

SYLLABUS

7th Grade Exploring Engineering & Design

INSTRUCTIONAL GOALS

Exploring Engineering & Design

This course focuses on 7th grade students in applying the design process in the invention or innovation of a new product, process, or system. Through engaging activities and hands-on projects of which are broken into three five week sections (Robotics, 3D Printing, and Python coding) students will focus on understanding how criteria, constraints, and processes affect designs. The course emphasizes brainstorming, visualizing, modeling, testing, and refining designs. Students will develop skills in researching information, communicating design information, and reporting results. This is a semester course.

Assignments:

Students will be expected to turn in assignments when they are due. Assignments that are late will be deducted 10% for every day they are late. Classes are designed for students to complete all work in class.

NEEDS AND RESOURCES

Required Background: To successfully complete this course, you will need to:

- Develop skills in researching information
- Communicating design information
- Reporting results

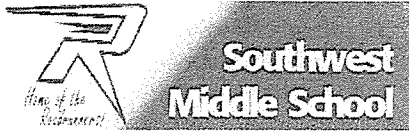
Required Materials:

Students need earbuds, a hand-held pencil sharpener, 1-subject spiral notebook, and pencils.

Common Core Curriculum

We follow the Common Core Curriculum. Please visit the North Carolina Department of Public Instruction for more information. The link is

<http://www.ncpublicschools.org/acre/standards/common-core>



CTE Technology Education Curriculum

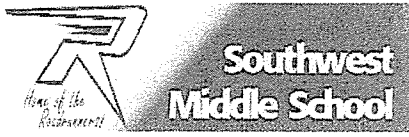
Instruction will be taught through guided instruction for hands-on projects and guided assignments. Students think about, talk about, and respond to the daily objective as a whole group or in pairs before recording and taking notes in their Engineering Design Journal or Electronic Portfolio. Weekly vocabulary is given and projects assigned. There will be quizzes/tests and journal checks for essential questions. Students will have to take time to work on assignments outside the classroom with more independent study

POLICIES AND PROCEDURES General Rules: Student Expectations

- 1) Be respectful.
- 2) Enter quietly and get to work immediately. Exit quietly.
- 3) Sharpen your pencil at the beginning of class. It is highly recommended to have and use a hand-held pencil sharpener.
- 4) Raise your hand and be given permission before speaking or leaving your seat.
- 5) Do your best on all assignments - effort matters.
- 6) Be an active participant by listening and speaking at appropriate times.
- 7) Engineering Design Journal is organized and contains Entry for each class period
- 8) Handle chromebook responsibly (follow GCS Acceptable Use Policy) and use for academic purposes only.
- 9) Clear bottled water allowed in the classroom (food not allowed without teacher permission).
- 10) Use the restroom during designated times.
- 11) Cell phones must remain off and put away (Not in use)
- 12) Homework expectations (Once Week) Vocabulary/Research

Parent Expectations

- 1) Please observe and monitor homework .
- 2) Please see that they study and review their vocabulary. Complete research for projects and presentations. Complete their homework, review and study.
- 3) The success of your child depends on you too!
- 4) Go through their Engineering Design Journal to help maintain organization and neatness. Email or call if you have questions. Ahsanders@gaston.k12.nc.us
- 5) Access your child's grades online using their lunch number and password.



Grading Policies:

Grading Policy Students are graded using the Gaston County Schools weighted grading scale and will be graded on:

1. Tests, major projects, papers, and performances 40%
2. Quizzes, class work, common assessments 30%
3. Guided Work and group activities 20%
4. Homework 10%

Each student will be encouraged to achieve a minimum of 80% on each test or in-class assignments.

I use Gaston County grading scale to determine student grades. The grading scale is as follows:

100-90 A 89-80 B 79-70 C 69-60 D 59- 0 F

ADDITIONAL INFORMATION

I look forward to a great year as we incorporate new technology, learning strategies into our classroom. Please do not hesitate to contact me if you have any questions or concerns. I can be reached:

CONTACT INFORMATION

Mrs. Angela Sanders, CTE Technology Education Teacher

704-308-4950 (Planning Time: 12:30-2:00) and By Appointments

Ahsanders@gaston.k12.nc.us / School Phone: 704-866-6290

AngelaSanders.net

Student Signature: _____ Date: _____

Parent Signature: _____