Exploring Engineering & Technology
6th Grade
Teacher: Ed Clawson

COURSE SYLLABUS 2022-2023

E-Mail: clawsone@fultonschools.org

Help Session:
Wednesday Mornings 8:00 – 8:45AM (By appointment)

SUPPLIES:

Each student will need to bring a pencil, your iPad, and your agenda to class each day. Mechanical pencils or standard pencils are both acceptable. The school will supply you with a folder for your engineering journal. A box of Kleenex and/or a roll of paper towels for the classroom would be greatly appreciated but are not mandatory. The two most important things to bring to class are a **curious mind** and a **positive attitude**!

COURSE DESCRIPTION:

The goal of this nine-week course is to provide all students with an introduction to the principles of Engineering & Technology and its place in the modern world. Students will evaluate the daily impact of engineering, and the nature of technology. They will use the Engineering Design Process and experimentation to solve a variety of technological problems. Engineering design challenges will be given to help students discover how criteria, constraints, and processes affect designs. Students will participate in activities that will allow them to gain experience in brainstorming, visualization, modeling, construction, testing, experimentation, and refining designs. Students will also develop skills in researching issues and communicating their findings. This course integrates the areas of science, technology, engineering and math to solve a variety of challenging hands-on activities. Students will be exposure to wide variety of engineering and technology related careers. The importance and value of a strong work ethic and the development of leadership skills will be important components in this course.

COURSE OUTLINE:

Accommodations and modifications will be made according to the student's needs.

Classes will be structured using the *Georgia Performance Standards* which are listed below.

1. **Students will demonstrate employability skills required by business and industry.**
2. **Students will demonstrate proper safety techniques and tool usage in the Engineering and Technology Laboratory.**
3. **Students will Identify engineering and technology and its impact on society.**
4. **Students will Apply the Engineering Design Process to generate a solution to hands-on design challenges.**
5. **Students will Examine and research careers in fields related to engineering & technology**
6. **Students will Explore how related career and technology student organizations are integral parts of career and technology education courses. Students will develop leadership, interpersonal, and problem-solving skills through participation in co-curricular activities associated with the Technology Student Association.**

GRADING PROCEDURE:

Grades are reported every 4 1/2 weeks and are a culmination of the following:
50 % - Major Assessments - Major projects or performance tasks that are cumulative and demonstrate mastery of learning targets from multiple standards or skills.
40 % - Minor Assessments – Assignment or assignments like labs or minor projects assessment that measures an individual learning target, standard, or subset of learning targets/standards/ skills within a unit
10% - Practice - Assignments, observations, and/or engagement activities given in class or for homework to build pre-requisite skills, measure progress towards mastery of a learning target or standard, enrich, and/or remediate skills.

Late work policy: If a student is absent, it is his/her responsibility to get the information missed upon return to school and complete the assignments. Students are given one day for each day absent plus one day to complete the work. Failure to gather or complete the assignments may result in a zero for missed work. Late assignments will be graded according to the AMMS grading policy. which states: 10% off per day. Zero points after unit completion. Guidelines listed on page 6 of the AMMS Student Handbook and Agenda.

Recovery Policy: 75% maxim grade for successfully completing a recovery assignment that demonstrates mastery of the standard. Guidelines listed on page 7 of the AMMS Student Handbook and Agenda.

BASIC CLASSROOM PROCEDURES AND EXPECTATIONS:

SEE HANDBOOK FOR FUTHER PROCEDURES AND EXPECTATIONS

1. Be on time to class.
2. Bring agendas, pencils, and iPads to class daily.
3. Participate in all classroom activities.
4. Maintain an open, positive attitude about all types learning activities.
5. Show respect to your fellow classmates, teacher, and the equipment and materials in the classroom
6. Be an active participant in class activities and group projects.
7. Strict adherence to all rules as they appear in the student handbook.

DISCIPLINE GUIDELINES:

In order to maintain an environment that is safe and conducive to learning, students must follow the AMMS Code of Conduct guidelines outlined on page 15 in the student handbook. Should a student not follow these rules, teachers will use the school-wide classroom discipline cycle which may include: verbal redirection, conference between teacher and student, seating change, time-out, detention, communication to parent via telephone or agenda, referral to guidance counselor or administrator, conference between parent, teacher, and student, and conference between parent, teacher, student, and administrator. **Conduct that is considered to be dangerous to yourself or others in the technology lab will not be tolerated. This type of behavior will result in the strictest enforcement of the discipline code. Any student engaging unsafe behavior may be reassignment to the safe environment of an isolated desk to complete the course requirements from the textbook.**

Please return this by the due date.

Student Name _____ Class Period_____ Date _____

Dear Parent,

I love teaching engineering and technology to middle school students. I must have said “I have the best job in the world” a thousand times, throughout my seventeen years of teaching. This is very much a “hands on” course. Students will be given opportunities to problem solve, create, design, and build. There is a significant emphasis on the development of problem-solving skills. I very strongly believe that teaching basic engineering concepts in a project-based learning environment will help prepare students for many of the challenges and job opportunities that are ahead of them.

Please feel free to email me with any comments or concerns that might help me to provide your son or daughter with a more positive experience in my classroom.

If you or your spouse have a career as an engineer or work in any technology related field, the students and I would love to invite you to come into the classroom and share your experiences and insight. Hearing a first-hand account of a real-world challenges can have a significant impact. Many students at this age are just beginning to discovery what their true interests are. Perhaps you might be the person that ignites a life-long passion. Please let me know if you would like to contribute a little bit of your time or to further discus other opportunities.

Sincerely,

Ed Clawson
AMMS Engineering Instructor
Technology Student Association Advisor
FIRST Robotics Coach
VEX IQ Robotics Coach
Drones for Good Coach

☐ Please check the box if you are interested in exploring the possibility of sharing your experiences in our classroom

I have read the Exploring Engineering & Technology syllabus and understand the requirements and expectations for success in Mr. Clawson’s class.

Student Name Printed _____

Student Signature_____ Date_____

Parent Name Printed _____

Parent Signature_____ Date_____

Parent Contact information:

Phone number _____ Email _____