**Murphey Middle School**

**Foundations of Computer Programming (6-8)**

Course syllabus

2023-2024

**Teacher:** Elliott Neumeister **Room #:** 136

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**Tutorial Support:** By appointment. Please email if individual support is needed.

COURSE DESCRIPTION

This course will provide an exploratory foundation in computer programming. It is designed to be taught in a 9-week rotation in 45-minute daily classes. Standards should be taught in the order presented with the exception of Standard 1 being an embedded standard with ongoing learning regarding employability and career opportunities. Through integrated instructional activities, students will have opportunities to apply employability skills and to research possible career options in the information technology area. They will also complete many hands-on activities to build a strong foundation in computer coding. Capstone projects should be incorporated at the completion of all standards as time allows. Students who successfully complete this course will be prepared for the following pathways upon entering high school: Internet of Things, Programming, and Computer Science.

COURSE CONTENT & STANDARDS

MS-CS-FCP-1 Demonstrate employability skills required by business and industry.

MS-CS-FCP-2 Explore and explain the basic components of computers and their relationships to programming.

MS-CS-FCP-3 Utilize computational thinking to solve problems.

MS-CS-FCP-4 Design, develop, debug and implement computer programs.

MS-CS-FCP-5 Explore the relationship between computer hardware and software.

MS-CS-FCP-6 Create digital artifacts to address a current issue requiring resolution.

MS-BMF-FBM-7 Examine how related student organizations are integral parts of career and technology education courses through leadership development, school and community service projects, and competitive events.

TEXTS AND RESOURCES

Content will largely consist of instructor-created materials. If other texts or excerpts of texts are used, they will be provided on Canvas. Be sure to check course pages regularly. Additionally, this course will make use of several free applications for learning and creation. All programs used will be free of charge, and will either be downloadable programs provided on Canvas, or web-based applications with links provided on Canvas and in instructional materials.

REQUIRED MATERIALS

Students should bring school-provided laptops to class. All other required materials will be provided.

COURSE SCHEDULE

This course’s planned units and estimated times are as follows:

Unit 1: Employability Skills and Typing – 3 weeks and throughout the year

Unit 2: Intro to Programming: Hedy Levels 1-10 – 4 weeks

Unit 3: Intermediate Programming: Hedy Levels 11-16 – 3 weeks

Unit 4: Practical Python with micro:bit – 4 weeks

Unit 5: Computer Components, Hardware, and Software – 4 weeks

See this course’s Curriculum Map for more details.

CLASSROOM ENVIRONMENT

DAILY PROCEDURES

1. Enter the room and take your seat at your assigned computer.
2. Most days, log in to Quizizz to participate in an interactive lesson.
3. Other days, open Canvas and independently continue assignment(s) for the class period.
4. Turn in work for the day. On longer projects, may be asked to submit your work in progress.
5. At the end of class, log out of your computer.
6. Clean up your table area. If necessary, wipe down the desk, monitor, keyboard, mouse, etc.
7. Exit to the next block when instructed to do so by the teacher.

RULES

1. Comply with dress code. The wearing of hats, hoods, and other head coverings is not permitted.
2. Phones are prohibited, per Murphey’s school-wide policy.
3. No food or drink is permitted in the classroom. Bottled water may be had at the front of the classroom, away from computers.
4. Respect yourself, your technology, your peers, and your teachers.
5. When the teacher is talking, nobody else should be talking.
6. You must have permission to leave class once you have entered the room.

GENERAL EXPECTATIONS

1. Students will keep computers clean, working, and intact.
2. Students will come to class on time, prepared to work.
3. Students will give their full effort, and creativity, to each assignment and project.
4. Students will participate in all class activities.
5. Students will submit work prior to the deadline unless an extension is arranged beforehand.
6. Students will collaborate appropriately, properly attributing the work of others.

Note on copying, sharing, plagiarism: the sharing of knowledge, strategies, and code, is a central part of computer science, in the classroom as in the real world. Inspiration may be drawn from both peers and internet sources. However, students are expected to comply with copyright laws and respect the rights of others, primarily by properly crediting the origin and author of shared content. Additionally, when outside ideas or code are used, students must **fully understand** what they add to their projects. If a student cannot adequately explain how a section of their submitted assignment works, they may face grade penalties, and possibly other disciplinary actions for plagiarism if outside code is not properly attributed.

CONSEQUENCES AND DISCIPLINE

**1st Offense:** Verbal warning. **2nd Offense:** Student will be moved to another part of the classroom.

**3rd Offense:** Parent conference. **4th Offense/Severe Cause:** Administrator referral.

GRADING

Minor Grades (weekly assignments, practice quizzes, participation): 60% of final grade.

Major Grades (major assignments, tests, coding projects): 40% of final grade.

**\*This syllabus will be updated as needed throughout the semester.**