM (60 points) – continued

Conservation of materials (X1)	An inefficient use of construction materials is obvious; too many unnecessary materials are incorporated into the design.	Most of the components of the solution are designed with conservation in mind; the construction is generally adequate.	All components of the solution are designed and assembled with conservation of materials in mind; the construction is elegant and not overbuilt.
Solution to problem (X2)	The solution is missing three or more attributes/criteria, and several do not function as intended.	The solution includes most attributes/criteria, and they function adequately.	The solution includes all attributes/ criteria listed in the design details, and all attributes function appropriately and correctly.
Ingenuity and creativity (X1)	The solution and design are unauthentic, complex, and/or do not function as a system.	The solution has some original ideas in its design, and its construction is adequate.	The solution is truly unique and authentic; its construction is concise and designed with simplicity.
		SOLUTION TO PROBLEM SUBTOTAL (60 points)	

Record scores in the column spaces below.

PROGRAMMING STRUCTURE (20 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Programming efficiency (X1)	The software used to program the system is overly complex and inefficient; advanced programming techniques, which would have simplified programming specific tasks, are not included.	The programming software is efficient, with some advanced features that simplify the solution's criteria and/or attributes.	A concise and logical programming application is used that incorporates advanced features to simplify the solution's criteria and/or attributes.	
Program structure (X1)	The programming structure is illogical, unorganized, or overly complicated and/or complex; the program does not reset.	There is evidence of an organized programming structure and adequate use of sub-routines; the program resets.	The programming structure is concise and predictable; there is appropriate use of sub-routines where needed; the program resets.	
		PROGRAMMING STRUCTURE SUBTOTAL (20 points)		

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

PRELIMINARY SUBTOTAL (100 points)

LEAP INTERVIEW (10 points)				
CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
LEAP Report/ Interview (10% of total event points)	The team's efforts are not clearly communicated, lack detail, and/ or are unconvincing; few, if any, attempts are made to identify and/or incorporate the SLC Practices and Behaviors.	The team's efforts are adequately communicated, include some detail, are clear, and/or are generally convincing; identification and/or incorporation of the SLC Practices and Behaviors is adequate.	The team's efforts are clearly communicated, fully-detailed, and convincing; identification and/or incorporation of the SLC Practices and Behaviors is excellent.	
			LEAP INTERVIEW SUBTOTAL (10 points)	

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

SEMIFINAL SUBTOTAL (10 points)

To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary.   **TOTAL (110 points)**

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____   Signature: _____

SYSTEM CONTROL TECHNOLOGY EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Judges

    1. Preliminary round, two (2) or more

    2. Semifinal round, two (2) or more

C. Assistants, two (2)

MATERIALS

A. Coordinator's packet, containing:

    1. Event guidelines, one (1) copy for the coordinator and for each judge

    2. TSA Event Coordinator Report

    3. List of evaluators/assistants

    4. Pre-populated flash drives for judges

    5. Stopwatch, one (1)

    6. Written problem, one (1) copy per team and judge

    7. Inventor's log, one (1) copy per team

    8. Power strips with surge protectors, and extension cords, as needed

    9. Results envelope

    10. Envelope for LEAP Reports

    11. LEAP Interview Judging Protocol

B. Large room to accommodate a first place team from every state and affiliated country

C. One (1) table and three (3) chairs per team

RESPONSIBILITIES

AT THE CONFERENCE

    1. Attend the mandatory coordinator's meeting at the designated time and location.

    2. Report to the CRC room and obtain the coordinator's packet; check the contents.

    3. Review the event guidelines and check to see that enough judges/assistants have been scheduled.

    4. Inspect the area(s) in which the event is being held for appropriate set-up, including room size, chairs, tables, outlets, etc. Notify the event manager of any potential problems.

    5. At least one (1) hour before the event is scheduled to begin, meet with judges/assistants to distribute materials and to review time limits, procedures, and regulations. If questions arise that cannot be answered, speak to the event manager before the event begins.

EVENT CHECK-IN

    1. Begin the event at the scheduled time by closing the doors, checking the entry list, and collecting LEAP Reports from each team.

    2. All participants and judges should be in the room at this time.

    3. Anyone reporting who is not on the entry list may check in only after official notification is received from the CRC.

    4. Late entries are considered on a case-by-case basis and only when the delay is caused by events beyond participant control.

    5. Secure participants' equipment in the area designated.

PRELIMINARY ROUND

    1. At the orientation meeting obtain the team/chapter identification numbers from each team captain.

    2. Judges must be present at the orientation meeting.

    3. Review the time limits, procedure, and regulations with team captains.

    4. Distribute the problem and *Inventor's Log* to teams at the beginning of the event.

    5. Teams have fifteen (15) minutes to complete their interpretation of the problem in the Inventor's Log.

    6. Each team is given two and one-half (2½) hours to complete the remaining portions of the event.

7. Teams must demonstrate that their device/model is operable and has the ability to reset prior to leaving.

    a. Judges must observe this portion and may ask a few questions.

    b. Judges may take notes, but evaluation occurs only after all teams have left the event room.

8. The LEAP interview will last a maximum of five (5) minutes.

9. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

    a. To deduct 20% of the total possible points or

    b. To disqualify the entry

    c. The event coordinator, judges, and CRC manager must all initial either of these actions on the rating form.

10. Judges determine the top ten (10) finalists in rank order, and discuss and break any ties. (Determine the procedure for breaking ties before the onsite competition begins.)

11. Review and submit the finalist results and all related items/forms in the results envelope to the CRC room for posting.

TECHNOLOGY BOWL

OVERVIEW

Participants demonstrate their knowledge of TSA and concepts addressed in the technology content standards by completing a written, objective test; semifinalist teams participate in question/response, head-to-head team competition.

ELIGIBILITY

One (1) team of three (3) members per chapter may participate.

Teams that take the written test and advance to the semifinalist portion of the event must be comprised of the same three (3) members.

TIME LIMITS

PRELIMINARY ROUND

1. One (1) hour is allowed for the written test.
2. This test is administered at the same time to all participants.

SEMIFINAL ROUND

1. Teams selected as semifinalists must be available as scheduled for oral competition, as well as the LEAP interview that will be conducted prior to the start of the semifinalist tournament and will last a maximum of five (5) minutes.
2. Teams will participate in a multi-round oral competition.

LEAP

A team LEAP Report is required for this event and must be submitted at event check-in (see LEAP Report).

ATTIRE

TSA competition attire is required for this event.

PROCEDURE

PRELIMINARY ROUND

1. Participants report to the event area at the time and place stated in the conference program. Teams must submit a LEAP Report prior to taking the written test.
2. Participants follow the specific regulations and adhere to the directions provided onsite by the event coordinator.
3. Each team is assigned a number by the event coordinator. This number establishes the initial order of participation in the oral portion of the event.
4. All team members take the written exam.
5. The sixteen (16) top-scoring teams qualify as semifinalists.
6. A semifinalist list (in random order) is posted.

SEMIFINAL ROUND

1. The LEAP interviews will be conducted by a panel of judges after the semifinalist list is posted.
2. All team members must be present for the LEAP interviews.
3. Semifinalist team members and their advisor report to the oral event area holding room at the time and place stated in the conference program.
4. When instructed to do so, two (2) teams enter the event area and are seated according to instructions.
5. Teams are paired using the semifinalist team bracket.
6. Questions are drawn from a card file resource bank.
7. If equipment malfunctions, a question that is being considered at that time automatically is eliminated. If equipment malfunctions three (3) times, time is called by the event coordinator to set up back-up equipment. After equipment has been set up and tested, the event continues from the point where it stopped.

8. Once a team is eliminated, it is out of the oral competition except for the round in which the third and fourth positions are determined.

9. The top ten (10) finalist teams will be announced during the conference awards ceremony.

REGULATIONS

PRELIMINARY ROUND/WRITTEN EXAM

A. Scan-type forms are furnished by the event coordinator.

B. Participants must provide their own pencils for the test.

C. Participant identification numbers (assigned during conference registration) must be entered on the scan form in the space indicated.

D. Participants must stop work immediately when time is called.

E. Should a participant complete the test before the time is allocated, the participant holds the test and remains seated quietly without distracting others. Failure to do so results in disqualification of the participant.

F. All tests must be turned in before leaving the test area.

G. The average of the scores of all three (3) team members determines team ranking.

SEMIFINAL ROUND/ORAL COMPETITION

A. Sixteen (16) teams, based upon the written test results, are selected as semifinalists.

B. All three (3) members of a semifinalist team must be available to participate at the scheduled time for the oral competition portion of the event.

C. If a team or member is late for participation, that team forfeits and is eliminated from competition.

D. No transmitting or recording devices are permitted to assist in answering a question in the event area.

E. No prompting is permitted.

F. Teams are asked twelve (12) questions one of which is a bonus question.

1. The questions will be selected by the coordinator and manager of the event.

2. The last question of every round is the bonus question.

3. Questions, to include the bonus question, may not be discussed by teams.

4. If a team answers the bonus question correctly, they are given an additional question to answer. The team may discuss this question.

5. If the bonus question is not answered correctly, participants are not given an additional question.

6. The team member who "buzzes in" to answer a question has five (5) seconds to answer the question without discussion.

7. After a question is read, competing teams have ten (10) seconds to answer. If neither team can answer the question, then another question is read.

8. If a team member buzzes in before a question is finished being read, the reader ceases reading and the team member must give the exact answer as printed on the answer card.

9. If the answer is incorrect, the reader will read the entire question for the opposing team.

G. Teams that leave the holding room before being called for competition are eliminated.

H. Teams may visit with other teams in the holding room.

I. No advisors or visitors may enter the holding room.

J. Team members may not enter the oral event area as spectators until after their team has been entirely eliminated from competition.

K. The LEAP Report

1. Teams document the leadership skills developed and demonstrated while working on this event, and on a non-competitive event leadership experience.

2. Teams will respond to questions about the content of the LEAP Report as part of the semifinalist LEAP interview.

3. Specific LEAP Report regulations can be found in the LEAP Program section of this guide and on the TSA website.

EVALUATION

A. **Preliminary round/written exam:** Scores on a test of fifty (50) multiple choice questions will determine the semifinalist teams for the oral competition portion of the event.

B. **Semifinal round/oral competition:** A team's score is derived from the total number of correct answers to the questions asked.

1. For each correct answer, the team receives ten (10) points.

2. Twelve (12) questions are asked per round; no questions are repeated in another round.

3. In case of a tie, three (3) additional questions and bonus questions are asked.

    a. If a tie exists after the first tiebreaker round, then three (3) additional questions and bonus questions are asked.

    b. This procedure continues until the tie is broken.

4. A correct answer will give the team ten (10) points, and an incorrect answer will result in a loss of five (5) points.

5. Bonus questions are worth fifteen (15) points.

C. The content and quality of the LEAP Report and interview.

Refer to the official rating form for more information.

TECHNOLOGY BOWL

2019 & 2020 OFFICIAL RATING FORM

HIGH SCHOOL

Competition Round ID# _____

Team #_____(A) Team #_____(B)

Scorekeeper's Signature _____

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

_____

☐ Completed LEAP Report is present
☐ ENTRY NOT EVALUATED

WRITTEN TEST (50 points)									Team A Average	Team B Average
Record the written test scores of each of the three (3) team members (for team A and B) in the boxes below to determine the team average. Record the team average in the column space to the right.										
Team member 1	(A)	(B)	Team member 2	(A)	(B)	Team member 3	(A)	(B)		
						WRITTEN TEST SUBTOTAL (50 points)				

	Team A	Team B
Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right. Indicate the rule violated: _____		

PRELIMINARY SUBTOTAL (50 points)		

SEMIFINAL ROUND – LEAP INTERVIEW (20 points)

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Record scores in the column spaces below.

CRITERIA	Minimal performance	Adequate performance	Exemplary performance		
	1-4 points	5-8 points	9-10 points		
LEAP Report/ Interview (X2)	The team's efforts are not clearly communicated, lack detail, and/or are unconvincing; few, if any, attempts are made to identify and/or incorporate the SLC Practices and Behaviors.	The team's efforts are adequately communicated, include some detail, are clear, and/or are generally convincing; identification and/or incorporation of the SLC Practices and Behaviors is adequate.	The team's efforts are clearly communicated, fully-detailed, and convincing; identification and/or incorporation of the SLC Practices and Behaviors is excellent.		
		LEAP INTERVIEW SUBTOTAL (20 points)			

TECHNOLOGY BOWL

2019 & 2020 OFFICIAL RATING FORM

HIGH SCHOOL

Competition Round ID# _____

Team #_____(A) Team #_____(B)

Scorekeeper's Signature _____

SEMIFINAL ROUND – ORAL COMPETITION						Team A Average	Team B Average
Mark an X in the box beside the team that gives the correct response to the question and an O beside the team that gives an incorrect response. Record the scores for each response in the column to the right.							
Question #	**Points**						
1.	+10 for correct, -5 for incorrect response						
2.	+10 for correct, -5 for incorrect response						
3.	+10 for correct, -5 for incorrect response						
4.	+10 for correct, -5 for incorrect response						
5.	+10 for correct, -5 for incorrect response						
6.	+10 for correct, -5 for incorrect response						
7.	+10 for correct, -5 for incorrect response						
8.	+10 for correct, -5 for incorrect response						
9.	+10 for correct, -5 for incorrect response						
10.	+10 for correct, -5 for incorrect response						
11.	+10 for correct, -5 for incorrect response						
12.	+10 for correct, -5 for incorrect response						
Bonus question	(+15 for answering the bonus question correctly; no penalty for answering the bonus question incorrectly)						
Additional question	(+5 for answering the additional question correctly; no penalty for answering the additional question incorrectly)	Team #		Team #			
	ORAL COMPETITION (135 points)						

TECHNOLOGY BOWL
2019 & 2020 OFFICIAL RATING FORM
HIGH SCHOOL

Competition Round ID# _____

Team #_____(A) Team #_____(B)

Scorekeeper's Signature _____

Tie Breaker Questions					
1.	+10 for correct, -5 for incorrect response	Team #	Team #		
2.	+10 for correct, -5 for incorrect response				
3.	+10 for correct, -5 for incorrect response				
	TIE BREAKER QUESTIONS SUBTOTAL				

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

SEMIFINAL SUBTOTAL (155 points)

To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary.   TOTAL (205 points)
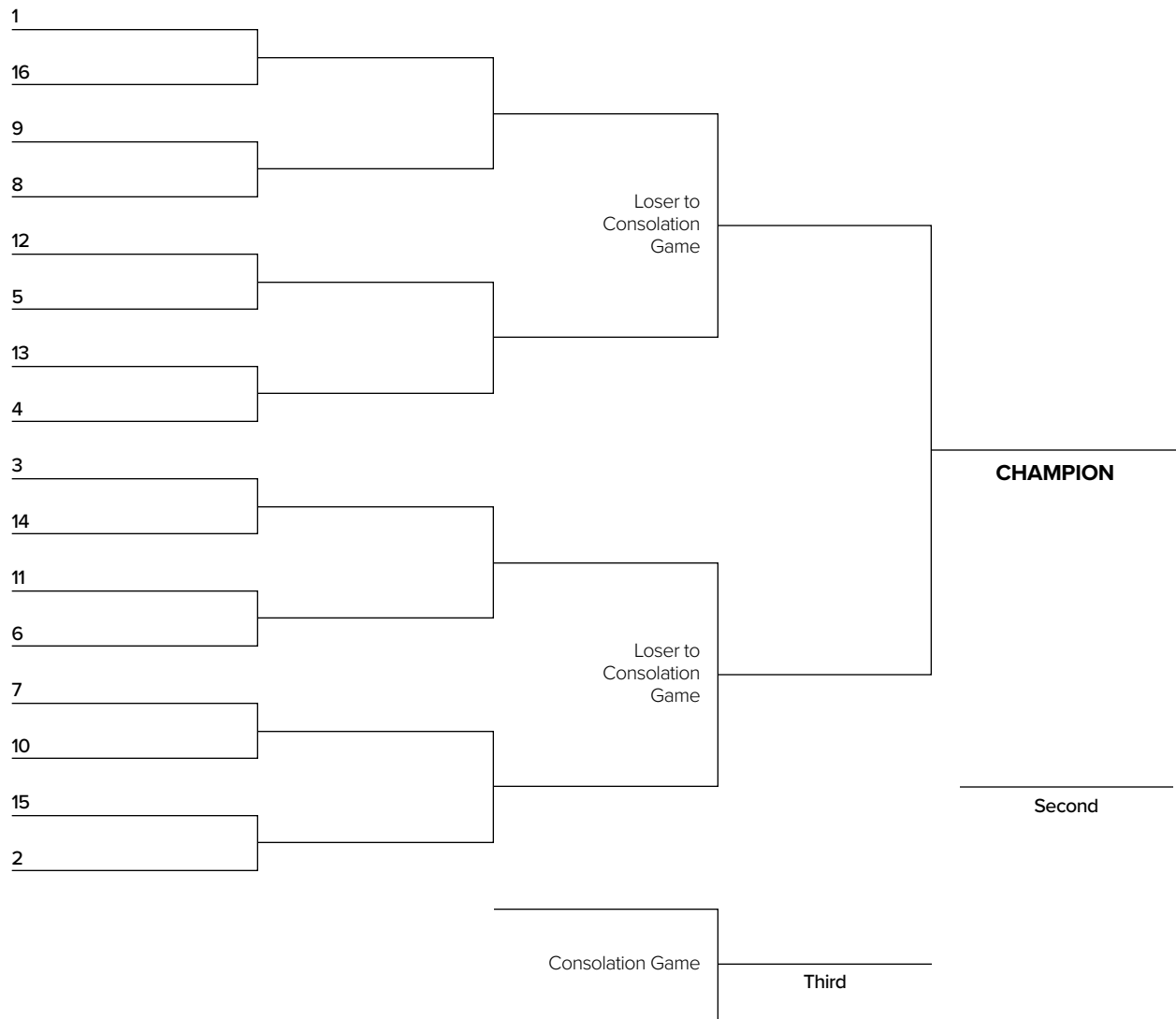
Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____   Signature: _____

SINGLE ELIMINATION TOURNAMENT CHART – SEEDED 16 PLAYER FIELD

1

16

9

8

Loser to
Consolation
Game

12

5

13

4

CHAMPION

3

14

11

6

Loser to
Consolation
Game

7

10

15

2

Second

Consolation Game

Third

Note to evaluators: This is a single elimination format (semifinalist teams ONLY).			
Team 1		Team 9	
Team 2		Team 10	
Team 3		Team 11	
Team 4		Team 12	
Team 5		Team 13	
Team 6		Team 14	
Team 7		Team 15	
Team 8		Team 16	

TECHNOLOGY BOWL
EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Timer for written exam, one (1)

C. Proctors for written exam, four (4)

D. Timekeeper for oral competition, one (1)

E. Scorekeeper for oral competition, one (1)

F. Moderator for oral competition, one (1)

G. Judges, for semifinal LEAP Report evaluation, two (2)

H. Assistants for oral competition, two (2)

MATERIALS

A. Coordinator's packet, containing:

1. Event guidelines, one (1) copy for the coordinator and each judge

2. TSA Event Coordinator Report

3. List of event judges/assistants

4. Pre-populated flash drives for judges

5. Copies of the written test (coded A or B), one (1) for each participant (these tests must be returned immediately following the event)

6. Results envelope with coordinator forms

7. Envelopes for LEAP Reports

8. LEAP Interview Judging Protocol

B. Written test

1. Stopwatch for timekeeper

2. Tables and chairs or tablet armchairs to accommodate all participants

3. Scan machine and forms

C. Oral competition

1. Table and chairs for the event judges

2. Two (2) tables and six (6) chairs for the event team, facing the moderator and audience

3. Tech Bowl bracket

4. List of chapters for the event

5. Buzzer system and controls

6. A printed sign (to be placed outside the oral competition room) stating that no filming, taking of photos, or use of any electronic recording devices will be allowed in the competition room

7. Stopwatch for timekeeper

8. 5" x 8" question cards selected from the technology bowl test bank, with questions and the acceptable answer(s) clearly typed

RESPONSIBILITIES

AT THE CONFERENCE

1. Attend the mandatory coordinator's meeting at the designated time and location.

2. Report to the CRC room and obtain the coordinator's packet; check the contents.

3. Review the event guidelines and check to see that enough judges/assistants have been scheduled.

4. Inspect the area(s) in which the event is to be held for appropriate set-up, including room size, chairs, tables, outlets, etc. Notify the event manager of any potential problems.

5. At least one (1) hour before the event is scheduled to begin, meet with judges/assistants to review time limits, procedures, and regulations. If questions arise that cannot be answered, speak to the event manager before the event begins.

EVENT CHECK-IN/PRELIMINARY ROUND/ WRITTEN EXAM

1. Begin the event at the scheduled time by closing the doors and checking the entry list.

2. Collect LEAP Reports.

3. All participants and event judges should be in the room at this time.

4. In order to compete, participants must be on the entry list or must have approval of the CRC.

5. Distribute the scan forms to the participants.

a. Direct participants to fill in their participant identification number and test code letter in the appropriate spaces.

b. Provide an opportunity for any questions about the scan form.

6. Pass out the written test with the help of the proctors (tests are coded A or B).

   a. Participants seated next to each other should not have the same coded test; tests should be alternated A, B, A, B, and so on.

   b. Instruct the participants to keep the tests face down until they are directed to turn them over and begin.

7. Acting as the timer and with proctors positioned around the event room, direct the participants to turn their test over, place their code number and the code letter found on the test on their scan form, and begin.

8. Exactly one (1) hour from the time that the participants begin the test, call time.

   a. Direct students to check out with a test proctor once they are finished with their test.

   b. Proctors should collect all tests and then students should immediately leave the testing room.

   c. If a line forms students must remain completely silent. Any talking will result in a zero score for their test.

9. Determine the individual winners of the written exam.

10. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

    a. To deduct twenty percent (20%) of the total possible points in this round or

    b. To disqualify the entry

    c. The event coordinator, judges and CRC manager must all initial either of these actions on the rating form.

11. Determine the sixteen (16) semifinalist teams based on team members averaged score on the written test.

12. Prepare a list of the sixteen (16) semifinalist teams and submit it to the CRC for posting.

SEMIFINAL ROUND/ORAL COMPETITION

1. Run the oral component of the event as described in the Procedure section.

2. Determine the ten (10) finalists. Judges discuss and break any ties that affect the top three (3) placements. (Determine the procedure for breaking ties before the onsite competition begins.)

3. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

   a. To deduct twenty percent (20%) of the total possible points in this round or

   b. To disqualify the entry

   c. The event coordinator, judges and CRC manager must all initial either of these actions on the rating form.

4. Review and submit the finalist results, including a ranking of the ten (10) finalists, and all related forms in the results envelope to the CRC room.

TECHNOLOGY PROBLEM SOLVING

OVERVIEW

Participants use their skills in problem solving to develop a finite solution to the stated problem provided onsite. Participants work as a team to provide the best solution, which is measured objectively.

ELIGIBILITY

One (1) team of two (2) members per chapter may participate.

TIME LIMITS

PRELIMINARY ROUND

The allotted time for design and construction of the solution is two (2) hours.

SEMIFINAL ROUND

Semifinalist teams will participate in a LEAP interview that will last a maximum of five (5) minutes.

LEAP

A team LEAP Report is required for this event and must be submitted at event check-in (see LEAP Program).

ATTIRE

TSA competition attire is required for this event.

PROCEDURE

PRELIMINARY ROUND

1. Participants report to the event area and submit a LEAP Report at the time and place stated in the conference program.
2. The problem, evaluation criteria, and materials are distributed.
3. Teams are allowed two (2) hours to design and construct a solution.
4. Each solution is tested as soon as possible after the construction phase is completed. (Some problems may require teams to be present for testing.)
5. A list of twelve (12) semifinalist teams (in random order) will be posted.

SEMIFINAL ROUND

1. Semifinalist teams will report at the time and place stated in the conference program to sign up for an interview time.
2. Semifinalists participate in a LEAP interview.
3. Judges independently evaluate the LEAP Report and interview.
4. The top ten (10) finalists will be announced at the awards ceremony.

REGULATIONS

A. All work must be completed in the event area during the time specified for the event.

B. Specific materials related to the onsite problem will be provided by TSA.

C. Only the materials issued to each team by the event coordinator, or the items that participants are required to bring, may be used in the development of the solution.

D. Participants are required to provide their own tool box
   1. Must include identification (school name, address, and advisor cell phone number)
   2. Must not exceed twenty (20) inches (508 mm) length x ten (10) inches (254 mm) width x ten (10) inches (254 mm) height.
   3. Must contain all items needed to fabricate the solution/entry. The following is a suggested list, with some required materials indicated:
      a. Cutting devices; NONE may be electric
      b. Adhesives
         i. aerosol and electric applicators are not allowed
         ii. a bottle of Uncure or Debonder is recommended
      c. Temporary fastening devices
         i. straight pins
         ii. clamps
         iii. tape; unless otherwise stipulated in the problem statement given at the competition
      d. A cutting surface that prevents table top marring (required)
      e. Rulers, straightedges, and/or measuring scales

f. Abrasive sheets/sandpaper, sanding sponges, sanding boards i.e. emory boards or similar

g. Marking devices (pens, pencils, etc.) and sharpener

h. Sheet of wax paper, as large as is needed for the competition

i. Pliers, wrenches, nut drivers, as needed

j. Safety glasses and side shields (required)

4. Participants are required to provide and wear safety-approved eyewear for this event.

a. Prescription eyewear will need to have side shields to be considered safety eyewear.

b. Should a team member remove his/her eyewear, s/he will be reminded once to replace it.

c. If there is a second infraction, the team will be asked to leave the competition.

d. Sunglasses are not suitable eyewear.

5. Each team is required to bring the following items:

a. one (1) roll ¾" masking tape

b. twelve (12) 3" x 5" index cards

c. twelve (12) Popsicle sticks

d. six (6) 8½" x 11" sheets of printer paper (20-pound bond)

e. fifteen (15) sheets of 8½" x 11" cardstock (65-pound weight)

f. six (6) standard drinking straws, straws (shall be no larger than ¼" diameter x 9" in length)

g. six (6) Styrofoam trays; trays should be no larger than 7" x 10"; foam core board or similar materials are not allowed. Perform an Internet search for 'Standard Supermarket Food Trays' to meet this requirement.

E. Participants without a toolbox will not be allowed to compete.

F. Once tool box sizes are evaluated, teams will self-examine their competitor's tools and materials using the Verifications sheet provided by the event coordinator. If there is a dispute, a judge will be summoned to determine a final ruling. Any disallowed tools or materials will be held by the event coordinator until the contest is complete.

G. Sharing tools between teams is not permitted.

SEMIFINAL ROUND

A. The LEAP Report

1. Teams document the leadership skills that they developed and demonstrated while working on this event, and on a non-competitive event leadership experience.

2. Teams will respond to questions about the content of the LEAP Report.

3. Specific LEAP Report regulations can be found in the LEAP Program section of this guide and on the TSA website.

EVALUATION

PRELIMINARY ROUND

1. Each team's solution is evaluated objectively.

2. A finite measure, such as elapsed time, horizontal or vertical distance, and/or strength, is used to determine the best solution.

3. Solution designs will be used to break ties.

4. Only as a last resort does the event coordinator use subjective measurement, such as originality, to evaluate solutions.

SEMIFINAL ROUND

The content and quality of the LEAP Report and interview will be evaluated.

Refer to the official rating form for more information.

STEM INTEGRATION

This event aligns with the STEM educational standards of Science, Technology, Engineering, and Mathematics.

CAREERS RELATED TO THIS EVENT

- Computer software engineer
- Mathematician
- Criminal investigator
- Air traffic controller

TECHNOLOGY PROBLEM SOLVING
2019 & 2020 OFFICIAL RATING FORM
HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

☐ Students have safety eyewear.
☐ The toolkit is present.
☐ Additional required items are present.
☐ Completed LEAP Report is present.
☐ ENTRY NOT EVALUATED

TESTING OF SOLUTION (60 points)

Evaluation: A finite unit of measure, such as elapsed time, linear distance, and/or strength, etc., is used to determine ranking..

1st: 60 Points	**2nd:** 55 Points	**3rd:** 50 Points	**4th:** 45 Points	**5th:** 40 Points	**6th:** 35 Points
7th: 30 Points	**8th:** 25 Points	**9th:** 20 Points	**10th:** 15 Points	**11th:** 10 Points	**12th:** 5 Points

TESTING OF SOLUTIONS SUBTOTAL (60 points)

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

PRELIMINARY SUBTOTAL (60 points)

SEMIFINAL LEAP INTERVIEW (6 points)

Record scores in the column spaces below.

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
LEAP Report/ Interview (10% of total event points)	The team's efforts are not clearly communicated, lack detail, and/or are unconvincing; few, if any, attempts are made to identify and/or incorporate the SLC Practices and Behaviors.	The team's efforts are adequately communicated, include some detail, are clear, and/or are generally convincing; identification and/or incorporation of the SLC Practices and Behaviors is adequate.	The team's efforts are clearly communicated, fully-detailed, and convincing; identification and/or incorporation of the SLC Practices and Behaviors is excellent.	

SEMIFINAL LEAP INTERVIEW SUBTOTAL (6 points)

TECHNOLOGY PROBLEM SOLVING

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

SEMIFINAL SUBTOTAL (6 points)

To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary.   **TOTAL (66 points)**

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____   Signature: _____

TECHNOLOGY PROBLEM SOLVING
EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Assistants for set-up, monitoring, and clean-up of onsite activity, two (2) or more per 100 teams

   1. Depending on the problem, one of the assistants may need to serve as timekeeper.

   2. Not all assistants are needed for set-up and clean-up, but all are needed while the onsite activity is being held.

C. Judges:

   1. Preliminary round, two (2) or more

   2. Semifinal round, two (2) or more

MATERIALS

A. Coordinator's packet, containing:

   1. Event guidelines, one (1) copy for the coordinator and for each judge

   2. TSA Event Coordinator Report

   3. List of judges/assistants

   4. Pre-populated flash drives for judges

   5. Identification tags or stick-on labels to identify entries

   6. Stopwatch

   7. Results envelope

   8. Envelope for LEAP Reports

   9. LEAP Interview Judging Protocol

B. Tables and chairs for participants

C. Tables and chairs for judges, to be used for tools/materials distribution and evaluation

D. Well-written, technologically appropriate problem that can be objectively measured; one (1) copy per team and judge

E. Adequate conditions, tools, materials, monitoring, and testing devices for the problem

RESPONSIBILITIES

AT THE CONFERENCE

1. Attend the mandatory coordinator's meeting at the designated time and location.

2. Report to the CRC room and check the contents of the coordinator's packet.

3. Review the event guidelines and check to see that enough judges/assistants have been scheduled.

4. Inspect the area or room in which the event is to be held for appropriate set-up, including room size, chairs, tables, outlets, etc. Notify the event manager of any potential problems.

5. At least one (1) hour before the event is scheduled to begin, meet with judges/assistants to review time limits, procedures, and regulations. If questions arise that cannot be answered, speak to the event manager before the event begins.

PRELIMINARY ROUND

1. Begin the event at the scheduled time by closing the doors and checking the entry list.

2. All participants and judges should be in the room at this time.

3. Anyone reporting who is not on the entry list may check in only after official notification is received from the CRC.

4. Distribute materials as appropriate, prior to the start of the event.

5. Each team will display its tools using the tool template (paper template) provided, as necessary.

   a. Only tools displayed will be permitted.

   b. Tool boxes must be removed from a team's work table prior to when participants begin the design and construction of the solution.

6. Once teams are seated (checked against the entry list) and general announcements have been made, the event problem will be distributed, reviewed, and time will be started.

7. Judges and monitors observe the entire construction phase, with judges measuring solutions as soon as appropriate.

8. Judges will collect the solution design when the team's solution is submitted for testing.

9. Judges will use the designs to break any ties in order to determine the twelve (12) semifinalists.

10. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

    a. To deduct twenty percent (20%) of the total possible points in this round or

    b. To disqualify the entry

    c. The event coordinator, judges and CRC manager must initial either of these actions on the rating form.

11. Review and submit the semifinalist results and all related forms in the results envelope to the CRC room.

12. If necessary, manage security and the removal of materials from the event area.

SEMIFINAL ROUND

1. At least one (1) hour before the event is scheduled to begin, meet with judges/assistants to review time limits, procedures, and regulations. If questions arise that cannot be answered, speak to the event manager before the event begins.

2. Conduct the LEAP interviews.

3. Judges will independently evaluate the LEAP requirements.

4. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

    a. To deduct twenty percent (20%) of the total possible points in this round or

    b. To disqualify the entry

    c. The event coordinator, judges and CRC manager must initial either of these actions on the rating form.

5. Judges determine the ten (10) finalists and discuss and break any ties. (Determine the procedure for breaking ties before the onsite competition begins.)

6. Review and submit the finalist results and all related forms in the results envelope to the CRC room.

7. If necessary, manage security and the removal of materials from the event area.

TRANSPORTATION MODELING

OVERVIEW
Using only designated materials and following required specifications, participants research, design, and produce a scale model of a vehicle that fits the annual design problem, which is posted on the TSA website under Competitions/Themes and Problems. The entry must take appearance and realism into consideration.

ELIGIBILITY
One (1) individual per chapter may participate, one (1) entry per individual.

TIME LIMITS
Semifinalists participate in a LEAP interview that lasts five (5) minutes.

LEAP REPORT/INTERVIEW
An individual LEAP Report is required for this event and must be submitted at event check-in (see LEAP Program).

ATTIRE
TSA competition attire is required for this event.

PROCEDURE
PRELIMINARY ROUND
1. Participants check in their entries and submit LEAP Reports at the time and place stated in the conference program.
2. Judges review entries. Neither students nor advisors are present at this time.
3. A list of twelve (12) semifinalists (in random order) will be posted.

SEMIFINAL ROUND
1. Semifinalist teams will report at the time and place stated in the conference program to sign up for a LEAP interview.
2. Judges independently evaluate the LEAP Report and interview.
3. The top ten (10) finalists will be announced during the awards ceremony.

REGULATIONS
PRELIMINARY ROUND
A. Entries must include a scale model, a display, and documentation (a portfolio).
B. The model, display and documentation must meet the following specifications:

Model
1. The scale model must accurately reflect the annual design problem.
2. The model must be designed and produced as original work by the student during the current school year.
3. The model may be made from wood or it may be 3D-printed.
4. Using commercially produced (store-bought) model vehicle body parts (including hoods, fenders, wings, propellers, frames, etc.) is prohibited.
5. It is permissible to use pre-manufactured parts such as body strengtheners, tires and wheels, plastic canopy, exhausts, mirrors, head and tail lights, windshields, and antennae.
   a. These parts may be attached to or enclosed within the vehicle and may be constructed from materials other than wood, excluding glass or liquids. These parts must be fastened securely.
   b. It is also permissible to use 3D printers in the production of the parts of this model.
6. The finished vehicle must fit inside the display space of 16" x 16" x 16".
7. The themed vehicle model must have an actual length that measures at least six inches (6").
8. The designer must choose a scale for the vehicle so that it meets regulations and must be specified in the notebook.
9. Wheels: Dimensions should be consistent with the scale of the body. Wheels must roll.

Display

1. The model must be presented for evaluation on a display not to exceed 16" tall x 16" deep x 16" long (including the model).

2. The portfolio is not considered part of the display but is placed with it at its side.

3. No electrical access will be provided by TSA for displays.

4. Use of dry cell batteries is permissible, but they must be contained within the stated display space.

Documentation

1. Documentation materials (comprising a "portfolio") are required and should be secured in a clear front report cover.

2. In addition to the 11" x 17" pages noted below, the report cover must include the following single-sided, 8½" x 11" pages, in this order:

   a. LEAP Report

   b. Title page with the event title, the conference city and state, and the year; a picture of the vehicle may be included as well; one (1) page

   c. Table of contents; pages as needed

   d. Description of designer's vehicle, making note of the scale used, inspiration for the choice and design of the vehicle, research about the history and evolution of the original vehicle, and design elements that set the vehicle apart from others (e.g. fuel used, unique features); one (1) page

   e. Photo examples of current or past vehicles that are similar to the current year's theme or that inspired the entry; one (1) page

   f. Concept drawings/detailed sketches or 3D CAD modeling; two (2) pages (11" x 17" size)

   g. Photos of the clay, foam, wax, or 3D-printed mock-up; one (1) page

   h. Final technical illustrations (orthographic); two (2) pages (11" x 17" size)

   i. Photos of the production of the model; one page

   j. Documentation for this event must not include the name of the chapter or state

   k. All ideas, text, or images from sources other than the designer must be cited

   l. Cited works should be in MLA format

   m. Pages that are 11" x 17" in size should be folded to fit in the notebook

SEMIFINAL ROUND

A. The LEAP Report

   1. Participants document the leadership skills developed and demonstrated while working on this event, and on a non-competitive event leadership experience.

   2. Participants will respond to questions about the content of the LEAP Report.

   3. Specific LEAP Report regulations can be found in the LEAP Program section of this guide and on the TSA website.

EVALUATION

PRELIMINARY ROUND

   1. The quality of the notebook

   2. The model

   3. The display

SEMIFINAL ROUND

The quality and content of the LEAP Report and interview.

Refer to the official rating form for more information.

STEM INTEGRATION

This event aligns with the STEM educational standards of Science, Technology, Engineering, and Mathematics.

CAREERS RELATED TO THIS EVENT

- Automotive designer
- Automotive engineer
- Digital modeling technician
- Industrial designer
- Industrial engineer

TRANSPORTATION MODELING

2019 & 2020 OFFICIAL RATING FORM

HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

☐ Vehicle scale model is present.
☐ The model is made of appropriate materials.
☐ The portfolio is present.
☐ The display size is no more than 16" x 16" x 16".
☐ Completed LEAP Report is present.
☐ ENTRY NOT EVALUATED

MODEL AND DISPLAY (50 points)

Record scores in the column spaces below.

CRITERIA	Minimal performance — 1-4 points	Adequate performance — 5-8 points	Exemplary performance — 9-10 points	
Production quality (X1)	The model exhibits poor production quality; the surface is rough; there is little or no attention to detail.	There is some evidence of proper production techniques; the model appearance is adequate.	The model demonstrates excellent production techniques with obvious effort and attention to detail.	
Paint and finish (X1)	Surface imperfections are evident; the model is sticky, and/or the painting quality is low.	The quality of the painted surface is acceptable, with some imperfections visible.	The painted surface is exceptional, with little or no visible imperfections.	
Appropriate to designated problem (X1)	The model does not relate to the stated annual design theme.	The model generally relates to the stated annual design theme.	The model effectively represents and portrays the stated annual design theme.	
Details (X1)	There is a very weak and limited attempt to include identifying characteristics and/or additional parts to help create a realistic appearance.	The model includes some identifying characteristics and/or additional parts that give it a sense of realism.	The model displays exemplary effort to include identifying characteristics and/or additional parts that give it a realistic appearance.	
Display (X1)	The quality of the display is poor, and/or it exceeds the size requirements.	The display is adequately created and meets the size specifications.	The display is exemplary, includes eye-catching details, and meets the size specifications.	
MODEL AND DISPLAY SUBTOTAL (50 points)				

TRANSPORTATION MODELING

DOCUMENTATION (70 points)

CRITERIA	Minimal performance 1-4 points	Adequate performance 5-8 points	Exemplary performance 9-10 points	
Portfolio components (X1)	The portfolio is missing several components, and/or it is unorganized; it is messy and lacks quality.	Most components are included in the portfolio; it is adequately organized.	All portfolio components are included and completely organized; effort and quality of work are evident.	
Vehicle description (X1)	The description is inadequate; research references are lacking; the scale is incomplete.	The description is adequate, research is evident with some documentation, and the scale is stated and accurate.	An excellent description is included, with necessary research referenced to support the model solution; the scale is stated and accurate.	
Concept drawings, detailed sketches, or 3D CAD modeling (X1)	The drawings are not to scale, and/or the the quality is poor, and/or there are missing parts and dimensions; the drawings are not on 11" x 17" paper.	The drawings are acceptable, true to scale, and representative of the vehicle, with some details/dimensions included; the drawings are produced on 11" x 17" paper.	The drawings are accurate and complete; they include all necessary details/dimensions and are drawn on 11" x 17" paper.	
Photo examples of current/past similar vehicles (X1)	There is only one photo example of current or past similar vehicles.	There are two or three photo examples of current or past similar vehicles.	There are a number of photo examples of current or past similar vehicles, showing that in-depth research was done.	
Photos of clay, foam, or 3D-printed model (X1)	There is only one photograph of the clay/foam or wax model included.	Two or three photographs of the clay/foam or wax model are included, but more are needed to adequately document the model.	There are a number of photographs included that effectively document the preliminary clay/foam/wax model.	
Final technical illustrations (orthographic plans) (X1)	Orthographic plans are poorly executed, and/or the plans are not on 11" x 17" paper.	Adequate orthographic plans are included; the plans are on 11" x 17" paper.	Complete orthographic plans are included; they are of excellent quality on 11" x 17" paper.	
Photos of production of the model (X1)	Only one photograph of the model production is included.	Two or three photographs of the model production are included, but they are not enough to provide full documentation.	The photographs included fully and effectively document and describe the model production process.	
DOCUMENTATION SUBTOTAL (70 points)				

Rules violations (a deduction of 20% of the total possible points in the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

PRELIMINARY SUBTOTAL (120 points)

Record scores in the column spaces below.

SEMIFINAL LEAP INTERVIEW (12 points)				
CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
LEAP Report/ Interview (10% of the total event points)	The individual's efforts are not clearly communicated, lack detail, and/or are unconvincing; few, if any, attempts are made to identify and/or incorporate the SLC Practices and Behaviors.	The individual's efforts are adequately communicated, include some detail, are clear, and/or are generally convincing; identification and/or incorporation of the SLC Practices and Behaviors is adequate.	The individual's efforts are clearly communicated, fully-detailed, and convincing; identification and/or incorporation of the SLC Practices and Behaviors is excellent.	
			SEMIFINAL LEAP INTERVIEW SUBTOTAL (12 points)	

Rules violations (a deduction of 20% of the total possible points in the semifinalist sections above) must be initialed by the evaluator, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

SEMIFINAL SUBTOTAL (12 points)	

To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary. **TOTAL (132 points)**	

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____ Signature: _____

TRANSPORTATION MODELING EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Assistants, two (2)

C. Judges:

1. Preliminary round, two (2) or more

2. Semifinal round, two (2) or more

MATERIALS

A. Coordinator's packet containing:

1. Event guidelines, one (1) copy for the coordinator and for each judge

2. TSA Event Coordinator Report

3. List of judges/assistants

4. Pre-populated flash drives for judges

5. Results envelope

6. Envelope for LEAP Reports

7. LEAP Interview Judging Protocol

RESPONSIBILITIES

AT THE CONFERENCE

1. Attend the mandatory coordinator's meeting at the designated time and location.

2. Report to the CRC room and obtain the coordinator's packet; check the contents.

3. Review the event guidelines and check to see that enough judges/assistants have been scheduled.

4. Inspect the area(s) in which the event is being held for appropriate set-up, including room size, chairs, tables, outlets, etc. Notify the event manager of any potential problems.

5. At least one (1) hour before the event is set to begin, meet with judges/assistants to review time limits, procedures, and regulations. If questions arise that cannot be answered, speak to the event manager before the event begins.

EVENT CHECK-IN

1. Check in the entries and collect LEAP Reports at the time stated in the conference program.

2. Anyone reporting who is not on the coordinator's report may check in only after official notification is received from the CRC.

3. Late entries are considered on a case-by-case basis and only when the delay is caused by events beyond participant control.

4. Collect and position the documentation portfolios and models for viewing by the judges, and assist them as necessary during the event.

PRELIMINARY ROUND

1. When it is necessary to move models, only judges and official personnel should handle the models. Extreme care should be taken to avoid damage to the entries.

2. Judges independently evaluate the entries.

3. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

   a. To deduct 20% of the total possible points or

   b. To disqualify the entry

   c. The event coordinator, judges and CRC manager must initial either of these actions on the rating form.

4. Judges determine the twelve (12) semifinalists.

5. Review and submit the semifinalist results and all related items/forms in the results envelope to the CRC room for posting.

SEMIFINAL ROUND

1. At least one (1) hour before the event is set to begin, meet with judges/assistants to review time limits, procedures, and regulations. If questions arise that cannot be answered, speak to the event manager before the event begins.

2. Semifinalist teams will report at the time and place stated in the conference program to sign up for a semifinalist LEAP interview.

3. The LEAP interview will last a maximum of five (5) minutes.

4. Judges independently evaluate the LEAP Report and interview.

5. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

    a. To deduct 20% of the total possible points or

    b. To disqualify the entry

    c. The event coordinator, judges and CRC manager must initial either of these actions on the rating form.

6. Judges determine the ten (10) finalists in rank order and discuss and break any ties. (Determine the procedure for breaking ties before the onsite competition begins.)

7. Review and submit the finalist results and all items/forms in the results envelope to the CRC room.

8. At the designated time, return models, displays, and portfolios to student owners after verifying official conference identification.

VIDEO GAME DESIGN

OVERVIEW

Video game design demands the use of complex intellectual, artistic, and technical skills. Once learned, these skills may be applied in many other high technology occupations within the sciences, technology, and the arts.

Participants develop a video game that focuses on the subject of their choice. The game must be interesting, exciting, visually appealing, and intellectually challenging. The game must have high artistic, educational, and social value.

The game and all required documentation must be submitted — and will be evaluated — online, pre-conference. Semifinalist teams (list posted at the conference) participate in an onsite interview to demonstrate the knowledge and expertise they gained during the development of the game.

The theme of the current year's game will be posted on the national TSA website under Competition Themes/Problems.

ELIGIBILITY

Three (3) teams per state may participate.

TIME LIMITS

PRELIMINARY ROUND

1. All components of the chapter's entry, including the website address (URL) for the entry, must be finished, submitted, and accessible via the Internet by 11:59 p.m. Pacific Daylight Time (PDT) on May 15th.

2. Entries received, or changes made to submitted entries after this deadline will not be judged.

3. Email verification of each team's entry will be made by June 10th.

4. The game submitted for evaluation must be greater than three (3) minutes in length of play and must be interactive.

5. A deduction of five (5) points total will be incurred for a game that completes under the three (3)-minute time minimum.

6. The timing of the game segment starts with the first image or sound presented.

SEMIFINAL ROUND

1. Semifinalists participate in an onsite interview that lasts approximately five to ten (5-10) minutes.

2. As part of each semifinalist interview, each team will participate in a LEAP interview that will last a maximum of five (5) additional minutes.

LEAP

A team LEAP Report is required for this event and must be submitted at event check-in (see LEAP Program).

ATTIRE

TSA competition attire is required for this event.

PROCEDURE

PRELIMINARY ROUND

1. Participants design, create, provide documentation for, and submit the game entry and the team LEAP Report by 11:59 p.m. (PDT) on May 15th (see Time Limits). The game may be an online based game, or one that is a downloadable *.exe file.

2. Submission information will be provided on the TSA website under Competition/Themes and Problems.

3. All questions pertaining to Video Game Design should be emailed to the event coordinator or the event manager.

4. Entries are reviewed by judges prior to the National TSA Conference.

5. A semifinalist list of twelve (12) teams (in random order) will be posted at the conference on the first full day of competition.

SEMIFINAL ROUND

1. Semifinalist teams sign up for an interview time on the date and time noted in the conference program.

2. Two (2) team members from each semifinalist team report to the event area.

3. Semifinalist teams will have a chance to answer questions about their documentation, game, the game's purpose, value, design, rules, and development process.

4. The LEAP interview will be conducted as part of the semifinalist interview.

5. Judges independently assess the entries, including the team's LEAP Report.

6. The top ten (10) finalists will be announced during the awards ceremony.

REGULATIONS

PRELIMINARY ROUND

A. The game and required documentation must be located online and accessible for evaluation. The game may be an online based game, or one that is a downloadable *.exe file.

B. The URL must point to the team's entry.

C. The game must be entertaining, exciting, and challenging and have artistic, social, and educational value.

D. Game instructions must be clear and understandable.

E. Entries must be a team project.

F. Judges must be able to play the game to the third (3rd) level.

G. The game must include original work of the team.

1. Game architecture, game engines, graphics, and sounds may be used from other sources.

2. Work that is not created by the team must have proper documentation, showing copyright permissions and/or license for usage in the game segment.

H. The required documentation (noted below) must be submitted with the game URL address in the form of a PDF attachment:

1. LEAP Report

2. A completed Student Copyright Checklist (see Forms Appendix)

3. A hand-drawn storyboard, which depicts the design concept of the video game; pages as needed

4. Purpose and description of the game, the target audience, and a detailed explanation of how to play the game, including a list of control functions; two (2) pages

5. A completed Plan of Work log (see Forms Appendix); pages as needed

6. Permission letters for the use of copyrighted material; pages as needed (if applicable)

I. Required documentation becomes the property of TSA.

SEMIFINAL ROUND

A. Two (2) team members participate in a semifinal interview.

B. The LEAP Report

1. Teams document the leadership skills the team has developed and demonstrated while working on this event, and on a non-competitive event leadership experience.

2. Teams will respond to questions about the content of the LEAP Report as part of the LEAP interview, which will be conducted immediately following the event-specific interview.

3. Specific LEAP Report regulations can be found in the LEAP Program section of this guide and on the TSA website.

EVALUATION

PRELIMINARY ROUND

1. The quality of the required documentation
2. The game's aesthetics, flow, story, content, sound (preferred but not required), and characters
3. The first three (3) levels of the game
4. Up to fifteen (15) bonus points may be added by the judges for exceptional game features, or for content showing exemplary educational and social value.

SEMIFINAL ROUND

1. A semifinalist interview
2. The content and quality of the LEAP Report and interview

Refer to the official rating form for more information.

NOTES

The Video Game Design submission procedure noted in this guide applies to entries for the National TSA Conference only, and not TSA state conferences.

STEM INTEGRATION

This event aligns with the STEM educational standards of Science, Technology, Engineering, and Mathematics.

CAREERS RELATED TO THIS EVENT

- Animator
- Computer programmer
- Electronic game designer
- Electronic game technician
- Writer

VIDEO GAME DESIGN
2019 & 2020 OFFICIAL RATING FORM
HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

☐ The game is playable.
☐ Completed LEAP Report is present.
☐ ENTRY NOT EVALUATED

DOCUMENTATION (30 points)

Record scores in the column spaces below.

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Portfolio components (X1)	Not all portfolio pages are included, and/or the pages are unorganized.	Most portfolio elements are included and organized.	Outstanding organization skills are evident in the preparation of the portfolio, which contains all required elements.	
Game directions and control function (X1)	The game explanation is difficult to follow; functions provided are illogical or incorrect.	The game directions can be followed, but at times they do not sync with overall workings of the game; most control functions are adequate.	The game explanation is easy to follow, and control functions are well-matched for the game.	
Plan of Work log (X1)	Plan of Work log is incomplete and inaccurate.	Plan of Work log is included and mostly addresses participation of all team members.	Plan of Work log is complete and shows participation of all members.	
DOCUMENTATION SUBTOTAL (30 points)				

GAME DESIGN (70 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Creativity and artisanship (X2)	The game lacks creativity; poor artisanship and development are evident.	The game exhibits adequate creativity and artisanship.	The game is highly creative and well-crafted.	
Technical skill (X2)	The game lacks originality and shows few technical skills.	The game is original and shows some evidence of programming skills.	The game is original, highly artistic, and shows evidence of programming skills.	
Storyline/flow of the game (X1)	The game follows little or no story line; there is limited logical flow to the game.	The game follows a story line and flows adequately from one scene/level to another.	The game is well-organized and flows smoothly from one scene/level to the next.	
Overall appeal (X2)	Playing the game is not enjoyable; interacting in game play is a struggle, due to the game's illogical sequencing.	The game is somewhat interesting, easy, and enjoyable to play; most design concepts are incorporated.	The game is innovative and entertaining; design principles are incorporated, which make playing the game easy and enjoyable.	
GAME DESIGN SUBTOTAL (70 points)				

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

BONUS (15 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Bonus Points Unique and exceptional features (X1)	The game demonstrates some unique and exceptional features and/or exemplary educational value.	The game is very good but limited in uniqueness.	The game is outstanding and unique.	
BONUS SUBTOTAL (15 points)				

PRELIMINARY SUBTOTAL (115 points)

VIDEO GAME DESIGN

SEMIFINAL INTERVIEW (45 points)

CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Organization (X1)	Participants seem unorganized and unprepared for the interview; an illogical explanation of the game is presented.	Participants are generally prepared for the interview; explanation of the game is communicated and generally organized.	The interview is logical, well-organized, and easy to follow; the game explanation is communicated in an organized and concise manner.	
Team participation (X1)	The majority of the delivery is made by one member of the team; the partner(s) may be disengaged in the interview.	Team members generally are engaged in the interview, though one member may take on more responsibility that the other(s).	All team members are actively involved in the interview and responses to the questions; there is shared responsibility among team members.	
Knowledge (X1)	Participants seem to have little understanding of the concepts in their project; answers to questions may be vague.	Participants exhibit an understanding of the concepts in the project.	Participants show clear evidence of a thorough understanding of their project.	
LEAP Report/ Interview (15 points; 10% of total event points)	The team's efforts are not clearly communicated, lack detail, and/ or are unconvincing. Few, if any, attempts are made to identify and/or incorporate the SLC Practices and Behaviors.	The individual's efforts are adequately communicated, include some detail, are clear, and/or are generally convincing. Identification and/or incorporation of the SLC Practices and Behaviors is adequate.	The individual's efforts are clearly communicated, fully-detailed, and convincing. Identification and/or incorporation of the SLC Practices and Behaviors is excellent.	
			SEMIFINAL INTERVIEW SUBTOTAL (45 points)	

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

SEMIFINAL SUBTOTAL (45 points)

To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary.   **TOTAL (160 points)**

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____   Signature: _____

VIDEO GAME DESIGN
EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Judges:

1. Preliminary round, two (2) or more for pre-conference judging

2. Semifinal Round, two (2) or more

MATERIALS

A. Coordinator's packet, containing:

1. Event guidelines, one (1) copy for the coordinator and each judge

2. TSA Event Coordinator Report

3. List of judges/assistants

4. Pre-populated flash drives for judges

5. Results envelope with coordinator forms

6. Envelopes for LEAP Reports

7. LEAP Interview Judging Protocol

B. Tables for entries

C. One (1) extension cord for the semifinalist evaluation team

D. One (1) power bar with surge protection for semifinalists, as needed

E. Laptop computer with high speed Internet capability

F. Tables and chairs for event coordinator, semifinalist judges, and participants

RESPONSIBILITIES

PRE-CONFERENCE/PRELIMINARY ROUND

1. Review entries as they are submitted to the designated online storage utility.

2. Entry submission is allowed only until 11:59 p.m. (PDT) on May 15th.

3. Send email verification to all entrants by June 10th.

4. Manage communication and pre-conference evaluation (at least two [2] or more judges should be recruited earlier in the year).

5. At least five (5) days prior to the National TSA Conference, make accessible the online storage utility link for Video Game Design entries.

6. Collect completed rating forms electronically and bring them to the conference on a flash drive.

AT THE CONFERENCE

1. Attend the mandatory coordinator's meeting at the designated time and location.

2. Report to the CRC room and obtain the coordinator's packet; check the contents.

3. Review the event guidelines and check to see that enough judges/assistants have been scheduled.

4. Inspect the area or room in which the event is to be held for appropriate set-up, including room size, chairs, tables, outlets, etc. Notify the event manager of any potential problems.

5. On the first full day of competition, post a list of the twelve (12) semifinalists in random order.

SEMIFINAL ROUND

1. At least one (1) hour before the event is scheduled to begin, meet with judges and review the time limits, procedures, and regulations and clear up any questions or misunderstandings.

2. Semifinalist teams report to the event area at the time and place noted in the conference program to sign up for an interview time.

3. Distribute the event-specific interview guidelines.

4. Manage completion of the onsite interviews.

5. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either:

a. To deduct twenty percent (20%) of the total possible points in this round or

b. To disqualify the entry

c. The event coordinator, judges and CRC manager must all initial either of these actions on the rating form.

6. Judges determine the ten (10) finalists and discuss and break any ties that affect the top three (3) placements.(Determine the procedure for breaking ties before the onsite competition begins.)

7. Submit the finalist results and all related forms in the results envelope to the CRC room.

WEBMASTER

OVERVIEW

Participants are required to design, build, and launch a website that features the school's career and technology/engineering program, the TSA chapter, and the chapter's ability to research and present a given topic pertaining to technology (referred to as the "design brief"). Semifinalists participate in an onsite interview to demonstrate the knowledge and expertise gained during the development of the website — with an emphasis on web design methods and practices, as well as their research for the annual design topic. The topic for the current year will be posted on the TSA website under Competitions/Themes and Problems.

ELIGIBILITY

One (1) team of three to five (3-5) members per TSA chapter may participate, one (1) entry per team.

TIME LIMITS

1. The Universal Resource Locator (URL) and all components of the chapter's entry must be submitted to webentry@tsaweb.org by 11:59 pm Pacific Daylight Time (PDT) on May 15th.

   a. Note: After 11:59 pm on May 15th changes should not be made to the website.

   b. If a team makes changes or updates to the entry after the submission deadline, those changes are not considered.

   c. The URL must point to the main web page of the career and technology/engineering program or TSA chapter portion of the team entry.

   d. Email verification of each team's entry is made by June 10th.

   NOTE: This procedure applies to the national TSA competition only — entry procedures for state conferences are handled by each state.

5. Semifinalists participate in an onsite interview that lasts approximately five to ten (5-10) minutes.

6. As part of the semifinalist interview, each semifinalist team will participate in a LEAP interview that will last a maximum of five (5) additional minutes.

LEAP

A team LEAP Report is required for this event and must be submitted at event check-in (see LEAP Program).

ATTIRE

TSA competition attire is required for this event.

PROCEDURE

PRELIMINARY ROUND

1. Participants obtain the event design brief from the national TSA website. (Criteria for the middle school and high school events are different.)

2. All questions pertaining to Webmaster must be emailed to the event coordinator, whose email address can be found in the Directory section of the TSA website.

3. During the current school year, participants design an original website that must feature the following components:

   a. the school's career and technology/engineering program,

   b. the TSA chapter, and

   c. the chapter's solution to the design brief

4. A LEAP Report must be submitted with the event entry (in PDF format). The document must be submitted as an attachment to the email containing the chapter's entry (URL).

5. The entries are evaluated prior to the National TSA Conference so that judges have ample opportunity to review them online.

6. A semifinalist list of twelve (12) teams (in random order) will be posted at the National TSA Conference one (1) day prior to the interview.

SEMIFINAL ROUND

1. Semifinalist teams must sign up for an interview time. The specific place and time for interview scheduling is posted in the conference program. Each team must report back to the event area at the appropriate time.

2. Semifinalist teams will answer questions about their entry.

3. The LEAP interview will be conducted immediately following the event-specific interview.

4. Judges independently assess the interviews, including each team's LEAP Report.

5. The top ten (10) finalists will be announced at the awards ceremony.

REGULATIONS

PRELIMINARY ROUND

A. Participants must launch their entry on a web server that can be accessed via the Internet 24 hours a day, 7 days a week, 52 weeks per year.

B. All portions of the website entry must be the original work of the team members.

C. Created entirely during the current school year, each website entry must consist of:

1. Original web pages that promote the school's career and technology/engineering program (i.e., career and technology/engineering classes offered at the school, course summaries, digital images that showcase the school technology/engineering laboratory, teacher contact information, etc.)

2. Original web pages that promote the school's TSA chapter (e.g., logo, motto, creed, officers, photos, chapter activities including school and community service projects)

3. Original web pages that specifically display the chapter's solution to the design brief

4. Career and technology/engineering courses and program pages

   a. This section has no minimum or maximum number of pages.

   b. The main page for this section must contain a link to the TSA chapter main page and the design brief main page.

5. TSA chapter pages

   a. This section has no minimum or maximum number of pages.

   b. The main page for this section must contain a link to the design brief main page.

6. Design brief pages

   a. This section has no minimum or maximum number of pages.

   b. A page within this section must contain a link to the TSA chapter's main page and the career and technology education program's main page.

D. Framework systems, such as Drupal, Joomla, Wordpress, Bootstrap, or other currrent technologies may be used; however, pre-built templates and themes for these sites are not permissible. If a framework system is used, a statement affirming that the template or theme used on the framework was built by the team must be posted on an "About" section or page. Any resources, such as references used must be cited properly and all attributions must be posted on an "About" section or page that is easy to locate.

E. Template engine websites, such as, but not limited to, Webs, Wix, and Weebly are NOT permitted.

F. If copyrighted material, such as text, images, or sound from other sources is used, proper written permission must be included. Use the Student Copyright Checklist (see Forms Appendix or TSA website), which must be completed, signed, and included in a separate PDF file with the entry.

G. All entries are viewed with reasonably current versions of Internet Explorer, Google Chrome, Mozilla Firefox, and/or Safari. Each entry also may be viewed with various tablet and mobile devices.

SEMIFINAL ROUND

A. Each chapter selects up to five (5) team members to represent the chapter in the onsite interview.

B. The LEAP Report

1. Teams document the leadership skills the team developed and demonstrated while working on this event, and on a non-competitive event leadership experience.

2. Teams will respond to questions about the content of the LEAP Report as part of the LEAP interview, which will be conducted immediately following the event-specific interview.

3. Specific LEAP Report regulations can be found in the LEAP Program section of this guide and on the TSA website.

EVALUATION

PRELIMINARY ROUND

1. The team's entry, targeting overall design and originality, career and technology/engineering content, and local chapter information

2. The scope and sequence of the design brief solution

3. The website's compatibility with different browsers and screen resolutions

4. The appropriate use of new Internet and web-based applications

SEMIFINAL ROUND

1. The event-specific interview and the team's knowledge and expertise pertaining to the entry in the following areas:

    a. overall website design and originality

    b. career and technology/engineering program

    c. TSA chapter information

    d. design brief

    e. website compatibility with different browsers, monitor resolution, plug-ins, etc.

2. The content and quality of the LEAP Report and interview

Refer to the official rating form for more information.

STEM INTEGRATION

This event aligns with the STEM educational standards of Science, Technology, Engineering, and Mathematics.

CAREERS RELATED TO THIS EVENT

- Computer engineer
- Webmaster
- Website designer
- Web technician

WEBMASTER

2019 & 2020 OFFICIAL RATING FORM

HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

- ☐ TSA chapter content is present.
- ☐ The design brief solution is present.
- ☐ The website is compatible with different browsers, screen resolutions, and mobile devices.
- ☐ Completed LEAP Report is present.
- ☐ ENTRY NOT EVALUATED

WEBSITE (130 points)				Record scores in the column spaces below.
CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Layout and navigation (X2)	The web pages are cluttered and confusing; it is often difficult to locate important elements; the navigation structure is unclear, unintuitive, and ineffective in getting users to relevant information.	The web pages have a reasonably usable layout, and all major elements can be found; the design is generally pleasing to view; the navigation structure is generally effective and intuitive, and provides reasonable ability to navigate the website.	The layout is exceptionally user-friendly; the relationship of elements and content are effective and attractive to the viewer; the navigation structure is highly intuitive, and provides efficient access to all pertinent information on the website.	
Graphics and color scheme (X2)	Graphic content is nonexistent or of low quality and questionable relation to the topic; colors are of poor contrast and detract from the user experience.	Graphic content effectively relates to the purpose of the site, provides enhancement to the user experience, and is of acceptable to good quality; the color scheme is effective and does not detract from the viewer's experience.	Graphics are well-used, of high quality, and clearly enhance the user experience; interactive elements effectively engage the user; the color scheme is attractive, appropriate, and clearly enhances the viewing experience.	
Function and compatibility (X1)	There are several broken links and images, and/or the website does not render properly on multiple browsers.	There are no broken images, and/or few, if any, broken links; the website renders properly on most major browsers.	There are no broken images or links; the web site renders properly on most major browsers and is usable on mobile devices.	
Spelling and grammar (X1)	There are numerous spelling and grammatical errors.	There are only a few spelling and/or grammatical errors.	There are few, if any, spelling and grammatical errors.	
CTE program content (X2)	The existence of the CTE program is presented, but little detailed information is provided.	A listing of classes, modules, teachers, and student activities is generally present.	Classes and modules are described, teacher backgrounds are detailed, and student projects are well presented.	
TSA chapter content (X2)	The existence of the TSA chapter is presented, but little detailed information is given.	Basic information, such as TSA motto, creed, chapter and history, competition, and activity information is generally present.	Information on TSA, competitions, activities, community service projects, awards, and other activities is presented in detail.	

WEBSITE (130 points) – continued				
Design brief solution (X3)	The design brief solution is addressed, but not in great detail; it is generally ineffective, and/or missing many parts of the required research and presentation.	The design brief solution is generally well presented; it addresses most major parts of the required research and presentation.	The design brief solution is well presented, well researched, and highly effective; all expected components are present, and additional, unrequired elements that enhance the final product are incorporated.	
			WEBSITE SUBTOTAL (130 points)	

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

PRELIMINARY SUBTOTAL (130 points)

SEMIFINAL INTERVIEW (68 points)				Record scores in the column spaces below
CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Organization (X1)	Participants seem unorganized and unprepared for the interview.	Participants are generally prepared and are somewhat organized for the interview.	Participants' interview is organized, logical, and easy to follow.	
Knowledge (X1)	Team members seem to have little understanding of their project; answers are vague, short, and/or incomplete.	Team members have a general understanding of their project, and adequately discuss their process and solution to the challenge.	There is clear evidence that the team members have a thorough understanding of their project and design procedure.	
Articulation (X1)	The interview provides an unclear, unorganized, and or illogical description of the project.	Participants exhibit an understanding of the concepts in the project.	Participants show clear evidence of a thorough understanding of their project.	
Delivery (X1)	The team is verbose and/ or uncertain in its interview; participants' posture, gestures, and lack of eye contact diminish the interview.	The team is somewhat well-spoken and distinct in its interview; participants' posture gestures, and eye contact are acceptable in the interview.	The team is well-spoken and distinct in its interview; participants' posture, gestures, and eye contact result in a polished, natural, and effective interview.	
Engagement and participation (X1)	The team must be prompted to provide answers and information; a clear team leader dominates the interview, while other team members are unresponsive.	Team members generally answer questions with responses of acceptable length and depth; most team members participate adequately in the interview and engage the judges when answering questions.	All team members contribute in the interview; while there may be a clear team leader, all members provide appropriate substantive material to the conversation; the team engages the judges in the interview, which becomes less of a question and answer session and more of a conversation about the topic and solution.	

SEMIFINAL INTERVIEW (68 points) – continued				
LEAP Report/ Interview (18 points; 10% of total event points)	The team's efforts are not clearly communicated, lack detail, and/ or are unconvincing; few, if any, attempts are made to identify and/or incorporate the SLC Practices and Behaviors.	The team's efforts are adequately communicated, include some detail, are clear, and/or are generally convincing; identification and/or incorporation of the SLC Practices and Behaviors is adequate.	The team's efforts are clearly communicated, fully-detailed, and convincing; identification and/or incorporation of the SLC Practices and Behaviors is excellent.	
			SEMIFINAL INTERVIEW SUBTOTAL (68 points)	

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right. Indicate the rule violated: _____	

SEMIFINAL SUBTOTAL (68 points)	

To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary. **TOTAL (198 points)**	

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____   Signature: _____

WEBMASTER
EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

A. Event coordinator

B. Judges:

1. Preliminary round for pre-conference evaluation of websites, two (2) or more

2. Semifinal round, semifinalist interviews, two (2) or more

MATERIALS

A. Coordinator's packet, containing:

1. Event guidelines, one (1) copy for the coordinator and for each judge

2. TSA Event Coordinator Report (Entries are evaluated before the conference and only scores of the semifinalists are needed onsite. These scores and any other materials required for judging are brought to the conference by the coordinator.)

3. List of judges/assistants

4. Pre-populated flash drives for judges

5. Results envelope

6. Envelope for LEAP Reports

7. LEAP Interview Judging Protocol

B. List of questions for onsite interview

C. One to three (1-3) laptop computers, with high speed Internet access, and loaded with reasonably current versions of Internet Explorer, Google Chrome, Mozilla Firefox, and/or Safari. A mobile device, such as a smartphone or tablet, is also desirable.

D. Evaluation of Webmaster entries takes place before the conference so that judges can post the conference semifinalist list on the first full day of the National TSA Conference and have plenty of time for the onsite interviews.

RESPONSIBILITIES

PRE-CONFERENCE

1. Review entries as they are received by webentry@tsaweb.org. Entries are allowed only until 11:59 pm Pacific Daylight Time (PDT) on May 15th. Send email verification to all entrants by June 10th.

2. Compile all team LEAP Reports for use in the onsite semifinalist round at the National TSA Conference.

3. Manage communication and pre-conference evaluation of entries (at least two [2] judges are recruited earlier in the year).

4. Collect completed entry scores, and have these scores at the conference.

AT THE CONFERENCE

1. Attend the mandatory coordinator's meeting at the designated time and location.

2. Report to the CRC room and obtain the coordinator's packet; check the contents.

3. Review the event guidelines and check to see that enough judges/assistants have been scheduled.

4. On the first full day of competition, at least one (1) day prior to the interview portion of the event, have the CRC post a list of the twelve (12) semifinalists in random order.

SEMIFINAL ROUND

1. Inspect the area or room in which the event is to be held for appropriate set-up, including room size, chairs, tables, outlets, etc. Notify the event manager of any potential problems.

2. At least one (1) hour before the event is to begin, meet with semifinalist judges to review the time limits, procedures, and regulations. If questions arise that cannot be answered, speak to the event manager before the event begins.

3. Distribute guidelines for the interview to the judges.

4. Semifinalist teams report to the event area and sign up for an interview time.

5. Manage completion of the onsite interviews.

6. Decisions about rules violations must be discussed and verified with the judges, event coordinator and CRC manager to determine either:

   a. To deduct 20% of the total possible points or

   b. To disqualify the entry

   c. The event coordinator, judges, and CRC manager must all initial either of these actions on the rating form.

7. The LEAP interview will be conducted as part of the semifinalist interview and will last a maximum of five (5) additional minutes.

8. Judges determine the ten (10) finalists and discuss and break any ties. (Determine the procedure for breaking ties before the onsite competition begins.)

9. Review and submit the finalist results and all items/forms in the results envelope to the CRC room.

10. If necessary, manage security and the removal of materials from the event area.

FORMS APPENDIX

TECHNOLOGY STUDENT ASSOCIATION PLAN OF WORK

Date	Task	Time involved	Team member responsible (student initials)	Comments
1.				
2.				
3.				
4.				
5.				
6.				

Advisor signature _____

STUDENT COPYRIGHT CHECKLIST
(for students to complete and advisors to verify)

1) **Does your solution to the competitive event integrate any music?** ☐ YES ☐ NO

   If NO, go to question 2.

   If YES, is the music copyrighted? ☐ YES ☐ NO

   If YES, move to question 1A. If NO, move to question 1B.

   1A) Have you asked for author permission to use the music in your solution and included that permission (letter/form) in your documentation? If YES, move to question 2. If NO, ask for permission (OR use royalty free/your own original music) and if permission is granted, include the permission in your documentation.

   1B) Is the music royalty free, or did you create the music yourself? If YES, cite the royalty free music OR your original music properly in your documentation.

   CHAPTER ADVISOR: Sign below if your student has integrated any music into his/her competitive event solution.

   I, _____ (chapter advisor), have checked my student's solution and confirm that the use of music is done so with proper permission and is cited correctly in the student's documentation.

2) Does your solution to the competitive event integrate any graphics? ☐ YES ☐ NO

   If NO, go to question 3.

   If YES, is the graphic copyrighted, registered and/or trademarked? ☐ YES ☐ NO

   If YES, move to question 2A. If NO, move to question 2B.

   2A) Have you asked for author permission to use the graphic in your solution and included that permission (letter/form) in your documentation? If YES, move to question 3. If NO, ask for permission (OR use royalty free/your own original graphic) and if permission is granted, include the permission in your documentation.

   2B) Is the graphic royalty free, or did you create your own graphic? If YES, cite the royalty free graphic OR your own original graphic properly in your documentation.

   CHAPTER ADVISOR: Sign below if your student has integrated any graphics into his/her competitive event solution.

   I, _____ (chapter advisor), have checked my student's solution and confirm that the use of graphics is done so with proper permission and is cited correctly in the student's documentation.

3) Does your solution to the competitive event use another's thoughts or research? ☐ YES ☐ NO

   If NO, this is the end of the checklist.

   If YES, have you properly cited other's thoughts or research in your documentation? If YES, this is the end of the checklist.

   If NO, properly cite the thoughts/research of others in your documentation.

   CHAPTER ADVISOR: Sign below if your student has integrated any thoughts/research of others into his/her competitive event solution.

   I, _____ (chapter advisor), have checked my student's solution and confirm that the use of the thoughts/research of others is done so with proper permission and is cited correctly in the student's documentation.

PHOTO/FILM/VIDEO CONSENT AND RELEASE

I hereby give permission for images of my child or myself (as applicable), captured during Technology Student Association (TSA) activities through video/film, photo or digital camera, to be used solely for the purposes of TSA promotional materials and publications, and I waive any rights of compensation or ownership thereto.

_____

Name of minor in images (please print)

_____

Name of minor's parent/guardian (please print)

_____

Name of adult in images (please print)

_____

Parent/guardian or adult's signature (as applicable)

_____

Date

EVENT REVISION SUGGESTION

As TSA expands in membership and participation in competitive events increases, parts of some competitive events may need revision. Also, whenever guidelines are misinterpreted, they are revised for better clarity. TSA encourages revision input so that competitive events continue to improve. Please use this form for comments. (Use one form for each suggestion.)

Event title _____

Note a reference to the exact section and page number in *2019 & 2020 Technology Student Association High School Competitive Events Guide*.

State your suggestion. Be very specific. List exactly what should be deleted, replaced, and/or added to the event rule or procedure.

Provide a rationale. List the pros and cons from a personal viewpoint.

Are any STEM areas addressed by this change? Explain.

_____

Signature   Date   State advisor's signature   Date

_____

Address

_____

City   State   Zip

Include signatures of two people from different TSA chapters who support the suggestion.

_____

Signature   Date   Signature   Date

Mail to: CRC, c/o National TSA, 1904 Association Drive, Reston, VA 20191-1540
Email to: general@tsaweb.org

RULES INTERPRETATION PANEL GRIEVANCE

Site of National TSA Conference _____

Advisor's name _____

Chapter name_____

School name_____

Competitive event (including level)_____

Student or team identification number _____

STATEMENT OF CONCERN (Please print or type.)

_____

Signature   Date

_____

Signature of state advisor   Date

The decisions of the Rules Interpretation Panel (RIP) at the national conference are final.

RULES INTERPRETATION PANEL RESPONSE TO GRIEVANCE

PANEL MEMBERS

_____

Signature   Date

_____

Signature   Date

_____

Signaturer   Date

Site of National TSA Conference _____

Date _____

Competitive event (including level)_____

Student or team identification number _____

Advisor's name _____

STATEMENT OF RESPONSE

The decisions of the Rules Interpretation Panel (RIP) at the national conference are final.

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LEAP Report – Competition Engagement (HS)
Competitive Event Leadership Experiences

Competitive Event

Participant/Team ID#

The Student Leadership Challenge*		Leadership Experiences
Practices	**Behaviors**	
Model the Way	Follow through on promises and commitments	
	Set a personal example through actions	
	Align others with principles and standards	
	Seek feedback about impact of actions	
	Make sure teammates support common values	
	Talk about values and principles	
Inspire a Shared Vision	Look ahead and communicate future ideas	
	Describe ideal capabilities	
	Talk about how future could be improved	
	Be upbeat and positive	
	Communicate purpose and meaning	
	Show others how their interests can be realized	
Challenge the Process	Challenge current skills and abilities	
	Break projects into smaller do-able portions	
	Search for innovative ways to improve	
	Ask "What can we learn?"	
	Take initiative in experimenting	
	Help others try out new ideas	
Enable Others to Act	Foster cooperative relationships with others	
	Actively listen to diverse viewpoints	
	Treat others with respect	
	Support the decisions other people make	
	Give people freedom and choice	
	Provide leadership opportunities for others	
Encourage the Heart	Praise people	
	Encourage others	
	Express appreciation for people's contributions	
	Publicly recognize alignment with values	
	Celebrate accomplishments	
	Creatively recognize people's contributions	

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LEAP Report – Competition Engagement (HS)
General Leadership Experiences

Competitive Event
_____

Participant/Team ID#
_____

Leadership Categories	Leadership Experiences
Leadership Roles	
Community Service/ Volunteer Experiences	
Leadership Development	
College Career Planning	

The Student Leadership Challenge* Practices and Behaviors

Model the Way	Follow through on promises and commitments
	Set a personal example through actions
	Align others with principles and standards
	Seek feedback about impact of actions
	Make sure teammates support common values
	Talk about values and principles
Inspire a Shared Vision	Look ahead and communicate future ideas
	Describe ideal capabilities
	Talk about how future could be improved
	Be upbeat and positive
	Communicate purpose and meaning
	Show others how their interests can be realized
Challenge the Process	Challenge current skills and abilities
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	Ask "What can we learn?"
	Take initiative in experimenting
	Help others try out new ideas
Enable Others to Act	Foster cooperative relationships with others
	Actively listen to diverse viewpoints
	Treat others with respect
	Support the decisions other people make
	Give people freedom and choice
	Provide leadership opportunities for others
Encourage the Heart	Praise people
	Encourage others
	Express appreciation for people's contributions
	Publicly recognize alignment with values
	Celebrate accomplishments
	Creatively recognize people's contributions

FORMS APPENDIX

LEAP LEGACY CHAPTER RECOGNITION PROGRAM GUIDELINES

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OVERVIEW

LEAP Legacy Chapter is a comprehensive leadership recognition program offered to middle and high school chapters as an optional national TSA activity that includes a competition component. Chapters (in a team of three to ten members) demonstrate — and are evaluated on — their involvement in LEAP activities related to *The Student Leadership Challenge-Five Practices for Becoming an Exemplary Leader* (SLC-five practices)* modules. Chapter semifinalists compete as participants in the TSA Meet and Greet event at the annual National TSA Conference.

TSA members are encouraged to use the free Student Leadership Challenge (SLC) sample resources found on the TSA website when participating in the LEAP Legacy Chapter recognition program. These free resources are applicable to all LEAP activities. *Complete Student Leadership Challenge* publications are available for purchase, but not required for participation in any aspect of LEAP.

CHAPTER PARTICIPATION

A. Chapters submit a LEAP Legacy Chapter portfolio (see Portfolio section) to national TSA by March 31st.

B. Portfolios will be evaluated by judges secured by national TSA. Judges will not evaluate portfolios submitted from their home state. Based on minimum qualifying scores, one middle school and one high school per state will be selected as semifinalists. Ten middle school chapters and ten high school chapters will be selected to advance as national semifinalists and will be notified of their standing by May 1st. Portfolios that do not meet the minimum qualifying score will not advance to the semifinalist round, even if there are no other portfolios from an individual state.

C. National semifinalists are expected to attend the National TSA Conference at their own expense to participate in the TSA Meet and Greet event, where they will have the opportunity to showcase their leadership activities and achievements to conference attendees. LEAP Legacy Chapter semifinalists will be judged anonymously at the Meet and Greet and ten finalists and their rank will be determined. First through third place middle school and high school chapters will receive $1,000, $500, and $250, respectively. They also will receive trophies on stage at the awards ceremony.

PORTFOLIO

Chapters document their leadership activities in a portfolio consisting of a Cover Page, Activity Summary and Evidence, and supporting documents. The portfolio provides information about the leadership activities in which chapters have participated.

A. Portfolios that are incomplete or submitted incorrectly will not be evaluated.

B. All content/activities provided must have been completed during the past twelve months. For example, if a chapter has not yet competed in their state conference as of March 31st, they may cite activities related to the most recent state conference (within the last 12 months.)

C. Portfolios will be submitted electronically by the TSA chapter advisor via submittable.com no later than March 31st each year. Portfolios should not be mailed to the national TSA office. Portfolio submissions received via US mail or express mail will not be evaluated.

D. General portfolio formatting requirements (Cover Page, Activity Summary and Evidence)

1. Participants must use the official Cover Page and Activity Summary and Evidence templates.

2. All portfolio content must be typed.

E. Portfolio content

1. Cover Page

    The Cover Page of the portfolio should include the following:

    a. Chapter name and level (middle school or high school)

    b. Number of participating students

    c. School name and address

    d. Chapter advisor name and email address

    e. Other general information

2. Activity Summary and Evidence

    Referencing the LEAP Legacy Chapter Activities Summary and Evidence Sample and the Evaluation Rubric, chapters will list their actions/roles/responsibilities on the Activity Summary and Evidence template using the five *Student Leadership Challenge* practices:

    • Model the Way

    • Inspire a Shared Vision

    • Challenge the Process

    • Enable Others to Act

    • Encourage the Heart

3. Supporting Documents

    Supporting documents must accompany the completed Activity Summary and Evidence template and serve as evidence of the chapter's LEAP Legacy Chapter activities. A minimum of two (2) activities with two (2) corresponding evidence-supporting documents for each *Student Leadership Challenge* practice must be provided.

    Supporting document file names must reference the *Student Leadership Challenge* practice they support. For example, documents provided as evidence for activities that support the Model The Way practice, could be named MTW1, MTW2 and so forth. Please ensure that the file names of documents clearly indicate which *Student Leadership Challenge* practice are supported.

TSA MEET AND GREET (NATIONAL SEMIFINALIST ROUND)

A. National TSA will secure judges to evaluate the portfolios of LEAP Legacy Chapter submissions to TSA and determine the ten (10) middle school and the ten (10) high school national finalists. LEAP Legacy Chapter national semifinalists will be notified by national TSA by May 1st.

B. A maximum of two (2) student members may represent their LEAP Legacy Chapter during the Meet and Greet event. Chapters may rotate members throughout the duration of the Meet and Greet.

C. Guidelines for table top displays and/or presentation materials for the Meet and Greet will be provided to LEAP Legacy Chapter national semifinalists.

D. LEAP Legacy Chapter national semifinalists are judged anonymously at the Meet and Greet and the ten (10) finalists and their rank will be determined.

E. Chapters may participate in LEAP Legacy Chapter annually if they choose, even if they have won in a prior year.

LEAP LEGACY CHAPTER NATIONAL PARTICIPANTS AND FINALISTS WILL ALSO RECEIVE THE FOLLOWING:

A. First through third (1st–3rd) place national finalist LEAP Legacy Chapter middle schools and high schools (chapters) will receive cash awards of $1,000, $500, and 250, respectively. They also will receive finalist pins and trophies on stage at the National TSA Conference Awards Ceremony.

B. School names of semifinalists will be posted on the TSA website and listed in the National TSA Conference program.

C. A letter of congratulations and a LEAP Legacy Chapter certificate will be sent to each finalist chapter's school.

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LEAP LEGACY CHAPTER
PORTFOLIO COVER PAGE

Chapter/school:_____

Chapter level (middle school or high school): _____

Number of student participants: _____

School address: _____

City/state/zip:_____

Chapter advisor: _____

Chapter advisor's email address: _____

Summarize – in 100 words or less – the chapter's activities for the LEAP Legacy Chapter program:

Required Signatures

Chapter President _____ Date _____

Chapter Advisor _____ Date_____

Principal _____ Date _____

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The Student Leadership Challenge: Five Practices For Becoming an Exemplary Leader*		Student Leadership Challenge Behaviors*	LEAP Legacy Chapter Activities	Supporting Documents
PRACTICE	**MODEL THE WAY**	Follow through on promises and commitments		
		Set a personal example through actions		
		Align others with principles and standards		
		Seek feedback about impact of actions		
		Make sure teammates support common values		
		Talk about values and principles		
	INSPIRE A SHARED VISION	Look ahead and communicate future ideas		
		Describe ideal capabilities		
		Talk about how future could be improved		
		Be upbeat and positive		
		Communicate purpose and meaning		
		Show others how their interests can be realized		
	CHALLENGE THE PROCESS	Challenge current skills and abilities		
		Break projects into smaller do-able portions		
		Search for innovative ways to improve		
		Ask "What can we learn?"		
		Take initiative in experimenting		
		Help others try out new ideas		
	ENABLE OTHERS TO ACT	Foster cooperative relationships with others		
		Actively listen to diverse viewpoints		
		Treat others with respect		
		Support the decisions other people make		
		Give people freedom and choice		
		Provide leadership opportunities for others		
	ENCOURAGE THE HEART	Praise people		
		Encourage others		
		Express appreciation for people's contributions		
		Publicly recognize alignment with values		
		Celebrate accomplishments		
		Creatively recognize people's contributions		

LEAP LEGACY CHAPTER
EVALUATION RUBRIC

The Student Leadership Challenge: Five Practices For Becoming an Exemplary Leader*		LEAP Criteria	Minimal Performance 1-4 Points	Adequate Performance 5-8 Points	Exemplary Performance 9-10 Points	Score
PRACTICE	MODEL THE WAY	GOALS	Provided minimal evidence (e.g. personal accounts, written confirmation) of efforts to set goals and follow through with actions.	Provided adequate evidence (e.g. state advisor and TSA peer accounts) of efforts to set goals and follow through with actions.	Provided exemplary evidence (e.g. external accounts of expert feedback and support) of efforts to set goals and follow through with actions.	
		ALIGNMENT	Provided minimal evidence (e.g. personal accounts, written confirmation) of efforts to align with others and seek feedback.	Provided adequate evidence (e.g. state advisor and TSA peer accounts, written evidence) of efforts to align with others and seek feedback.	Provided exemplary evidence (e.g. external accounts of expert feedback and support; written/video evidence) of efforts to align with others and seek feedback.	
		VALUES AND PRINCIPLES	Provided minimal evidence (e.g. personal accounts, written confirmation) of efforts to establish common values and principles.	Provided adequate evidence (e.g. state advisor accounts and TSA peer accounts written evidence) of efforts to establish common values and principles.	Provided exemplary evidence (e.g. external accounts of expert feedback and support, published evidence) of efforts to establish common values and principles.	
					SUBTOTALS (30 pts)	

The Student Leadership Challenge: Five Practices For Becoming an Exemplary Leader*		LEAP Criteria	Minimal Performance 1-4 Points	Adequate Performance 5-8 Points	Exemplary Performance 9-10 Points	Score
PRACTICE	INSPIRE A SHARED VISION	ENVISION	Provided minimal evidence (e.g. personal accounts, written confirmation) of efforts to prepare for future activities and identify ideal capabilities.	Provided adequate evidence (e.g. state advisor and TSA peer accounts) of efforts to prepare for future activities and identify ideal capabilities.	Provided exemplary evidence (e.g. external accounts of expert feedback and support) of efforts to prepare for future activities and identify ideal capabilities.	
		AQUIRE	Provided minimal evidence (e.g. personal accounts, written confirmation) of efforts/actions taken to learn new things in order to accomplish the activity.	Provided adequate evidence (e.g. state advisor and TSA peer accounts, written evidence) of efforts/actions taken to learn new things in order to accomplish the activity.	Provided exemplary evidence (e.g. external accounts of expert feedback and support; written/video evidence) of efforts/actions taken to learn new things in order to accomplish the activity.	
		COMMUNICATE	Provided minimal evidence (e.g. personal accounts, written confirmation) of efforts to communicate with others.	Provided adequate evidence (e.g. state advisor and TSA peer accounts, written evidence) of efforts to communicate with others.	Provided exemplary evidence (e.g. external accounts of expert feedback and support; published evidence) of efforts to communicate with others.	
					SUBTOTALS (30 pts)	

EVALUATION RUBRIC

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The Student Leadership Challenge: Five Practices For Becoming an Exemplary Leader*			LEAP Criteria	Minimal Performance 1-4 Points	Adequate Performance 5-8 Points	Exemplary Performance 9-10 Points	Score
PRACTICE	**CHALLENGE THE PROCESS**		**INNOVATION**	Provided minimal evidence (e.g. personal accounts, written confirmation) of efforts to engage in an activity that has not been done before by the participating chapter or other TSA chapters.	Provided adequate evidence (e.g. state advisor and TSA peer accounts) of efforts to engage in an activity that has not been done before by the participating chapter or other TSA chapters.	Provided exemplary evidence (e.g. external accounts of expert feedback and support) of efforts to engage in an activity that has not been done before by the participating chapter or other TSA chapters.	
			INQUIRY	Provided minimal evidence (e.g. personal accounts, written confirmation) of efforts to seek projects that require experimentation.	Provided adequate evidence (e.g. state advisor and TSA peer accounts, written evidence) of efforts to seek projects that require experimentation.	Provided exemplary evidence (e.g. external accounts of expert feedback and support; written/video evidence) of efforts to seek projects that require experimentation.	
						SUBTOTALS (20 pts)	

The Student Leadership Challenge: Five Practices For Becoming an Exemplary Leader*			LEAP Criteria	Minimal Performance 1-4 Points	Adequate Performance 5-8 Points	Exemplary Performance 9-10 Points	Score
PRACTICE	**ENABLE OTHERS TO ACT**		**EMPATHY**	Provided minimal evidence (e.g. personal accounts, written confirmation) of efforts to actively listen to diverse viewpoints and support diverse ideas.	Provided adequate evidence (e.g. state advisor and TSA peer accounts) of efforts to actively listen to diverse viewpoints and support diverse ideas.	Provided exemplary evidence (e.g. external accounts of expert feedback and support) of efforts to actively listen to diverse viewpoints and support diverse ideas.	
			COLLABORATION	Provided minimal evidence (e.g. personal accounts, written confirmation) of efforts to support the decisions other people make, give people freedom and choice, and provide leadership opportunities for others.	Provided adequate evidence (e.g. state advisor and TSA peer accounts, written evidence) of efforts to support the decisions other people make, give people freedom and choice and provide leadership opportunities for others.	Provided exemplary evidence (e.g. external accounts of expert feedback and support; written/video evidence) of efforts to support the decisions other people make, give people freedom and choice and provide leadership opportunities for others.	
						SUBTOTALS (20 pts)	

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LEAP LEGACY CHAPTER
EVALUATION RUBRIC

The Student Leadership Challenge: Five Practices For Becoming an Exemplary Leader*		LEAP Criteria	Minimal Performance 1-4 Points	Adequate Performance 5-8 Points	Exemplary Performance 9-10 Points	Score
PRACTICE	**ENCOURAGE THE HEART**	**ADVOCACY**	Provided minimal evidence (e.g. personal accounts, written confirmation) of efforts to publicly support a cause of need within a community.	Provided adequate evidence (e.g. state advisor and TSA peer accounts) of efforts to publicly support a cause of need within a community.	Provided exemplary evidence (e.g. external accounts of expert feedback and support) of efforts to publicly support a cause of need within a community.	
		RECOGNITION	Provided minimal evidence (e.g. personal accounts, written confirmation) of efforts to express appreciation and creatively recognize the contributions of others, as well as celebrate their accomplishments.	Provided adequate evidence (e.g. state advisor and TSA peer accounts, written evidence) of efforts to express appreciation and creatively recognize the contributions of others, as well as celebrate their accomplishments.	Provided exemplary evidence (e.g. external accounts of expert feedback and support; written/video evidence) of efforts to express appreciation and creatively recognize the contributions of others, as well as celebrate their accomplishments.	
					SUBTOTALS (20 pts)	

TOTAL (120 pts)	

Comments:

_____

I certify these results to be true and accurate to the best of my knowledge.

JUDGE

Printed name: _____   Signature: _____