

## **TECHNOLOGY / ENGINEERING**

### **Grade 5 Major Topics:**

Major topics are based on the MASS DOE Technology Engineering standards:

1. Introduction to Technology / Engineering
  - Understanding and Using Technology in Society
2. Materials and Tools
  - Identify Materials/Tools For Design and Construction Tasks
  - Explain Differences of Simple and Complex Machines
3. Engineering Design
  - Needs for Shelter, Storage or Convenience
  - Represent Problems Using Sketches, Diagrams, Graphic Organizers and Lists
  - Identify Uses for Design Features (size, shape, weight) for Prototypes
  - Compare Natural Systems with Mechanical Systems

### **Grade 6 Major Topics:**

Major topics are based on the MASS DOE Technology Engineering standards:

1. Review Technology / Engineering and Uses in Society
2. Engineering Design
  - Identify, Explain, Document, and Use of Eight Steps of Engineering Design Process
  - Describe and Use of Five Elements of Universal Systems Model
3. Materials, Tools, and Machines
  - Describe Steps to Produce, Evaluate, and Improve a Product; Documentation of the Design Process; and Understand Use of Tools and Machines

### **Grade 7 Major Topics:**

Major topics are based on the MASS DOE Technology Engineering standards:

1. Engineering Design
  - Identify, Explain, Document, and Use of Eight Steps of Engineering Design Process
  - Describe and Use of Five Elements of Universal Systems Model
2. Transportation Systems

### 3. Construction Systems

#### **Grade 8 Major Topics:**

Major topics are based on the MASS DOE Technology Engineering standards:

1. Nature of Engineering Communications Systems
2. Nature of Engineering Manufacturing Systems
3. Nature of Engineering Bioengineering Systems

Each of the major topics at each grade level will focus on the following minor topics:

1. Use of the Engineering and Systems Design process
2. Applications of Materials, Tools, and Machines
3. Ability to Produce, Use, Evaluate, and/or Improve a Product
4. Documentation of the Informed Design Process