

Course Title: Power, Energy and Transportation Technologies (grade 9)

Course Description: Students will learn how to make conscientious decisions as they study the use of energy and power. Fossil fuels, solar, wind, geothermal, engines, motors, electricity, and electronics will be studied. Servicing of small gas engines will be explored in this class. Vehicle design and construction of scale models will be covered. Students will also learn about electricity and power systems as they design and build a variety of projects.

Course Outline:

- Manufacture projects using basic problem solving techniques.
- Safely operate tools and machines in a sequence to achieve results.
- Apply technology to specific tasks.
- Gather and evaluate information from written and electronic sources.
- Interpret schematic diagrams to assemble a product.
- Show knowledge of relevant technical vocabulary.
- Individual and group problem solving techniques.

Course Schedule/Assignments: Class is one trimester in length and 55 minutes per day. Assignments include study in:

- Problem solving skills (hands on application of knowledge to achieve a solution).
- Basic principles of engines, aerodynamics and design.
- Transportation systems.
- Small gas engine parts and uses.
- Energy use and conservation.
- Knowledge of systems (methods using logic and creativity to meet specific goals).
- Safe use of tools and machines for project production

Course Grading Criteria and Grading Scale:

A = 90 – 100%

B = 80 – 89%

C = 70 – 79%

D = 60-69%

Course Expectations:

Work within the boundaries of the class rules to complete homework and lab projects of the highest quality in a timely manner.