

Technology Education 8

General Curriculum Outcomes

1. Students will be expected to design, develop, evaluate, and articulate technological solutions.
2. Students will be expected to operate and manage technological systems.
3. Students will be expected to demonstrate an understanding of the history and evolution of technology, and of its social and cultural implications.
4. Students will be expected to demonstrate an understanding of the consequences of their technological choices.
5. Students will be expected to demonstrate an understanding of current and evolving careers and of the influence of technology on the nature of work.

Specific Curriculum Outcomes

Students will be expected to

FUNDAMENTALS OF TECHNOLOGY EDUCATION

(Threading Outcomes, Grade 7, Grade 8, and Grade 9)

- 5.1 work independently, co-operatively, and collaboratively to solve technological problems
- 5.2 demonstrate an awareness of ethics and environmental responsibility in technological decision-making and work habits
- 5.3 demonstrate preparedness for technological problem solving
- 5.4 demonstrate safe and healthy practices with regard to materials, processes, and equipment
- 5.5 document the design process
- 5.6 independently demonstrate appropriate application of skills learned
- 5.7 demonstrate measuring skills with accuracy and precision
- 5.8 communicate ideas using 2-D and 3-D technical drawings and sketches
- 5.9 use appropriate language and terminology as applied to technology education
- 5.10 investigate connections among technology education, STEM (Science, Technology, Engineering, and Math), and careers

MODULE 1: COMMUNICATIONS TECHNOLOGY

- 1.1 modify a plan to solve communications technology problems
- 1.2 create solutions to communications technology problems using a variety of media
- 1.3 evaluate their design solutions, redesigning as necessary
- 1.4 demonstrate effective use of a variety of communications technology media
- 1.5 characterize target audiences and determine effective medium
- 1.6 apply principles of design

MODULE 2: ENERGY ENGINEERING

- 2.1 modify a plan to solve energy engineering problems
- 2.2 construct an energy engineering solution by using or creating a modified plan
- 2.3 examine solutions to energy engineering problems
- 2.4 demonstrate practical applications of mechanical advantage
- 2.5 operate and analyze devices that change motion
- 2.6 create and operate devices that use mechanical advantage
- 2.7 investigate the forces affecting structures or control systems

MODULE 3: INNOVATIONS AND INVENTIONS

Students will be expected to

- 3.1 modify a plan to develop a system
- 3.2 create a model or prototype of an existing invention
- 3.3 explain a complex system in terms of its subsystems
- 3.4 examine and communicate the importance and impact of invention and innovation
- 3.5 develop improvements to an existing product
- 3.6 document the life cycle of a manufactured product
- 3.7 employ control systems to regulate processes
- 3.8 diagnose and repair malfunctioning systems

MODULE 4: PRODUCTION TECHNOLOGY

- 4.1 demonstrate an understanding of all safety features of production technology machines and equipment used to solve design problems
- 4.2 demonstrate safe and effective use of a variety of production technology tools and processes
- 4.3 demonstrate an understanding of safe management of wood dust
- 4.4 modify a plan to solve production technology problems
- 4.5 construct solutions to production technology problems
- 4.6 evaluate solutions to production technology problems
- 4.7 safely use a variety of hand tools, power tools, and equipment to prepare stock
- 4.8 construct an aesthetically pleasing finished product that solves a design problem
- 4.9 use a variety of fasteners to combine materials or assemble a product
- 4.10 use environmentally friendly finishing techniques to enhance the esthetics or functionality of a product