Technology Engineering Systems

For each of the sections that follow, students may be required to analyze, recall, explain, interpret, apply, or evaluate the particular concepts being taught.

TECHNOLOGY: A HUMAN ADAPTIVE SYSTEM

- define technology
- explain the difference between science and technology
- describe technology as an evolving, dynamic area of knowledge

TECHNOLOGY AS A SYSTEM

- evaluate technology as it relates to human needs
- describe technology as a human made system
- describe the parts of a technological system
- list and describe the inputs of technological systems
- illustrate the two major processes used by technology

TYPES OF TECHNOLOGICAL SYSTEMS

- describe technology in terms of level of development, economic structure, number of people involved and type of product or service produced
- analyze the impacts of high technology and development of society

TECHNOLOGICAL PROCESS

- define and describe the major types of technological process
- list and describe the steps in the problem solving/design process
- apply the technological processes to everyday activities

PRODUCTION TOOLS IN TECHNOLOGY

- explain the differences between tools and machines
- list and describe the major types of material processing tools
- explain cutting and feed motions of machine tools
- list and describe the major types of energy processing tools
- list and describe the major types of information processing tools

PROBLEM SOLVING AND DESIGN PROCESS

- describe the problem solving process and design process
- define and describe innovation
- evaluate a technological problem or opportunity in terms of the quality life

- assess and categorize the types of criteria and information gathered as a foundation for technological development projects

MANUFACTURING PRODUCTS

- define manufacturing
- categorize the six types of secondary manufacturing processes
- create a casting and principles of casting and molding
- describe the basic principles or concepts of forming actions
- describe the basic principles or concepts of separating actions
- describe the safe and proper use of the various separating machines

CONSTRUCTING STRUCTURES

- define and describe the two types of construction
- compare the major types of buildings that are constructed
- analyze the impacts the structures built by heavy engineering have on our society
- list the steps involved in constructing a structure
- analyze how a site is prepared for a construction project and define its function

TRANSPORTATION TECHNOLOGY

- define transportation and transportation technology
- list and describe the parts of a transportation system
- describe the four environments in which transportation systems operate
- categorize the types of transportation vehicles

ENERGY: THE FOUNDATION OF TECHNOLOGY

- define energy
- describe the deference's between potential and kinetic energy
- explain the differences between energy, work, and power
- list and describe the six important forms of energy

TECHNOLOGY: A SOCIETAL VIEW

- research and evaluate destructive natural forces that affect human life
- explain how technology can help to control destructive natural forces
- discuss how humans have a responsibility to care for the planet on which they live

TECHNOLOGY CAREERS: A PERSONAL VIEW

- describe how technology impacts your personal life
- explain the employment opportunities related to technological activities
- list the factors that should be considered in selecting a career

- describe how technological activities we now think of as fictional may become modern processes