

# Technology Education 9

*Foundational Outcomes*

## Website References

Website references contained within this document are provided solely as a convenience and do not constitute an endorsement by the Department of Education of the content, policies, or products of the referenced website. The department does not control the referenced websites and subsequent links, and is not responsible for the accuracy, legality, or content of those websites. Referenced website content may change without notice.

Regional Education Centres and educators are required under the Department's Public School Programs Network Access and Use Policy to preview and evaluate sites before recommending them for student use. If an outdated or inappropriate site is found, please report it to <curriculum@novascotia.ca>.

© Crown copyright, Province of Nova Scotia, 2020

Prepared by the Department of Education and Early Childhood Development

This is the most recent version of the current curriculum materials as used by teachers in Nova Scotia.

The contents of this publication may be reproduced in part provided the intended use is for non-commercial purposes and full acknowledgment is given to the Nova Scotia Department of Education.

## Technology Education 9

As teachers determine their lesson plans for Term 1 of the 2020-2021 school year, one of the considerations will be the sequencing of learning activities. Where possible, activities that will be difficult or impossible to do at home should be done early in the term, to be better prepared to shift to a learning-at-home model, if required. The colour-coded outcomes below can serve as a guide for teachers as they make activity sequencing decisions.

 In-class learning priority

 In-class learning preferred

 Outcome could be met from home

Students will be expected to

### Module 1: Communications Technology

1.1 develop a plan to solve authentic communications technology problems

1.2 create solutions to authentic communications technology problems

1.3 evaluate their solutions to authentic communications technology problems

1.4 create and manipulate a variety of communications technology media to solve a design problem

1.5 determine criteria for specific target audiences

1.6 apply elements and principles of design

1.7 present a solution and rationale to a target audience using a given medium

### Module 2: Energy Engineering

2.1 develop a plan to solve energy engineering problems

2.2 design and construct solutions to energy engineering problems

2.3 evaluate solutions to energy engineering problems

2.4 construct or modify a device that demonstrates the conversion of energy

2.5 create a mechanical device that demonstrates a change in motion

2.6 use mechanical advantage in the solution of a technological problem

2.7 use knowledge of energy sources to make decisions about real-life energy problems

### Module 3: Inventions and Innovations

3.1 design and construct a system incorporating simple machines that will initiate a

series of events

3.2 design an adaptation for an existing product that solves a new need

3.3 explain a complex system in terms of its subsystems

3.4 evaluate the impact of invention and innovation

3.5 develop improvements to an existing product

3.6 hypothesize and investigate how products are manufactured

3.7 employ control systems to regulate processes

3.8 reverse-engineer a product to explain its inner workings

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 develop a plan to solve authentic production technology problems

4.5 construct solutions to authentic production technology problems

4.6 evaluate solutions to authentic production problems

4.7 safely use production equipment and machines to process materials

4.8 work with real-life clients or situations to solve production related problems within school or community environments

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

Mandatory threading outcomes

Fundamentals of Technology Education 9

5.1 work independently, cooperatively, 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 between technology education, STEM (Science, Technology, Engineering, and Math), and careers