# **Grade** **Level**: 5th **Dates**: February 22- April 6

|  |  |
| --- | --- |
| **School Information****School**: Copeland Elementary **School Code**: 060043**Teachers**: Hall, Jackson, Seagrave**Buffer**: | **Transdisciplinary Theme**: How the World Works**Segment of Theme**: the impact of scientific and technological advances on society and on the environment.**Over Arching Concept**: human experience |
| **Section 1: Overview** |
| 1. **Central Idea**: Our knowledge of natural laws help us understand human experience.
 |
| 1. **Key Concepts**: Function, Causation, Connection
 |
| 1. **Guiding Related Concepts**:
 | 1. **Lines of Inquiry**:
 | 1. **Teacher Questions (Guided Questions)**:
 |
| TraitsInheritedoffspring UniqueSpeciesGenespopulation | -Sharing knowledge enables progress-Competition encourages growth.-Genetics are inherited and culture is acquired. | **DOK Level 3 & 4** * What impact did the Cold War rivalry with the Soviet Union have on American society?
* What were the assumptions and consequences of the Truman Doctrine?
* Was American intervention in areas around the world justified during the Cold War?
* Who started the Cold War?
* What are some examples of inherited traits?
* Which traits can be inherited and which must be acquired?
* In what ways am I a product of both my parents and my environment?
* How can you determine which traits will be inherited by offspring?
* Why do children resemble their parents and grandparents without being exactly like anyone else?
* How are inherited traits determined by genes?
* How can we use our knowledge of genetics to predict which traits offspring will have?
* How can microorganisms be controlled?
* How are microorganisms beneficial?
* How are microorganisms harmful?
* What roles do microorganisms have in the ecosystem?

 |
| 1. **Prior Content Knowledge**:
 | 1. **Assessing the Lines of Inquiry**:
 |
| Students should have prior knowledge of living and non-living things, microscopes, previous wars such as World War 1 and 2.  | How will you assess student’s understanding of the lines of inquiry?Classes will have ongoing discussion about the Cold War, genetics, and microorganisms.* Student Inquiry Notebook

Trait Graphic Organizer: Traits that are inherited aren’t changed by experiences. Acquired traits are passed to you through experiences and learning. Who you are is based on a combination of the inherited traits you were born with and what you have experienced and learned in your life. Students make a chart to list some examples of each, and then share to create a class T chart.* Genetic Inventory Line Chart

Microorganism wanted poster |
| **Section 2: What Are Our Target Goals?** |
| 1. **Concept Based Summative Assessment:**
 | 1. **Targeted Approaches to Learning (highlight 3):**
 | 1. **Targeted Learner Profile Attributes (highlight 2):**
 |
| Microorganism Brochure: Pretend you are a scientist working in the food industry. You are in charge of human resources for your department (You hire people.).Explain what skills the people you hire must have to study the effects of microorganisms on your product. Make a brochure including skills, tools used, terminology, and education needed.Cold War Poster Gallery:Let students know that they have become the expert Cold War historians and that they will be working in groups to visually represent their learning on a poster. Assign students to a group (or allow them to choose) with 4-5 students per group. Each group chooses one topic for their poster project: a. The Iron Curtain b. The Berlin Airlift c. NATO d. The Korean War e. McCarthyism f. The Cuban Missile Crisis g. The Vietnam War. Groups should see the sample poster and follow the directions using the last 4 slides of the unit ppt to complete their poster. When groups have finished their posters, display them and do a gallery walk. Invite others in the school to see their work or display in a prominent location. | Social Skills, Research Skills, Communication Skills. Thinking Skills, Self-Management Skills  | well-balanced, caring, principled, open-minded, risk taker, knowledgeable, communicator, reflective, thinker, inquirer |
| **Section 3: What Assessments will be provided in this unit of inquiry?** |
| 1. Pre-Assessments:

What assessment will be given at the beginning of the unit to inform current understanding  | 1. Formative Content Based Assessments:

What assessments will be given to monitor student learning of content? | 1. Summative Content Based Assessments:

What assessments will be given for students to show mastery of unit content? |
| Pre-Assessment for content (Canvas)CMA’s (district)Standards Mastery (Iready) | Student Inquiry NotebookConferencing with teachersMini-content quizClass discussionsTeacher observationsExit ticketsStation work activities | Post Assessment for content (canvas)Standards Mastery (Iready)KahootJeopardy  |
| **Section 4: How will we Facilitate Learning?** |
| 1. Provocation:

How will interest into this unit be sparked? | 1. Learning Experiences:

What activities/experiences will help facilitate the learning? | 1. Evidence of Differentiation:

How will the learning experiences be adjusted to different learning styles/abilities? |
| -Acquired and Inherited Traits:<https://www.youtube.com/watch?v=RlZUq2OykO8><https://www.youtube.com/watch?v=FYofotB4XFM>-Student survey on inherited traits- Use flashcards from website to introduce the idea of inherited vs. acquired characteristics. Show a pair and contrast to introduce vocabulary (e.g., “I have attached earlobes” contrasted with “I have pierced ears.”Microorganisms:<https://www.youtube.com/watch?v=9JW63U2mzqo><https://www.youtube.com/watch?v=f2FcoEgselc>The Cold War:<https://www.youtube.com/watch?v=I79TpDe3t2g><https://www.youtube.com/watch?v=rB1Y4Lu1rZs>- Show the map of Berlin in PowerPoint and have students use the notice and wondering sheet to make some observations. | Week 1 (Tuning In)Students will complete a survey to inventory their own inherited traits. To begin, the teacher should demonstrate each of the traits and explain that traits are observable characteristics that we inherit. Some are more common than others, but each person has their own combination of traits that makes them unique. Students will complete the inventory, and then compare their results in small groups. Collect the data from the whole class and create a wall chart (line plot).Week 2 (Tuning In)Discuss the results of the class data collection and the frequency with which traits appear in our class. Remind students that although they share traits with many others, they are unique. Ask students to predict how many traits they would have to look at on the survey to identify a classmate as unique. Select a volunteer to determine their uniqueness. All students stand. The volunteer reads their traits one at a time, and all students who do not share that trait sit down. Continue until no one is left standing. (Math Extension) students convert fractions to percentages to calculate frequency of traits in the classroom.Week 3 (Finding Out)Draw a wanted poster of a microorganism. The wanted poster must warn people about the dangerous fugitives who are at large. The wanted poster could alert people to beneficial microorganisms. The poster gives a picture of the wanted microorganism. When making the poster one must keep in mind the crime or beneficial event itself; you have to give a detailed description of the events that occurred to make it a crime or a benefit. Then give some remarks on how to handle the microorganism, if apprehended. The most important element is the reward. Always state how much the reward is and who is receiving the reward.Week 4 (Sorting Out)Pretend you are a scientist working in the food industry. You are in charge of human resources for your department (You hire people.).Explain what skills the people you hire must have to study the effects of microorganisms on your product. Make a brochure including skills, tools used, terminology, and education needed.Week 5 (Sorting Out)Show the map of Berlin in PowerPoint and have students use the notice and wondering sheet to make some observations. Have students pair/share to compare observations and then discuss as a whole class. Next tell students to pair up (pull aside 2 – 3 students) so they can recreate the Berlin airlift. One student will be on one end of the room labeled West Germany and his/her partner will be on the other side of the room labeled West Berlin. Use the 2 – 3 other students to stand in the middle of the room and label that area East Germany. Have the West Germany people make a paper airplane and have them the supplies cards. Tell students that they must try to get the supplies over to West Berlin by attaching the supplies to the planes and throwing them to their West Berlin partners. If the planes land in East Germany, the students in East Germany can hold onto the plane for 5 seconds and then return it back to West Germany, since they can’t shoot down any of the planes. After about 10 minutes, stop and see if all the supplies were delivered. Pose the following question to students to wrap up the activity: “Why was the Berlin Airlift needed?”Week 6 (Going Further) Let students know that they have become the expert Cold War historians and that they will be working in groups to visually represent their learning on a poster. Assign students to a group (or allow them to choose) with 4-5 students per group. Each group chooses one topic for their poster project: a. The Iron Curtain b. The Berlin Airlift c. NATO d. The Korean War e. McCarthyism f. The Cuban Missile Crisis g. The Vietnam War Groups should see the sample poster and follow the directions using the last 4 slides of the unit ppt to complete their poster. When groups have finished their posters, display them and do a gallery walk. Invite others in the school to see their work or display in a prominent location. | Myon differentiates reading levelStudents can work with partners on activities at 5th grade reading level |
| 1. Learning Experiences in Specials:

How are Specials Courses able to connect to this unit? | 1. Local/National/Global Connections:

How can we connect the content to local/national/global issues? | 1. Student Action:

What learning experiences support potential student-initiated action? |
| Spanish: Ss will learn about the Spanish technology vocabulary, and they will make a word search activity. | Students can make connections with microorganisms and corona virus. They can determine if this virus would fit in the category of a microorganism. | Students may want to find out more about their family traits and extend the survey on inherited traits from school to home. |
| 1. Student Agency and Play:

What learning experiences provide students with voice, choice and ownership? What play opportunities will be provided by Kindergarten/Pre-K?hands on/STEAM for K-5? | 1. Resources:

Which resources will you and the students use? This may include people, places, technologies, learning spaces and physical materials.  |
| Microorganism Brochure: Pretend you are a scientist working in the food industry. You are in charge of human resources for your department (You hire people.).Explain what skills the people you hire must have to study the effects of microorganisms on your product. Make a brochure including skills, tools used, terminology, and education needed.Berlin aircraft Recreation: Show the map of Berlin in PowerPoint and have students use the notice and wondering sheet to make some observations. Have students pair/share to compare observations and then discuss as a whole class. | <https://www.youtube.com/watch?v=RlZUq2OykO8><https://www.youtube.com/watch?v=FYofotB4XFM>Student survey on inherited traitsFlashcards <https://www.youtube.com/watch?v=9JW63U2mzqo><https://www.youtube.com/watch?v=f2FcoEgselc><https://www.youtube.com/watch?v=I79TpDe3t2g><https://www.youtube.com/watch?v=rB1Y4Lu1rZs>Unit PowerPoint  |
| **Section 5: Reflection** (Write the year, change font color for each year) |
| 1. Reflect on learning experiences:
 |
| Hall 2022-The learning experiences in this unit were effective for the students. They were able to learn more about traits and microorganisms. This gave them opportunity to work hands on with these skills. They were engaged throughout the unit and they were able to carry things that they learned home and share it with their family.Seagrave (2022) - The learning experiences in this unit were engaging and effective. Students really enjoyed discussing inherited traits and identifying similarities and differences between their classmates. They were able to understand the content better through the hands-on experiences that reinforced the information. I had some students return to school with a list of traits that they received from their family members. |
| 1. How were the tasks differentiated to meet different learning styles?
 | 1. How did the learning experiences and strategies we used throughout the unit help to develop and show students understanding of the central idea?
 |
| Hall 2022-Students were given opportunity to work with partners throughout the unit. Different students have different needs so some students conducted research during small groups independently while others were able to work in groups to help them be more successful with completing the tasks in this unit.Seagrave (2022) - The tasks were differentiated to meet different learning styles through independent work and small groups. Students were also able to work with students that shared their same reading levels during research opportunities. | Hall 2022- The learning experiences and strategies used in this unit helped to develop and show students learning and understanding of the central idea by allowing the students to act some things out that we learned. They were able to get close to real life experience by actually performing and presenting to their peers. This gave them a better understanding of the unit. Seagrave (2022) - The learning experiences and strategies used throughout the unit helped to develop and show students understanding of the central idea by having students actively participating in the lessons through exploration, research, collaboration, and communication with their peers. They were able to take the information they learned and describe it to their peers. This showed their understanding of the unit. |
| 1. What learning experiences best supported students’ development and demonstration of the attributes of the learner profile and approaches to learning?
 | 1. How effective were the summative assessments in measuring student learning? What, if any, changes need to be made to the assessments?
 |
| Hall 2022- The learning experiences all supported student’s development and demonstration of the attributes, but the one that stood out the most was the traits learning experience. Students used their social skills, research skills, and thinking skills in this task. They did very well working in groups and finding similar or different traits. They also were inspired to research more about traits on their own which led to students using their thinking skills to better understand the learning experience.Seagrave (2022) - The different learning experiences throughout this unit supported the students’ development and demonstration of the attributes of the learner profile and approaches to learning. However, my students embodied being inquirers, knowledgeable, thinkers, and communicators while being Cold War historians and developing posters that discussed different events in that time period. They enjoyed researching the topic in their groups and then presenting their posters in a gallery walk. | Hall 2022- The summative assessments were effective in measuring student learning. I was about to gauge the level of understanding of each student through their performance on the summative assessments. Seagrave (2022) - The summative assessments were effective in measuring student learning. It was a clear way to determine understanding among each student. |
| 1. What student-initiated inquiries (questions) arose from this unit of inquiry?
 | 1. What student action arose from this unit of inquiry?
 |
| Hall 2022- Some student initiated inquiries that arose from this unit are questions such as: What are traits? How are traits passed down? Why were their so many wars? Is there a different way to solve problems in the world? Is COVID a microorganism?Seagrave (2022) - A majority of my students had questions on the differences in inherited traits, learned behaviors, and instincts. They were questioning the differences in siblings and why they did not look the same even though they shared the same parents. How do I know what trait is dominant or recessive? Why are there so many different traits? Is there a way to make sure you get specific traits? | Hall 2022- Students were very interested in traits and wanted to learn more about them. Students also thought of ways that we could stop going to war.Seagrave (2022) - Students wanted to continue to explore traits and microorganisms.  |
| 1. Any additional notes or changes that need to be considered next year?
 |
|  |
| **Section 6: Picture Evidence** |
|  |

\*\*Scroll Down for Unit Standards\*\*

**Unit Standards**:

**ELA**:

**Science**:

5L2. Obtain, evaluate, and communicate information showing that some characteristics of organisms are inherited, and other characteristics are acquired.

S5L4. Obtain, evaluate, and communicate information about how microorganisms' benefit or harm larger organisms.

**Social Studies**:

SS5H5 Discuss the origins and consequences of the Cold War.