

Welcome to 6th Grade Introduction to Technology class. I'm sure you're anxious to get started, but before we begin let's talk about what Engineering Technology is all about. In a word it's about INNOVATION! It's about how people think and apply technology to solve the problems facing society. It's about all things human made and how they came to be. Have you ever watched a science fiction movie? How much of that movie is actually related to science and how much is technology? Spaceships, weapons, computers, lights, electricity, clothing, tools, communication systems...Hmmm. Interesting, huh? There's more technology around us than we realize.

The thinking process we will use is closely related to that of an engineer, hi-tech worker, designer, or architect. You will use your own ingenuity to utilize tools, materials, processes, and resources to create solutions and opportunities for everyone.

Often the terms, science and technology, are used confused. The biggest difference between the two is, one is the study of the natural world and the other is the study of the human-made world. Do you know which is which?

Science tells us that objects will fall to the earth, technology allows us to determine which objects will survive the fall. Science tells us that steel exposed to oxygen will rust, technology has produced metals that resist rusting all together. Science tells us that cross-pollinating plants will produce predictable results, technology allows us to clone living things. Science tells us that oil is most likely found near certain rock formations, technology is helping to develop alternative energy sources so we don't run out of precious oil supplies. Have you figured it out yet?

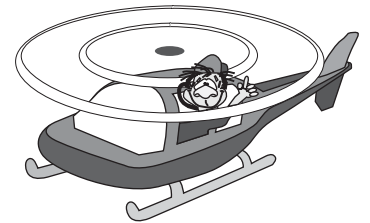
Quite simply put, technology deals with the human-made world and science deals with the natural world. Technology is the study of ways people develop and use technical means - tools and machines. It tells us how to control the natural and human-made world. It is the study of the ways people transport, design, manufacture, construct, and communicate.

This is not to say science and technology are unrelated. Science deals with "understanding" while technology deals with "doing". Science helps us know how to do something efficiently.

All students will participate in Technology Learning Activities (TLA's) that will explore the areas of transportation, construction, manufacturing, design, communication, energy. The units and activities covered this term may vary slightly but will always try to make a connection with math, science, physics, social studies *and* engineering.

Upon completion of this course students will:

- ☑ understand how technology plays a vital role in our society
- ☑ understand and demonstrate the steps of the design process
- ☑ understand the importance of design before production
- ☑ develop skills in designing and drafting
- ☑ understand the importance of accurate dimensions when designing
- ☑ understand the various ways products are manufactured
- ☑ design and construct a transportation vehicle based on a given problem-solving situation
- ☑ understand and recall the definition of transportation
- ☑ understand the history and influences of transportation
- ☑ list various modes of transportation over land, sea, air and space
- ☑ recognize various tools used in the construction process
- ☑ demonstrate the correct and safe use of tools used in the construction process
- ☑ understand the importance of commitment, cooperation, and safety



If a student does poorly on an activity or an exam, he/she can improve their grade by completing and submitting extra credit work. My web site has an extensive list of Extra Credit activities that vary from grade boosters (a single assignment that will increase your grade by 10, 20, or 30 points) to grade replacements (a single assignment, that when completed correctly, will replace the lowest grade for the term). These Extra Credit activities can be completed throughout the current term only. I also have printed copies of all the extra credit activities if you do not have access to the Internet.

<http://bms-et.org/>



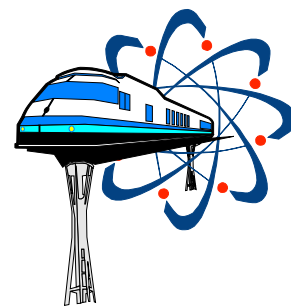
CURRICULUM AND GRADING

The following is a list of the assignments that will be completed by the end of the current term. Specific due dates will be given at the beginning of each assignment and can be reviewed on my web site in the "Homework" section.

Curriculum Assignment

% of Total Grade

Lab Safety Test	10
"Tools in Technology" Project	10
"Tools in Technology" Unit Summary	10
"Transportation" Research Worksheet	10
"Mag Lev" Design Worksheet	10
"Mag Lev" Activity and Worksheet	10
"Manufacturing" Research Worksheet	10
"Manufacturing" Product Design	10
"Manufacturing" Logo Design	10
"Manufacturing" Unit Summary	10
Classroom behavior and participation grade *	10 <i>maximum</i>



* Notice that the classroom behavior and participation grade brings the total to over 100%. As long as the student behaves in class and cleans up after him/herself, there will be no deduction in the final grade for the term. If there is a behavior or participation issue, this issue could lower the final grade.

It is my expectation that all assignments be handed in accurately and on time. If a student is absent for any reason, it is their responsibility to see me to make up any work. I may extend a due date in special cases, but I usually expect the students to use "out-of-class" time to complete any missed work. 10 points will be deducted for each class that an assignment is handed in late. After 10 days late the assignment may not receive any partial credit and must be replaced by an extra credit activity. Extra credit activities may be found on my web site in the "Extra Credit" section or, if a student does not have access to the internet, they can get a printed copy from me in room 113.

MAKE-UP TIMES

I am usually available any morning from 7:00 to 8:00. I am also usually available after school from 2:45 - 4:00 except on Wednesdays and Fridays. I will also allow students to come during 4th period "Team Extension" as long as the supervising teacher approves. You must get permission from your original teacher.

COURSE REQUIREMENTS:

A pencil will be needed in each class, so please bring one to class every day. Each student will be given a 3-ring binder to be used as a Technology Portfolio during the term. These binders are the property of Bigelow Middle School Engineering Technology Department and should not be damaged in any way. If the binder is damaged by the student, a \$10.00 fee will be assessed to the student and grades will be withheld until payment has been made.

My Web Address:

<http://bms-et.org/>

If you ever have any questions or concerns, please do not hesitate to contact me.

Sincerely, Michael Whitman

Phone: (617) 559-6800
ext. 457119

email: whitmanm@newton.k12.ma.us



~ Please sign below and return ~

Student Signature: _____

Parent Signature: _____