

STEM Success Syllabus

Instructor: Tina Williamson

School: Cosby High School

Email: williamsont@cocke.k112.tn.us

Room Number: 119

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Course Description

STEM Success is an inquiry-driven, project-based course designed to engage students in exploring the foundations of science, technology, engineering, and mathematics (STEM). Students will work collaboratively

to investigate real-world problems, apply the engineering design process, and develop creative and practical solutions. Emphasis will be placed on critical thinking, teamwork, and technical communication.

Course Objectives

By the end of this course, students will be able to:

- Apply the engineering design process to solve real-world problems.
- Demonstrate safe practices in a laboratory or project-based environment.
- Explore and evaluate a variety of STEM careers and their educational pathways.
- Conduct scientific investigations and analyze data to inform decision-making.
- Collaborate effectively in team settings to design, build, and test prototypes.

- Communicate technical information clearly in both written and oral forms.

Units of Study

- Unit 1: Introduction to STEM & Safety Protocols
- Unit 2: The Engineering Design Process
- Unit 3: Scientific Inquiry and Data Analysis
- Unit 4: Exploring STEM Careers and Fields
- Unit 5: Innovation Challenges & Problem Solving
- Unit 6: Capstone Project - Design, Prototype, Present

Grading Policy

Grades will be based on the following categories:

- Projects & Prototypes – 50%
- Participation & Teamwork – 20%
- Written Reflections & Journals – 20%
- Quizzes & Assessments – 10%
- Final Exam - Final Capstone Project

Materials Needed

- STEM notebook or binder
- Pencils and colored pencils
- Access to digital tools (Chromebook or equivalent)
- Basic project supplies (provided in class or through group materials)

Classroom Expectations

- Be respectful of classmates, tools, and materials.
- Participate actively in all group activities and discussions.

- Follow all safety guidelines and instructions.
- Turn in all assignments and projects on time.
- Ask questions, take risks, and be creative!

ACADEMIC HONESTY

The teacher expects all students to refrain from acts of academic misconduct including but not limited to:

1. According to Harbrace Handbook, 15 Edition:
 - a. Plagiarism is defined as “presenting someone else’s ideas, research, or opinions as your own without proper documentation, even if it has been rephrased.”
 - b. This includes but is not limited to:
 1. Copying verbatim all or part of another’s written work;
 2. Using phrases, figures, or illustrations without citing the source;
 3. Paraphrasing ideas, conclusions, or research without using the source;
 4. Using all or part of a literary plot, poem, or film without attributing the work to it’s creator.
2. Cheating - construed as attempting to deceive or mislead which includes, but is not limited to the following:
 - a. Utilizing old tests, projects, notes or written papers that are not your own to be turned in.
 - b. Providing unauthorized information to a fellow student about exam content.
 - c. Receiving unauthorized aid from any source with quizzes, examinations, or other assignments.
 - d. Seeking information in an unacceptable manner during/preceding an exam or other assigned work (cheat sheet, verbal exchange, looking at another person’s paper or electronic device, utilizing headphones, using textbook when

the test/quiz is not an open book test/quiz, using textbook test bank etc.).

- e. Consulting with a classmate or others when taking a computerized test.
 - f. Disregarding other specific policies and procedures outlined for a particular class.
 - g. Utilizing unapproved technology/electronic equipment during testing (i.e.: mobile devices such as cell phones, smart devices, ChatGPT, etc.).
 - h. Using the same Internet Protocol network address (IP address) as another student for testing without approval from the course faculty.
3. The use of any generative artificial intelligence (AI) tool must be cited for any assignment where it has been used and may not be used unless specifically allowed by your instructor. Please see your teacher if you have questions.

Academic Dishonesty Consequences: Students who are found guilty have the option of either redoing the assignment within a specified time-period and accepting a letter drop in grade or taking a zero on the assignment.

RELIGION IN THE CLASSROOM

The board affirms that it is essential that the teaching about religion – and not of a religion be conducted in a factual, objective and respectful manner in accordance with the following guidelines:

Cocke County Board Policy 4.804:

Educational content which consists of religious themes shall be presented in a factual, objective, and respectful manner in accordance with the following guidelines:

1. Religious themes may be a part of the curriculum for school-sponsored activities and programs provided it is essential to the learning experience in the various fields of study and is presented objectively.

2. The inclusion of religion shall be for educational purposes only.

3. The emphasis on religious themes should be only as extensive as necessary for a balanced and comprehensive study of the curriculum. Such studies shall never be used to proselytize, establish, foster, or demean any particular religion, religious tenets, or beliefs.

4. Student-initiated expressions to questions or assignments which reflect their beliefs or non-beliefs about a religious theme shall be accommodated.