

# Technology Education 7

## 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 Mathematics), and careers

### MODULE 1: COMMUNICATIONS TECHNOLOGY

- 1.1 interpret a plan to solve communications technology problems
- 1.2 create solutions to communications technology problems using given media
- 1.3 evaluate their design solutions, redesigning as necessary
- 1.4 modify a variety of given communications technology media to solve a design problem
- 1.5 identify target audiences
- 1.6 identify principles of design

**MODULE 2: ENERGY ENGINEERING**

- 2.1 interpret a plan to solve energy engineering problems
- 2.2 construct an energy engineering solution
- 2.3 identify solutions to energy engineering problems
- 2.4 demonstrate mechanical advantage using a simple machine
- 2.5 identify devices that change motion in real-world technological solutions
- 2.6 identify mechanical advantage in real-world technological solutions
- 2.7 investigate the forces affecting structures or control systems

**MODULE 3: INNOVATIONS AND INVENTIONS**

- 3.1 interpret a plan to develop a system
- 3.2 create a model or prototype of an existing invention
- 3.3 differentiate the components of simple technological systems
- 3.4 examine and communicate the importance and impact of invention and innovation
- 3.5 develop improvements to an existing product
- 3.6 investigate the manufacturing process of a product
- 3.7 engineer a prototype to solve a design challenge

**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 interpret 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 basic hand tools, power tools, and equipment to create a product that solves a design problem
- 4.9 use fasteners to combine materials
- 4.10 use environmentally friendly finishing techniques to enhance the esthetics or functionality of a product

**Note:** There is no outcome 4.8 in grade 7.