

# Technology, Engineering & Design (7th Grade) Syllabus

## Kernodle Middle School Department of CTE/STEM

**Course Name:** Exploring Engineering & Design (7th)

**Course Teacher:** Mrs. Janet W. Carter (Room 509)

**Course Description:** Refer to the current Student Registration Book

### Objectives

*By participating in this course, you will be able to:*

- ✓ Examine why technology is developed to help meet our individual needs and wants.
- ✓ Investigate how products can be improved and invented based on the current need to solve problems.
- ✓ Engage in activities & hands-on projects to focus on understanding how criteria, constraints, and processes affect designs.
- ✓ Apply the EDP (Engineering Design Process) in the invention or innovation of a new product, process, or system.
- ✓ Utilize engineering design concepts such as CAD (Computer-Aided Design) & other communication technologies to brainstorm and analyze solutions to technological problems.
- ✓ Develop skills in researching information, communicating design information, and reporting results.

### Supplies Needed

*The following items are needed for your semester:*

- ✓ 3-Ring (**1"**) binder to use as your EDJ (Engineering Design Journal) for drawings, technological terms, research notes, handouts, classwork, etc.
- ✓ Notebook paper for binder (Loose leaf paper only - No spiral notebooks)
- ✓ Pencils and/or Pens (**Blue or Black ink ONLY**).
- ✓ Pencils must be used on all engineering drawings – **NO PENS!!!**

### Course Assessment

*Grading for this course will be based on:*

- ✓ Classwork / Activities \_\_\_\_\_ 40%
- ✓ Participation - Teamwork & Soft Skills \_\_\_\_\_ 40%
- ✓ Unit Tests / Projects \_\_\_\_\_ 20%

**Course Content:** We will explore many areas of technology & engineering.

**STEM101 Topics:** Determining and Defining the Criteria, Introduction to Problem Solving, Exploration and Use of Online Services, Defining the Problem, Copyright and Intellectual Property, Developing Ideas, Creating Solutions, Exploration of Networking and IT Support, Testing and Evaluating, Hardware, Operation Systems and Application Software, Presenting the Solution.

**TED Topics:** Introduction to Invention and Innovation, The Engineering Design Process, Invention and Innovation of the Designed World, Design and Creativity, Technology and Society.

**Classroom Policies & Procedures:**

- ✓ Be on time - All tardies require a note from a teacher or an administrator. (Excessive unexcused tardies to class will result in lunch detention)
- ✓ Be prepared - Come to class with paper, pencil and a **GOOD ATTITUDE!**
- ✓ Be respectful - Respect the right of others by being a good listener and take care of all property within the classroom. (You will be responsible to cover any damages to tools & equipment in the Tech Lab via student fees)
- ✓ No Horse Playing – Accidents & injuries can be avoided by staying on task and working safely.
- ✓ No Food or Drink - Food and drinks can damage the computers and ruin projects. (Water bottles are allowed, but they must have threaded tops)
- ✓ No MP3's/iPods or Cell Phones - These are a distraction to your learning. (Per school policy, if these are out during class time, I will have to take them)
- ✓ Stay on Authorized Websites - You must use teacher instructed/guided websites/software programs only. (You could be banned from using the computers and/or Internet)

**Breaking any TED Policies and/or Procedures:**

<b>1st</b> Infraction:	Warning
<b>2nd</b> Infraction:	Lunch Detention
<b>3rd</b> Infraction:	Contact Parent/Guardian
<b>4th</b> Infraction:	Referral to the appropriate grade-level Administrator

**Other Items of Importance:**

- ✓ Assignments - Name, class & date should be included on all assignments (Assignment points may be lost if your name & class are not included. Late assignments will lose **10pts.** per week)
- ✓ Make-up Assignments - All work must be completed, and tests made up in a timely manner. (It is **YOUR** responsibility to make up missing assignments - Tutor/Make-up sessions are offered on Wednesday afternoon or mornings)
- ✓ Bathroom Passes - You are allowed limited bathroom passes per Quarter (Only one student is permitted to leave the room at a time)

*Feel free to contact me if you have any questions and/or concerns.*

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**“Change To Empower; Empower to Change”**