

# Production Technology 11-12

*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 If an outdated or inappropriate site is found, please report it to 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.

## Production Technology 11/12

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

### Unit 1: Production and Humans

1.1 describe the role and value of production and identify basic and advanced human needs

1.2 compare and judge the advantages and disadvantages of hand and mass production techniques

1.3 explain the highlights of the industrial revolution and their impact on production and society

1.4 recount and interpret contemporary developments in the field of production

1.5 describe and demonstrate the general principles of the organization of production

1.6 define, demonstrate, and apply the basic technology system used in production

1.7 specify and communicate the major impacts of production on society, economy, culture, and the environment

1.8 identify the needs and preferences of users reflected in contemporary products

1.9 recognize potential conflicts between the needs of individuals and of society

### Unit 2: Resources for Production

2.1 define the major categories of resources used for production

2.2 explain the general structure of materials and describe major material properties

2.3 specify and communicate the personnel involved in the production technology team

2.4 list and explain the basic tools and machines used in production

2.5 select production tools, machines, and equipment appropriate to the task at hand and use them safely, accurately, and economically

2.6 describe the general organization of business involved with production, including capital and financing, management, and research development

2.7 explain how people are an important resource who need to be trained, organized, and motivated for roles in production

2.8 demonstrate that in production the control of stock is important

### Unit 3: Manufacturing

- 3.1 explain how designs for the production of an item can be granted a patent
- 3.2 demonstrate awareness of the competition that surrounds the development of inventions and the control of patents
- 3.3 define the major types of manufacturing
- 3.4 plan a total sequence for the production of a product
- 3.5 demonstrate basic manufacturing processes during the production of a quality product
- 3.6 explain and demonstrate various ways of packaging/promoting and selling a product
- 3.7 define acceptable tolerances for manufacturing
- 3.8 resolve conflicting demands to produce an optimum solution
- 3.9 develop and implement plans for the packaging, promotion, and sale of at least one product
- 3.10 explain that goods may be designed to be produced singly or in quantity and that this affects what each item costs
- 3.11 devise methods of production that show a comprehensive understanding of tools, materials, equipment, and processes

#### Unit 4: Product Analysis

- 4.1 analyze and evaluate products produced by different methods of manufacturing such as handcrafted, custom, mass, CIM, etc.
- 4.2 apply critical thinking skills for developing and evaluating ideas
- 4.3 define the conceptual framework associated with the design problem-solving process
- 4.4 demonstrate the application of the design problem-solving process during the production of numerous products
- 4.5 control quality effectively during the production of a product
- 4.6 perform regular tasks on a manufactured product
- 4.7 be aware that the appearances of products and their relationship to their environment is important to the consumer
- 4.8 use techniques, processes, and resources creatively to achieve a high-quality product that matches the specifications

#### Unit 5: Construction Production

- 5.1 identify the features relevant to small- and large-scale construction production projects
- 5.2 design, plan, and complete a custom production project
- 5.3 identify and use the materials, tools, machines, and techniques used in construction production
- 5.4 overcome obstacles when making by applying knowledge of materials components, tools, equipment, and processes to change working practice

#### Unit 6: Computers and Manufacturing

- 6.1 describe and demonstrate the basic operation of a computer
- 6.2 demonstrate and use a computer to support production manufacturing in a variety of ways as follows: – for the management of production – for research and development – to assist the

promotion and sale of a product – for planning production – for the control of manufacturing/production

6.3 save, restore, and print products of computer applications listed above

Unit 7: Future Production and Careers

7.1 identify and distinguish the advantages and disadvantages of new materials for use in production technology

7.2 describe and discuss the impact of production on resources available, the environment, and human beings

7.3 display and develop the personal qualities and attitudes beneficial to careers in the production and job applications

7.4 identify the careers available in the area of production technology

7.5 work as a member of a team in a production enterprise