

****Equipment/Software Agreement:**

Equipment is a necessary part of any Technology Education class. It is, therefore, very important that special care be taken in using the equipment. For this reason, the following guidelines will be strictly adhered to concerning students using equipment.

1. Students should check their equipment they are assigned to. Report any problems to the teacher. This includes equipment that will not work, stuck keys on keyboard, etc.
2. Students should NOT attempt to repair equipment. You could also injure yourself or further damage the equipment.
3. Take good care of your equipment by not pounding the mouse, keyboard, etc.
4. Students will save their work on their computer and submit electronically. Absolutely NO flash drives are permitted unless approved by the teacher.

****Violations in Computer Usage Include:**

1. Being on the Internet without teacher authorization and/or on inappropriate websites (could result in losing computer privileges)
2. Changing computer settings
3. Adding/Changing passwords
4. Changing screensavers or backgrounds

****As a student in a Technology Education class, it is your responsibility to uphold the expectations set forth in the student handbook at Northwest Cabarrus STEM Middle School. Disciplinary action (i.e., loss of computer privileges, parent conferences, and administrative referrals) will be taken if these expectations are not upheld.**

Exploring Engineering and Design TE012YBS07

“It is not in doing what you like, but in liking what you do that is the secret of happiness.” – J. M. Barrie, Peter Pan

Course Description: Students will get opportunities to apply the design process in the invention or innovation of a new product, process, or system. In this course, students learn all about invention and innovation. They will have opportunities to study the history of inventions and innovations, including their impacts on society. They will learn about the core concepts of technology and about the various approaches to solving problems, including engineering design and experimentation. Students will apply their creativity in the invention and innovation of new products, processes, or systems. Finally, students will learn about how various inventions and innovations impact their lives.

Students will participate in engineering design activities to understand how criteria, constraints, and processes affect designs. Students will be involved in activities and experiences where they learn about brainstorming, visualizing, modeling, constructing, testing, experimenting, and refining designs. Students will also develop skills in researching information, communicating design information, and reporting results.

Course Objectives:

1. Understand the engineering design process.
2. Apply the engineering design process to a project.
3. Learn research, communication and reporting skills.

Instructor: Amit Kaul Room 166 (704)260-6550

Contact me via amit.kaul@cabarrus.k12.nc.us for parent conferences. Please fill out the paper Parent/Guardian Contact information form (or via http://bit.ly/Kaul_PS)

Materials Needed Daily:

1. Notebook & Pencils
2. Charged Chromebook
3. Headphones with microphone for Chromebook
4. Optional: Wireless Mouse

Helpful Class Supplies:

1. 1 box of baby wipes or hand sanitizer
2. 1 Box Kleenex

Grading Policy: *Grading is on a 100 point scale.*

A = 90-100
B = 80-89
C = 70-79
D = 60-69
F = 59 and below

1. Weights for course work:
 - a. Classwork/Practice Quizzes 30%
 - b. Projects/Tests 70%
2. It is the student’s responsibility to monitor their grades/assignment deadlines in CANVAS. Any overdue course work not turned in by student will be marked with a 50 in gradebook/PowerSchool.
3. **Absences/Late Assignments** – Students are responsible for all work/assignments missed.
4. **Cheating/Copying** – Teamwork on assignments, without my permission, is not allowed. Any cheating/copying will automatically get the cheater/copier a 0 on the assignment. The other student who gave the cheater/copier the assignment will also get an automatic reduction to 50% on the assignment.

Tutoring/Makeup Sessions: By appointment on Wednesdays.

Class Expectations:

1. Respect yourself, the teacher and others. I am here to facilitate your learning; you are here to be a [self-regulated learner](#).
2. Always be prepared for class by being logged into your chrome by the start of class.
3. **NEVER** share your computer password with anyone. You are responsible for keeping your electronic files secure.
4. Having your pen/pencil and a charged Chromebook - the most successful students are organized.
5. Follow all the rules listed in the NCMS Student Handbook.

Std #	Units, Essential Standards, and Indicators (The Learner will be able to :)	Course Weight	RBT
1.00	Introduction to Invention and Innovation	10%	
	Big Idea – Invention and innovation are creative ways to turn ideas into real things.		
2.00	The Engineering Design Process.	13%	
	Big Idea – The engineering design process is a systematic, iterative problem-solving strategy used to satisfy human needs and wants within specific criteria and constraints to arrive at the best possible solution.		
3.00	Invention and Innovation in the Designed World	20%	
	Big Idea – Invention and innovation are driven by human needs and wants and are influenced by the core concepts of technology: systems, resources, requirements, optimization and trade-offs, processes, and controls.		
4.00	Using Design and Creativity to Help Others	22%	
	Big Idea – Improving daily life involves using design concepts to solve problems.		
5.00	Technology and Society	22%	
	Big Idea – While Technology has allowed humans to prosper, negative impacts have also resulted.		
6.00	Creating a Space Exploration Infrastructure	13%	
	Big Idea – Constellation, one of NASA’s latest space exploration program proposals, is a combination of large and small technology systems that would enable humans to travel to and explore the solar system		
	Total Course Weight	100%	