Main Criteria: Forward Education

Secondary Criteria: Alberta Programs of Study, British Columbia Curriculum, Manitoba Curriculum Frameworks, New Brunswick Curriculum, Newfoundland and Labrador Curriculum Guides, Northern Territory Curriculum, Nova Scotia Curriculum, The Ontario Curriculum, Prince Edward Island Curriculum, Québec Education Program Progression of Learning, Programme de formation de l'école québécoise - Progression des apprentissages, Saskatchewan Curriculum

Subjects: Mathematics, Science, Technology Education

Grades: 7, 8, Key Stage 3

Forward Education

Smart Farming with Hydroponics & LED Grow Lights

Alberta Programs of Study
Mathematics
Grade **7** - Adopted: **2007/Updated 2016**

GENERAL OUTCOME / COURSE	AB.MP.	Mathematical Processes
GENERAL OUTCOME / SPECIFIC OUTCOME	[PS]	Problem Solving: Students are expected to develop and apply new mathematical knowledge through problem solving
GENERAL OUTCOME / SPECIFIC OUTCOME	[R]	Reasoning: Students are expected to develop mathematical reasoning
GENERAL OUTCOME / SPECIFIC OUTCOME	[V]	Visualization: Students are expected to develop visualization skills to assist in processing information, making connections and solving problems.

GENERAL OUTCOME / COURSE	AB.7.1.	NUMBER
GENERAL OUTCOME / SPECIFIC OUTCOME		Develop number sense.
SPECIFIC OUTCOME / ILLUSTRATIVE EXAMPLE	7.1.2.	Demonstrate an understanding of the addition, subtraction, multiplication and division of decimals to solve problems (for more than 1-digit divisors or 2-digit multipliers, the use of technology is expected). [ME, PS, T] [ICT: P2–3.4]

GENERAL OUTCOME / COURSE	AB.7.2.	PATTERNS AND RELATIONS
GENERAL OUTCOME / SPECIFIC OUTCOME		(Variables and Equations): Represent algebraic expressions in multiple ways.
SPECIFIC OUTCOME / ILLUSTRATIVE EXAMPLE	7.2.3.	Demonstrate an understanding of preservation of equality by: modelling preservation of equality, concretely, pictorially and symbolically; applying preservation of equality to solve equations. [C, CN, PS, R, V]

| SPECIFIC OUTCOME / ILLUSTRATIVE EXAMPLE | 7.2.7. | Model and solve, concretely, pictorially and symbolically, problems that can be represented by linear equations of the form: $ax + b = c$; $ax = b$; $x/a = b$, $a \neq 0$ where a, b and c are whole numbers. [CN, PS, R, V] |

Alberta Programs of Study
Mathematics
Grade **8** - Adopted: **2007/Updated 2016**

GENERAL OUTCOME / COURSE	AB.MP.	Mathematical Processes
GENERAL OUTCOME / SPECIFIC OUTCOME	[PS]	Problem Solving: Students are expected to develop and apply new mathematical knowledge through problem solving
GENERAL OUTCOME / SPECIFIC OUTCOME	[R]	Reasoning: Students are expected to develop mathematical reasoning
GENERAL OUTCOME / SPECIFIC OUTCOME	[V]	Visualization: Students are expected to develop visualization skills to assist in processing information, making connections and solving problems.

GENERAL OUTCOME / COURSE	AB.8.2.	PATTERNS AND RELATIONS
GENERAL OUTCOME / SPECIFIC OUTCOME		(Patterns): Use patterns to describe the world and to solve problems.
SPECIFIC OUTCOME / ILLUSTRATIVE EXAMPLE	8.2.1.	Graph and analyze two-variable linear relations. [C, ME, PS, R, T, V] [ICT: P2–3.3]

GENERAL OUTCOME / COURSE	AB.8.2.	PATTERNS AND RELATIONS
GENERAL OUTCOME / SPECIFIC OUTCOME		(Variables and Equations): Represent algebraic expressions in multiple ways.
SPECIFIC OUTCOME / ILLUSTRATIVE EXAMPLE	8.2.2.	Model and solve problems concretely, pictorially and symbolically, using linear equations of the form: $ax = b$; $a/x = b$, $a \neq 0$; $ax + b = c$; $x/a + b = c$, $a \neq 0$; $a(x + b) = c$ where a, b and c are integers. [C, CN, PS, V]

Grade **8** - Adopted: **2006/Revised 2009**

GENERAL OUTCOME / COURSE	AB1.8.1.	Number (Number Concepts and Number Operations)

GENERAL OUTCOME / SPECIFIC OUTCOME		**Students will: estimate and solve number problems in everyday home, workplace and community contexts, using technology as appropriate; develop and demonstrate number sense to describe quantities, represent numbers in multiple ways and apply appropriate arithmetic operations; assess the reasonableness of calculations and problem-solving strategies; communicate mathematically and investigate the application of number concepts and operations in a variety of career and workplace situations, working individually or as members of a team.**
SPECIFIC OUTCOME / ILLUSTRATIVE EXAMPLE		**General Outcome – Students will: demonstrate a number sense for whole numbers, common fractions, decimals and percents and apply arithmetic operations to solve problems with whole numbers, fractions, decimals and percents in everyday contexts.**
ILLUSTRATIVE EXAMPLE		**Specific Outcomes – Students will:**
EXPECTATION	8.1.7.	estimate and apply arithmetic operations to whole numbers and decimals to the hundredths in everyday contexts [CN, E, PS, R]
EXPECTATION	8.1.10.	estimate and apply arithmetic operations to decimals to the hundredths concretely, pictorially and symbolically to solve problems in everyday contexts [C, CN, E, PS, R, T, V]

GENERAL OUTCOME / COURSE	**AB1.8.2.**	**Patterns and Relations**
GENERAL OUTCOME / SPECIFIC OUTCOME		**(Variables and Equations) – Students will: represent algebraic equations in multiple ways to solve everyday problems, using technology as appropriate; communicate mathematically and investigate the application of variables and equations in a variety of career and workplace situations, working individually or as members of a team.**
SPECIFIC OUTCOME / ILLUSTRATIVE EXAMPLE		**General Outcome – Students will: use informal and concrete representations of equality and operations to solve problems in everyday contexts.**
ILLUSTRATIVE EXAMPLE		**Specific Outcomes – Students will:**
EXPECTATION	8.2.5.	use pre-algebra strategies to solve equations with one unknown and with whole numbers [PS, R]

Alberta Programs of Study
Science
Grade **7** - Adopted: **2014**

GENERAL OUTCOME / COURSE	**AB.7.A.**	**Unit A: Interactions and Ecosystems (Social and Environmental Emphasis)**
GENERAL OUTCOME / SPECIFIC OUTCOME	**7.A.STS.**	**Outcomes for Science, Technology and Society (STS) and Knowledge - Students will:**
SPECIFIC OUTCOME / ILLUSTRATIVE EXAMPLE	**7.A.STS .1.**	**Investigate and describe relationships between humans and their environments, and identify related issues and scientific questions**
ILLUSTRATIVE EXAMPLE	7.A.STS.1 .4.	Analyze personal and public decisions that involve consideration of environmental impacts, and identify needs for scientific knowledge that can inform those decisions

GENERAL OUTCOME / COURSE	**AB.7.B.**	**Unit B: Plants for Food and Fibre (Science and Technology Emphasis)**
GENERAL OUTCOME / SPECIFIC OUTCOME	**7.B.STS.**	**Outcomes for Science, Technology and Society (STS) and Knowledge - Students will:**

SPECIFIC OUTCOME / ILLUSTRATIVE EXAMPLE	**7.B.STS .1.**	**Investigate plant uses; and identify links among needs, technologies, products and impacts**
ILLUSTRATIVE EXAMPLE	7.B.STS.1 .2.	Describe human uses of plants as sources of food and raw materials, and give examples of other uses (e.g., identify uses of plants as herbs or medicines; describe plant products, and identify plant sources on which they depend)
ILLUSTRATIVE EXAMPLE	7.B.STS.1 .3.	Investigate trends in land use from natural environments (e.g., forests, grasslands) to managed environments (e.g., farms, gardens, greenhouses) and describe changes
ILLUSTRATIVE EXAMPLE	7.B.STS.1 .4.	Investigate practical problems and issues in maintaining productive plants within sustainable environments, and identify questions for further study (e.g., investigate the long-term effects of irrigation practices or fertilizer use)
GENERAL OUTCOME / COURSE	**AB.7.B.**	**Unit B: Plants for Food and Fibre (Science and Technology Emphasis)**
GENERAL OUTCOME / SPECIFIC OUTCOME	**7.B.STS.**	**Outcomes for Science, Technology and Society (STS) and Knowledge - Students will:**
SPECIFIC OUTCOME / ILLUSTRATIVE EXAMPLE	**7.B.STS .2.**	**Investigate life processes and structures of plants, and interpret related characteristics and needs of plants in a local environment**
ILLUSTRATIVE EXAMPLE	7.B.STS.2 .3.	Investigate and interpret variations in needs of different plants and their tolerance for different growing conditions (e.g., tolerance for drought, soil salinization or short growing seasons)
GENERAL OUTCOME / COURSE	**AB.7.B.**	**Unit B: Plants for Food and Fibre (Science and Technology Emphasis)**
GENERAL OUTCOME / SPECIFIC OUTCOME	**7.B.STS.**	**Outcomes for Science, Technology and Society (STS) and Knowledge - Students will:**
SPECIFIC OUTCOME / ILLUSTRATIVE EXAMPLE	**7.B.STS .4.**	**Identify and interpret relationships among human needs, technologies, environments, and the culture and use of living things as sources of food and fibre**
ILLUSTRATIVE EXAMPLE	7.B.STS.4 .2.	Investigate and identify intended and unintended consequences of environmental management practices (e.g., identify problems arising from monocultural land use in agricultural and forestry practices, such as susceptibility to insect infestation or loss of diversity)
GENERAL OUTCOME / COURSE	**AB.7.B.**	**Unit B: Plants for Food and Fibre (Science and Technology Emphasis)**
GENERAL OUTCOME / SPECIFIC OUTCOME	**7.B.SO.**	**Skill Outcomes (focus on problem solving)**
SPECIFIC OUTCOME / ILLUSTRATIVE EXAMPLE	**7.B.SO.I P.**	**Initiating and Planning - Students will:**
ILLUSTRATIVE EXAMPLE	**7.B.SO.I P.1.**	**Ask questions about the relationships between and among observable variables, and plan investigations to address those questions**
EXPECTATION	7.B.SO.IP .1.1.	Define practical problems (e.g., identify problems in growing plants under dry conditions)

GENERAL OUTCOME / COURSE	AB.7.B.	Unit B: Plants for Food and Fibre (Science and Technology Emphasis)
GENERAL OUTCOME / SPECIFIC OUTCOME	7.B.SO.	Skill Outcomes (focus on problem solving)
SPECIFIC OUTCOME / ILLUSTRATIVE EXAMPLE	7.B.SO. AI.	Analyzing and Interpreting - Students will:
ILLUSTRATIVE EXAMPLE	7.B.SO. AI.1.	Analyze qualitative and quantitative data, and develop and assess possible explanations
EXPECTATION	7.B.SO.AI .1.1.	Identify strengths and weaknesses of different methods of collecting and displaying data (e.g., compare two different ways to measure the amount of moisture in soil; evaluate different ways of presenting data on the health and growth of plants)

Alberta Programs of Study
Science
Grade **8** - Adopted: **2014**

GENERAL OUTCOME / COURSE	AB.8.E.	Unit E: Freshwater and Saltwater Systems (Social and Environmental Emphasis)
GENERAL OUTCOME / SPECIFIC OUTCOME	8.E.STS.	Outcomes for Science, Technology and Society (STS) and Knowledge - Students will:
SPECIFIC OUTCOME / ILLUSTRATIVE EXAMPLE	8.E.STS .4.	Analyze human impacts on aquatic systems; and identify the roles of science and technology in addressing related questions, problems and issues
ILLUSTRATIVE EXAMPLE	8.E.STS.4 .1.	Analyze human water uses, and identify the nature and scope of impacts resulting from different uses (e.g., identify pollutants in ground water and surface water systems resulting from domestic and industrial use; analyze the effects of agriculture and forestry practices on stream flow and water quality)
ILLUSTRATIVE EXAMPLE	8.E.STS.4 .2.	Identify current practices and technologies that affect water quality, evaluate environmental costs and benefits, and identify and evaluate alternatives (e.g., research and analyze alternatives for ensuring safe supplies of potable water; research, analyze and debate alternatives for a specific water quality issue, such as the location and design of a landfill, the protection of a natural waterway, the use of secondary and tertiary wastewater treatment, the salinization of soils due to irrigation, the eutrophication of ponds and streams due to excess use of phosphates in fertilizers and detergents, or a proposal to export water resources)
ILLUSTRATIVE EXAMPLE	8.E.STS.4 .3.	Illustrate the role of scientific research in monitoring environments and supporting development of appropriate environmental technologies (e.g., describe a local example of aquatic monitoring, and describe how this research contributes to watershed management)

British Columbia Curriculum
Mathematics
Grade **7** - Adopted: **2016**

CURRICULUM ORGANIZER / COURSE	BC.MA.7. BI.	Big Ideas

PRESCRIBED LEARNING OUTCOME / ORGANIZER	7.BI.2.	Computational fluency and flexibility with numbers extend to operations with integers and decimals.
PRESCRIBED LEARNING OUTCOME / ORGANIZER	7.BI.3.	Linear relations can be represented in many connected ways to identify regularities and make generalizations.

CURRICULUM ORGANIZER / COURSE	BC.MA.7. CC.	Curricular Competencies
PRESCRIBED LEARNING OUTCOME / ORGANIZER		Students are expected to be able to do the following:
EXPECTATION / SUB ORGANIZER	7.CC.1.	Reasoning and analyzing

PRESCRIBED LEARNING OUTCOME	7.CC.1.1.	Use logic and patterns to solve puzzles and play games
PRESCRIBED LEARNING OUTCOME	7.CC.1.2.	Use reasoning and logic to explore, analyze, and apply mathematical ideas
PRESCRIBED LEARNING OUTCOME	7.CC.1.6.	Model mathematics in contextualized experiences

CURRICULUM ORGANIZER / COURSE	BC.MA.7. CC.	Curricular Competencies
PRESCRIBED LEARNING OUTCOME / ORGANIZER		Students are expected to be able to do the following:
EXPECTATION / SUB ORGANIZER	7.CC.2.	Understanding and solving

PRESCRIBED LEARNING OUTCOME	7.CC.2.1.	Apply multiple strategies to solve problems in both abstract and contextualized situations
PRESCRIBED LEARNING OUTCOME	7.CC.2.2.	Develop, demonstrate, and apply mathematical understanding through play, inquiry, and problem solving
PRESCRIBED LEARNING OUTCOME	7.CC.2.3.	Visualize to explore mathematical concepts

PRESCRIBED LEARNING OUTCOME	7.CC.2.4.	Engage in problem-solving experiences that are connected to place, story, cultural practices, and perspectives relevant to local First Peoples communities, the local community, and other cultures

CURRICULUM ORGANIZER / COURSE	BC.MA.7. CC.	Curricular Competencies
PRESCRIBED LEARNING OUTCOME / ORGANIZER		Students are expected to be able to do the following:
EXPECTATION / SUB ORGANIZER	7.CC.3.	Communicating and representing

PRESCRIBED LEARNING OUTCOME	7.CC.3.2.	Explain and justify mathematical ideas and decisions

PRESCRIBED LEARNING OUTCOME	7.CC.3.3.	Communicate mathematical thinking in many ways

CURRICULUM ORGANIZER / COURSE	BC.MA.7. CC.	Curricular Competencies
PRESCRIBED LEARNING OUTCOME / ORGANIZER		Students are expected to be able to do the following:
EXPECTATION / SUB ORGANIZER	7.CC.4.	Connecting and reflecting

PRESCRIBED LEARNING OUTCOME	7.CC.4.1.	Reflect on mathematical thinking

PRESCRIBED LEARNING OUTCOME	7.CC.4.2.	Connect mathematical concepts to each other and to other areas and personal interests

CURRICULUM ORGANIZER / COURSE	BC.MA.7. C.	Content
PRESCRIBED LEARNING OUTCOME / ORGANIZER		Students are expected to know the following:
EXPECTATION / SUB ORGANIZER	7.C.6.	Two-step equations with whole-number coefficients, constants, and solutions

CURRICULUM ORGANIZER / COURSE	BC.MA.8. CC.	Curricular Competencies
PRESCRIBED LEARNING OUTCOME / ORGANIZER		Students are expected to be able to do the following:
EXPECTATION / SUB ORGANIZER	8.CC.1.	Reasoning and analyzing
PRESCRIBED LEARNING OUTCOME	8.CC.1.1.	Use logic and patterns to solve puzzles and play games
PRESCRIBED LEARNING OUTCOME	8.CC.1.2.	Use reasoning and logic to explore, analyze, and apply mathematical ideas
PRESCRIBED LEARNING OUTCOME	8.CC.1.6.	Model mathematics in contextualized experiences

CURRICULUM ORGANIZER / COURSE	BC.MA.8. CC.	Curricular Competencies
PRESCRIBED LEARNING OUTCOME / ORGANIZER		Students are expected to be able to do the following:
EXPECTATION / SUB ORGANIZER	8.CC.2.	Understanding and solving
PRESCRIBED LEARNING OUTCOME	8.CC.2.1.	Apply multiple strategies to solve problems in both abstract and contextualized situations
PRESCRIBED LEARNING OUTCOME	8.CC.2.2.	Develop, demonstrate, and apply mathematical understanding through play, inquiry, and problem solving
PRESCRIBED LEARNING OUTCOME	8.CC.2.3.	Visualize to explore mathematical concepts
PRESCRIBED LEARNING OUTCOME	8.CC.2.4.	Engage in problem-solving experiences that are connected to place, story, cultural practices, and perspectives relevant to local First Peoples communities, the local community, and other cultures

CURRICULUM ORGANIZER / COURSE	BC.MA.8. CC.	Curricular Competencies
PRESCRIBED LEARNING OUTCOME / ORGANIZER		Students are expected to be able to do the following:

EXPECTATION / SUB ORGANIZER	8.CC.3.	Communicating and representing

PRESCRIBED LEARNING OUTCOME	8.CC.3.2.	Explain and justify mathematical ideas and decisions

PRESCRIBED LEARNING OUTCOME	8.CC.3.3.	Communicate mathematical thinking in many ways

CURRICULUM ORGANIZER / COURSE	BC.MA.8.CC.	Curricular Competencies
PRESCRIBED LEARNING OUTCOME / ORGANIZER		Students are expected to be able to do the following:
EXPECTATION / SUB ORGANIZER	8.CC.4.	Connecting and reflecting

PRESCRIBED LEARNING OUTCOME	8.CC.4.1.	Reflect on mathematical thinking

PRESCRIBED LEARNING OUTCOME	8.CC.4.2.	Connect mathematical concepts to each other and to other areas and personal interests

CURRICULUM ORGANIZER / COURSE	BC.MA.8.C.	Content
PRESCRIBED LEARNING OUTCOME / ORGANIZER		Students are expected to know the following:
EXPECTATION / SUB ORGANIZER	8.C.8.	Two-step equations with integer coefficients, constants, and solutions

British Columbia Curriculum
Science
Grade **7** - Adopted: **2016**

CURRICULUM ORGANIZER / COURSE	BC.SC.7.CC.	Curricular Competencies
PRESCRIBED LEARNING OUTCOME / ORGANIZER		Students are expected to be able to do the following
EXPECTATION / SUB ORGANIZER	7.CC.5.	Applying and innovating

PRESCRIBED LEARNING OUTCOME	7.CC.5.1.	Contribute to care for self, others, community, and world through personal or collaborative approaches

PRESCRIBED LEARNING OUTCOME	7.CC.5.3.	Transfer and apply learning to new situations

CURRICULUM ORGANIZER / COURSE	BC.SC.7. CC.	Curricular Competencies
PRESCRIBED LEARNING OUTCOME / ORGANIZER		Students are expected to be able to do the following
EXPECTATION / SUB ORGANIZER	7.CC.6.	Communicating

PRESCRIBED LEARNING OUTCOME	7.CC.6.1.	Communicate ideas, findings, and solutions to problems, using scientific language, representations, and digital technologies as appropriate

British Columbia Curriculum
Science
Grade **8** - Adopted: **2016**

CURRICULUM ORGANIZER / COURSE	BC.SC.8. CC.	Curricular Competencies
PRESCRIBED LEARNING OUTCOME / ORGANIZER		Students are expected to be able to do the following:
EXPECTATION / SUB ORGANIZER	8.CC.5.	Applying and innovating

PRESCRIBED LEARNING OUTCOME	8.CC.5.1.	Contribute to care for self, others, community, and world through personal or collaborative approaches

PRESCRIBED LEARNING OUTCOME	8.CC.5.3.	Transfer and apply learning to new situations

CURRICULUM ORGANIZER / COURSE	BC.SC.8. CC.	Curricular Competencies
PRESCRIBED LEARNING OUTCOME / ORGANIZER		Students are expected to be able to do the following:
EXPECTATION / SUB ORGANIZER	8.CC.6.	Communicating

PRESCRIBED LEARNING OUTCOME	8.CC.6.1.	Communicate ideas, findings, and solutions to problems, using scientific language, representations, and digital technologies as appropriate

Manitoba Curriculum Frameworks
Mathematics
Grade **7** - Adopted: **2013**

STRAND / COURSE / GENERAL OUTCOME	MB.7.N.	**Number**
STRAND / SPECIFIC OUTCOME		**Develop number sense.**
GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	**7.N.2.**	**Demonstrate an understanding of the addition, subtraction, multiplication, and division of decimals to solve problems (for more than 1-digit divisors or 2-digit multipliers, technology could be used). [ME, PS, T]**

SPECIFIC OUTCOME / ACHIEVEMENT INDICATOR	7.N.2.1.	Solve a problem involving the addition of two or more decimal numbers.

STRAND / COURSE / GENERAL OUTCOME	MB.7.PR.	**Patterns and Relations**
STRAND / SPECIFIC OUTCOME		**(Variables and Equations) Represent algebraic expressions in multiple ways.**
GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	**7.PR.7.**	**Model and solve problems that can be represented by linear equations of the form: $ax + b = c$; $ax = b$; $x/a = b$, $a \neq 0$ concretely, pictorially, and symbolically, where a, b, and c, are whole numbers. [CN, PS, R, V]**

SPECIFIC OUTCOME / ACHIEVEMENT INDICATOR	7.PR.7.3.	Solve a problem using a linear equation and record the process.

SPECIFIC OUTCOME / ACHIEVEMENT INDICATOR	7.PR.7.4.	Verify the solution to a linear equation using concrete materials or diagrams.

SPECIFIC OUTCOME / ACHIEVEMENT INDICATOR	7.PR.7.5.	Substitute a possible solution for the variable in a linear equation to verify the equality.

Manitoba Curriculum Frameworks
Mathematics
Grade **8** - Adopted: **2013**

STRAND / COURSE / GENERAL OUTCOME	MB.8.PR.	**Patterns and Relations**

STRAND / SPECIFIC OUTCOME		(Variables and Equations) Represent algebraic expressions in multiple ways.
GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	8.PR.2.	Model and solve problems using linear equations of the form: ax = b; x/a = b, a ≠ 0; ax + b = c; x/a + b = c, a ≠ 0; a(x + b) = c concretely, pictorially, and symbolically, where a, b, and c, are integers. [C, CN, PS, V]
SPECIFIC OUTCOME / ACHIEVEMENT INDICATOR	8.PR.2.2.	Verify the solution to a linear equation using a variety of methods, including concrete materials, diagrams, and substitution.
SPECIFIC OUTCOME / ACHIEVEMENT INDICATOR	8.PR.2.3.	Draw a visual representation of the steps used to solve a linear equation, and record each step symbolically.
SPECIFIC OUTCOME / ACHIEVEMENT INDICATOR	8.PR.2.4.	Solve a linear equation symbolically.
SPECIFIC OUTCOME / ACHIEVEMENT INDICATOR	8.PR.2.5.	Identify and correct errors in an incorrect solution of a linear equation.
SPECIFIC OUTCOME / ACHIEVEMENT INDICATOR	8.PR.2.7.	Solve a problem using a linear equation, and record the process.

Manitoba Curriculum Frameworks
Science
Grade **7** - Adopted: **2006**

STRAND / COURSE / GENERAL OUTCOME	MB.GLO-A.	Foundation A: Nature of Science and Technology
STRAND / SPECIFIC OUTCOME	GLO-A3.	Distinguish critically between science and technology in terms of their respective contexts, goals, methods, products, and values

STRAND / COURSE / GENERAL OUTCOME	MB.GLO-B.	Foundation B: Science, Technology, Society, and Environment (STSE)
STRAND / SPECIFIC OUTCOME	GLO-B1.	Describe scientific and technological developments, past and present, and appreciate their impact on individuals, societies and the environment, both locally and globally.
STRAND / SPECIFIC OUTCOME	GLO-B2.	Recognize that scientific and technological endeavors have been and continue to be influenced by human needs and the societal context of the time

STRAND / SPECIFIC OUTCOME	GLO-B5.	Identify and demonstrate actions that promote a sustainable environment, society and economy, both locally and globally
STRAND / COURSE / GENERAL OUTCOME	**MB.GLO-C.**	**Foundation C: Scientific and Technological Skills and Attitudes**
STRAND / SPECIFIC OUTCOME	GLO-C6.	Employ effective communication skills and utilize information technology to gather and share scientific and technological ideas and data
STRAND / COURSE / GENERAL OUTCOME	**MB.7-0.**	**Overall Skills and Attitudes - Specific Learning Outcomes**
STRAND / SPECIFIC OUTCOME	**7-0-8.**	**Reflecting on Science and Technology**
GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	7-0-8b.	Describe examples of how scientific knowledge has evolved in light of new evidence, and the role of technology in this evolution. (GLO: A2, A5, B1)
GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	7-0-8d.	Describe examples of how technologies have evolved over time in response to changing needs and scientific advances. (GLO: A5, B1, B2)
STRAND / COURSE / GENERAL OUTCOME	**MB.7-0.**	**Overall Skills and Attitudes - Specific Learning Outcomes**
STRAND / SPECIFIC OUTCOME	**7-0-9.**	**Demonstrating Scientific and Technological Attitudes**
GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	7-0-9e.	Be sensitive and responsible in maintaining a balance between the needs of humans and a sustainable environment. (GLO: B5)
STRAND / COURSE / GENERAL OUTCOME	**MB.7-1.**	**Interactions Within Ecosystems - Specific Learning Outcomes**
STRAND / SPECIFIC OUTCOME	7-1-06.	Identify environmental, social, and economic factors that should be considered in the management and preservation of ecosystems. (GLO: B1, B5, D2, E2)
STRAND / SPECIFIC OUTCOME	7-1-07.	Propose a course of action to protect the habitat of a particular organism within an ecosystem. (GLO: B5, C3, D2, E2)

STRAND / COURSE / GENERAL OUTCOME	MB.GLO-A.	**Foundation A: Nature of Science and Technology**
STRAND / SPECIFIC OUTCOME	GLO-A3.	Distinguish critically between science and technology in terms of their respective contexts, goals, methods, products, and values
STRAND / COURSE / GENERAL OUTCOME	MB.GLO-B.	**Foundation B: Science, Technology, Society, and Environment (STSE)**
STRAND / SPECIFIC OUTCOME	GLO-B1.	Describe scientific and technological developments, past and present, and appreciate their impact on individuals, societies and the environment, both locally and globally.
STRAND / SPECIFIC OUTCOME	GLO-B2.	Recognize that scientific and technological endeavors have been and continue to be influenced by human needs and the societal context of the time
STRAND / SPECIFIC OUTCOME	GLO-B5.	Identify and demonstrate actions that promote a sustainable environment, society and economy, both locally and globally
STRAND / COURSE / GENERAL OUTCOME	MB.GLO-C.	**Foundation C: Scientific and Technological Skills and Attitudes**
STRAND / SPECIFIC OUTCOME	GLO-C6.	Employ effective communication skills and utilize information technology to gather and share scientific and technological ideas and data
STRAND / COURSE / GENERAL OUTCOME	MB.8-0.	**Overall Skills and Attitudes - Specific Learning Outcomes**
STRAND / SPECIFIC OUTCOME	8-0-8.	**Reflecting on Science and Technology**
GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	8-0-8b.	Describe examples of how scientific knowledge has evolved in light of new evidence, and the role of technology in this evolution. (GLO: A2, A5, B1)
GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	8-0-8d.	Describe examples of how technologies have evolved over time in response to changing needs and scientific advances. (GLO: A5, B1, B2)

STRAND / COURSE / GENERAL OUTCOME	MB.8-0.	Overall Skills and Attitudes - Specific Learning Outcomes
STRAND / SPECIFIC OUTCOME	8-0-9.	Demonstrating Scientific and Technological Attitudes
GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	8-0-9e.	Be sensitive and responsible in maintaining a balance between the needs of humans and a sustainable environment. (GLO: B5)

New Brunswick Curriculum
Mathematics
Grade **7** - Adopted: **2008**

DOCUMENT/GENERAL LEARNING OUTCOME		Grade 7
CATEGORY		MATHEMATICAL PROCESSES
SECTION/SPECIFIC LEARNING OUTCOME	C.	communicate in order to learn and express their understanding of mathematics (Communications: C)
SECTION/SPECIFIC LEARNING OUTCOME	PS.	develop and apply new mathematical knowledge through problem solving (Problem Solving: PS)
SECTION/SPECIFIC LEARNING OUTCOME	R.	develop mathematical reasoning (Reasoning: R)
SECTION/SPECIFIC LEARNING OUTCOME	V.	develop visualization skills to assist in processing information, making connections and solving problems (Visualization: V).

DOCUMENT/GENERAL LEARNING OUTCOME		Grade 7
CATEGORY	N.	Number (N): Develop number sense
SECTION/SPECIFIC LEARNING OUTCOME	N2.	Demonstrate an understanding of the addition, subtraction, multiplication and division of decimals (for more than 1-digit divisors or 2-digit multipliers, the use of technology is expected) to solve problems. [ME, PS, T]

DOCUMENT/GENERAL LEARNING OUTCOME		Grade 7
CATEGORY	PR.	Patterns & Relations (PR): Use patterns to describe the world and solve problems
SECTION/SPECIFIC LEARNING OUTCOME	PR2.	Create a table of values from a linear relation, graph the table of values, and analyze the graph to draw conclusions and solve problems. [C, CN, R, V]

DOCUMENT/GENERAL LEARNING OUTCOME		Grade 7
CATEGORY	PR.	Patterns & Relations (PR): Represent algebraic expressions in multiple ways
SECTION/SPECIFIC LEARNING OUTCOME	PR7.	Model and solve problems that can be represented by linear equations of the form: ax + b = c; ax = b; x/a = b, a ≠ 0 concretely, pictorially and symbolically, where a, b and c are whole numbers. [CN, PS, R, V]

New Brunswick Curriculum
Mathematics
Grade **8** - Adopted: **2009**

DOCUMENT/GENERAL LEARNING OUTCOME		Grade 8
CATEGORY		MATHEMATICAL PROCESSES
SECTION/SPECIFIC LEARNING OUTCOME	C.	communicate in order to learn and express their understanding of mathematics (Communications: C)
SECTION/SPECIFIC LEARNING OUTCOME	PS.	develop and apply new mathematical knowledge through problem solving (Problem Solving: PS)
SECTION/SPECIFIC LEARNING OUTCOME	R.	develop mathematical reasoning (Reasoning: R)
SECTION/SPECIFIC LEARNING OUTCOME	V.	develop visualization skills to assist in processing information, making connections and solving problems (Visualization: V).

DOCUMENT/GENERAL LEARNING OUTCOME		Grade 8
CATEGORY	PR.	Patterns & Relations (PR): Represent algebraic expressions in multiple ways
SECTION/SPECIFIC LEARNING OUTCOME	PR2.	Model and solve problems using linear equations of the form: ax = b; x/a = b , a ≠ 0; ax + b = c; x/a + b = c a ≠ 0; a(x + b) = c concretely, pictorially and symbolically, where a, band c are integers. [C, CN, PS, V]

New Brunswick Curriculum
Science
Grade **7** - Adopted: **2002**

DOCUMENT/GENERAL LEARNING OUTCOME		Atlantic Canada Science Curriculum (Specific curriculum outcomes)
CATEGORY		Science 7 Curriculum
SECTION/SPECIFIC LEARNING OUTCOME		LIFE SCIENCE – Unit 1: Interactions within Ecosystems

UNIT/SPECIFIC LEARNING OUTCOME		Decomposers
SPECIFIC LEARNING OUTCOME		describe conditions essential to the growth and reproduction of plants and microorganisms in an ecosystem, and relate these conditions to various aspects of the human food supply: air, temperature, light, moisture (304-3)

DOCUMENT/GENERAL LEARNING OUTCOME		Atlantic Canada Science Curriculum (Specific curriculum outcomes)
CATEGORY		Science 7 Curriculum
SECTION/SPECIFIC LEARNING OUTCOME		LIFE SCIENCE – Unit 1: Interactions within Ecosystems
UNIT/SPECIFIC LEARNING OUTCOME		Action
SPECIFIC LEARNING OUTCOME		propose and defend a course of action to protect the local habitat of a particular organism (113-11, 211-5)

Newfoundland and Labrador Curriculum Guides
Mathematics
Grade **7** - Adopted: **2013**

COURSE / STRAND	NL.7N.	Number
STRAND / GCO		Number: Develop number sense.
GCO / SCO	7N2.	Demonstrate an understanding of the addition, subtraction, multiplication and division of decimals to solve problems (for more than 1-digit divisors or 2-digit multipliers, the use of technology is expected). [ME, PS, T]
OUTCOME / INDICATOR	7N2.1.	Solve a given problem involving the addition of two or more decimal numbers.
OUTCOME / INDICATOR	7N2.4.	Solve a given problem involving the multiplication of decimal numbers with two digit multipliers (whole numbers or decimals) without the use of technology.
OUTCOME / INDICATOR	7N2.6.	Solve a given problem involving the multiplication or division of decimal numbers with more than 2-digit multipliers or 1-digit divisors (whole numbers or decimals) with the use of technology.
OUTCOME / INDICATOR	7N2.7.	Solve a given problem involving the division of decimal numbers for 1-digit divisors (whole numbers or decimals) without the use of technology.
OUTCOME / INDICATOR	7N2.10.	Solve a given problem that involves operations on decimals (limited to thousandths), taking into consideration the order of operations.

COURSE / STRAND	NL.7PR.	Patterns and Relations
STRAND / GCO		Patterns: Use patterns to describe the world and to solve problems.
GCO / SCO	7PR1.	Demonstrate an understanding of oral and written patterns and their equivalent linear relations. [C, CN, R]

OUTCOME / INDICATOR	7PR1.2.	Provide a context for a given linear relation that represents a pattern.

COURSE / STRAND	NL.7PR.	Patterns and Relations
STRAND / GCO		Variables and Equations: Represent algebraic expressions in multiple ways.
GCO / SCO	7PR3.	Demonstrate an understanding of preservation of equality by: modelling preservation of equality, concretely, pictorially and symbolically; applying preservation of equality to solve equations. [C, CN, PS, R, V]

OUTCOME / INDICATOR	7PR3.3.	Solve a given problem by applying preservation of equality.

COURSE / STRAND	NL.7PR.	Patterns and Relations
STRAND / GCO		Variables and Equations: Represent algebraic expressions in multiple ways.
GCO / SCO	7PR6.	Model and solve, concretely, pictorially and symbolically, problems that can be represented by one-step linear equations of the form x + a = b, where a and b are integers. [CN, PS, R, V]

OUTCOME / INDICATOR	7PR6.2.	Draw a visual representation of the steps required to solve a given linear equation.

COURSE / STRAND	NL.7PR.	Patterns and Relations
STRAND / GCO		Variables and Equations: Represent algebraic expressions in multiple ways.
GCO / SCO	7PR7.	Model and solve, concretely, pictorially and symbolically, problems that can be represented by linear equations of the form: ax + b = c; ax - b = c; ax = b; x/a = b, a ≠ 0, where a, b and c are whole numbers. [CN, PS, R, V]

OUTCOME / INDICATOR	7PR7.3.	Draw a visual representation of the steps used to solve a given linear equation.

OUTCOME / INDICATOR	7PR7.4.	Solve a given problem, using a linear equation, and record the process.

Newfoundland and Labrador Curriculum Guides
Mathematics
Grade **8** - Adopted: **2015**

COURSE / STRAND	NL.8PR.	Patterns and Relations
STRAND / GCO		Variables and Equations: Represent algebraic expressions in multiple ways.
GCO / SCO	8PR2.	Model and solve problems using linear equations of the form: ax = b; x/a = b, a ≠ 0; ax + b = c; x/a + b = c, a ≠ 0; a(x+b) = c; where a, b, and c are integers.

OUTCOME / INDICATOR	8PR2.2.	Draw a visual representation of the steps used to solve a given linear equation and record each step symbolically.

OUTCOME / INDICATOR	8PR2.3.	Verify the solution to a given linear equation using a variety of methods, including concrete materials, diagrams and substitution.

OUTCOME / INDICATOR	8PR2.4.	Solve a given linear equation symbolically.

OUTCOME / INDICATOR	8PR2.6.	Identify and correct an error in a given incorrect solution of a linear equation.

Newfoundland and Labrador Curriculum Guides
Science
Grade **7** - Adopted: **2013**

COURSE / STRAND	NL.7.1.	Interactions Within Ecosystems
STRAND / GCO	7.1.2.	Components of an Ecosystem: Students will be expected to:

GCO / SCO	7.1.2.1.	Demonstrate the importance of choosing words that are scientifically appropriate. (109-12, 109-13)

COURSE / STRAND	NL.7.1.	Interactions Within Ecosystems
STRAND / GCO	7.1.6.	Environmental Action: Students will be expected to:

GCO / SCO	7.1.6.1.	Defend a course of action to protect the local habitat of a particular organism. (113-11)

COURSE / STRAND	NL.7.1.	Interactions Within Ecosystems
STRAND / GCO	7.1.6.	Environmental Action: Students will be expected to:
GCO / SCO	7.1.6.3.	Discuss the pros and cons of habitat conservation:
OUTCOME / INDICATOR	7.1.6.3.1 .	Pros

INDICATOR	7.1.6.3.1.i.	Sustainability of resource

INDICATOR	7.1.6.3.1.ii .	Preservation of biodiversity

INDICATOR	7.1.6.3.1.iii.	Eco-tourism

COURSE / STRAND	NL.7.1.	Interactions Within Ecosystems
STRAND / GCO	7.1.6.	Environmental Action: Students will be expected to:
GCO / SCO	7.1.6.3.	Discuss the pros and cons of habitat conservation:
OUTCOME / INDICATOR	7.1.6.3.2 .	Cons

INDICATOR	7.1.6.3.2.i.	Artificial habitats

INDICATOR	7.1.6.3.2.ii .	Economic loss (job loss, etc.)

INDICATOR	7.1.6.3.2.iii.	Limited human use

COURSE / STRAND	NL.7.1.	Interactions Within Ecosystems
STRAND / GCO	7.1.6.	Environmental Action: Students will be expected to:
GCO / SCO	7.1.6.4.	Recognize that a variety of groups and individuals are interested in protecting the environment. (112-4, 112-8)

Northern Territory Curriculum
Mathematics
Grade **7** - Adopted: **2015**

STRAND / DOMAIN	ACMNA.7.	Number and Algebra
OUTCOME / INDICATOR	ACMNA. 7.2.	Real numbers
INDICATOR	ACMNA. 7.2.3.	Multiply and divide fractions and decimals using efficient written strategies and digital technologies (ACMNA154)
INDICATOR	ACMNA.7 .2.3.1.	Investigating multiplication of fractions and decimals, using strategies including patterning and multiplication as repeated addition, with both concrete materials and digital technologies, and identifying the processes for division as the inverse of multiplication

STRAND / DOMAIN	ACMNA.7.	Number and Algebra
OUTCOME / INDICATOR	ACMNA. 7.5.	Linear and non-linear relationships
INDICATOR	ACMNA. 7.5.2.	Solve simple linear equations (ACMNA179)
INDICATOR	ACMNA.7 .5.2.1.	Solving equations using concrete materials, such as the balance model, and explain the need to do the same thing to each side of the equation using substitution to check solutions

Northern Territory Curriculum
Mathematics
Grade **8** - Adopted: **2015**

STRAND / DOMAIN	ACMNA.8.	Number and Algebra
OUTCOME / INDICATOR	ACMNA. 8.5.	Linear and non-linear relationships
INDICATOR	ACMNA. 8.5.1.	Plot linear relationships on the Cartesian plane with and without the use of digital technologies (ACMNA193)
INDICATOR	ACMNA. 8.5.1.1.	Completing a table of values, plotting the resulting points and determining whether the relationship is linear

Northern Territory Curriculum
Science
Grade **7** - Adopted: **2016**

STRAND / DOMAIN	ACSHE.7.	Science as a Human Endeavour
OUTCOME / INDICATOR	ACSHE. 7.1.	Nature and development of science
INDICATOR	ACSHE. 7.1.2.	Science knowledge can develop through collaboration across the disciplines of science and the contributions of people from a range of cultures (ACSHE223)

INDICATOR	ACSHE.7. 1.2.1.	Considering how water use and management relies on knowledge from different areas of science, and involves the application of technology

STRAND / DOMAIN	ACSHE.7.	Science as a Human Endeavour
OUTCOME / INDICATOR	ACSHE. 7.2.	Use and influence of science
INDICATOR	ACSHE. 7.2.1.	**Solutions to contemporary issues that are found using science and technology, may impact on other areas of society and may involve ethical considerations (ACSHE120)**

INDICATOR	ACSHE.7. 2.1.4.	Considering how human activity in the community can have positive and negative effects on the sustainability of ecosystems

STRAND / DOMAIN	ACSHE.7.	Science as a Human Endeavour
OUTCOME / INDICATOR	ACSHE. 7.2.	Use and influence of science
INDICATOR	ACSHE. 7.2.2.	**People use science understanding and skills in their occupations and these have influenced the development of practices in areas of human activity (ACSHE121)**

INDICATOR	ACSHE.7. 2.2.5.	Recognising that water management plays a role in areas such as farming, land management and gardening

Northern Territory Curriculum
Science
Grade **8** - Adopted: **2016**

STRAND / DOMAIN	ACSHE.8.	Science as a Human Endeavour
OUTCOME / INDICATOR	ACSHE. 8.2.	Use and influence of science
INDICATOR	ACSHE. 8.2.2.	**People use science understanding and skills in their occupations and these have influenced the development of practices in areas of human activity (ACSHE136)**

INDICATOR	ACSHE8 .2.2.1.	Describing how technologies have been applied to modern farming techniques to improve yields and sustainability

INDICATOR	ACSHE8 .2.2.3.	Describing the impact of plant cloning techniques (asexual production) in agriculture such as horticulture, fruit production and vineyards

Northern Territory Curriculum
Technology Education
Grade **7** - Adopted: **2016 (ACARA)**

STRAND / DOMAIN		Design and Technologies
OUTCOME / INDICATOR	ACTDEK .7-8.	Design and Technologies Knowledge and Understanding
INDICATOR	ACTDE K.7-8.3.	**Analyse how food and fibre are produced when designing managed environments and how these can become more sustainable (ACTDEK032)**

INDICATOR	ACTDEK. 7-8.3.2.	Investigating the management of plant and animal growth through natural means and with the use of chemical products like herbicides and medicines when producing food and fibre products

INDICATOR	ACTDEK. 7-8.3.3.	Recognising the need to increase food production using cost efficient, ethical and sustainable production techniques
INDICATOR	ACTDEK. 7-8.3.4.	Describing physical and chemical characteristics of soil and their effects on plant growth when producing food and fibre products
INDICATOR	ACTDEK. 7-8.3.5.	Investigating different animal feeding strategies such as grazing and supplementary feeding, and their effects on product quality, for example meat tenderness, wool fibre diameter (micron), milk fat and protein content when producing food and fibre products
INDICATOR	ACTDEK. 7-8.3.6.	Recognising the importance of food and fibre production to Australia's food security and economy including exports and imports to and from Asia when critiquing and exploring food and fibre production

STRAND / DOMAIN		Design and Technologies
OUTCOME / INDICATOR	ACTDEP .7-8.	Design and Technologies Processes and Production Skills
INDICATOR	ACTDE P.7-8.2.	**Generate, develop, test and communicate design ideas, plans and processes for various audiences using appropriate technical terms and technologies including graphical representation techniques (ACTDEP036)**
INDICATOR	ACTDEP. 7-8.2.1.	Using a variety of critical and creative thinking strategies such as brainstorming, sketching, 3-D modelling and experimenting to generate innovative design ideas
INDICATOR	ACTDEP. 7-8.2.2.	Considering which ideas to further explore and investigating the benefits and drawbacks of ideas, for example using digital polling to capture the views of different groups in the community
INDICATOR	ACTDEP. 7-8.2.3.	Identifying factors that may hinder or enhance project development, for example intercultural understanding
INDICATOR	ACTDEP. 7-8.2.4.	Developing models, prototypes or samples using a range of materials, tools and equipment to test the functionality of ideas
INDICATOR	ACTDEP. 7-8.2.5.	Producing annotated concept sketches and drawings, using: technical terms, scale, symbols, pictorial and aerial views to draw environments; production drawings, orthogonal drawings; patterns and templates to explain design ideas
INDICATOR	ACTDEP. 7-8.2.6.	Documenting and communicating the generation and development of design ideas for an intended audience, for example developing a digital portfolio with images and text which clearly communicates each step of a design process

STRAND / DOMAIN		Digital Technologies
OUTCOME / INDICATOR	ACTDIP. 7-8.	Digital Technologies Processes and Production Skills
INDICATOR	ACTDIP. 7-8.7.	**Design algorithms represented diagrammatically and in English, and trace algorithms to predict output for a given input and to identify errors (ACTDIP029)**
INDICATOR	ACTDIP.7 -8.7.2.	checking the accuracy of an algorithm before it is implemented, for example desk checking it with test data to see if the instructions produce the expected results
INDICATOR	ACTDIP.7 -8.7.4.	using structured English to express algorithmic instructions, for example using conventional statements such as 'while' and 'endwhile' in a 'while loop' when describing interactive instruction

STRAND / DOMAIN		Digital Technologies
OUTCOME / INDICATOR	ACTDIP. 7-8.	Digital Technologies Processes and Production Skills
INDICATOR	ACTDIP. 7-8.8.	Implement and modify programs with user interfaces involving branching, iteration and functions in a general-purpose programming language (ACTDIP030)
INDICATOR	ACTDIP.7 -8.8.1.	developing and modifying digital solutions by implementing instructions contained in algorithms through programs
INDICATOR	ACTDIP.7 -8.8.3.	programming a robot to recognise particular objects and to treat them differently, for example choose objects based on colour

STRAND / DOMAIN		Digital Technologies
OUTCOME / INDICATOR	ACTDIP. 7-8.	Digital Technologies Processes and Production Skills
INDICATOR	ACTDIP. 7-8.9.	Evaluate how student solutions and existing information systems meet needs, are innovative, and take account of future risks and sustainability (ACTDIP031)
INDICATOR	ACTDIP.7 -8.9.1.	comparing student solutions with existing solutions that solve similar problems, for example identifying differences in the user interface of two adventure games and explaining how these differences affect the usability or appeal of the game
INDICATOR	ACTDIP.7 -8.9.2.	judging the quality of a student solution based on specific criteria such as meeting an economic need or contributing to social sustainability

<p align="center">Northern Territory Curriculum
Technology Education
Grade 8 - Adopted: 2016 (ACARA)</p>

STRAND / DOMAIN		Design and Technologies
OUTCOME / INDICATOR	ACTDEK .7-8.	Design and Technologies Knowledge and Understanding
INDICATOR	ACTDE K.7-8.3.	Analyse how food and fibre are produced when designing managed environments and how these can become more sustainable (ACTDEK032)
INDICATOR	ACTDEK. 7-8.3.2.	Investigating the management of plant and animal growth through natural means and with the use of chemical products like herbicides and medicines when producing food and fibre products
INDICATOR	ACTDEK. 7-8.3.3.	Recognising the need to increase food production using cost efficient, ethical and sustainable production techniques
INDICATOR	ACTDEK. 7-8.3.4.	Describing physical and chemical characteristics of soil and their effects on plant growth when producing food and fibre products
INDICATOR	ACTDEK. 7-8.3.5.	Investigating different animal feeding strategies such as grazing and supplementary feeding, and their effects on product quality, for example meat tenderness, wool fibre diameter (micron), milk fat and protein content when producing food and fibre products
INDICATOR	ACTDEK. 7-8.3.6.	Recognising the importance of food and fibre production to Australia's food security and economy including exports and imports to and from Asia when critiquing and exploring food and fibre production

STRAND / DOMAIN		Design and Technologies
OUTCOME / INDICATOR	ACTDEP .7-8.	Design and Technologies Processes and Production Skills
INDICATOR	ACTDE P.7-8.2.	Generate, develop, test and communicate design ideas, plans and processes for various audiences using appropriate technical terms and technologies including graphical representation techniques (ACTDEP036)
INDICATOR	ACTDEP. 7-8.2.1.	Using a variety of critical and creative thinking strategies such as brainstorming, sketching, 3-D modelling and experimenting to generate innovative design ideas
INDICATOR	ACTDEP. 7-8.2.2.	Considering which ideas to further explore and investigating the benefits and drawbacks of ideas, for example using digital polling to capture the views of different groups in the community
INDICATOR	ACTDEP. 7-8.2.3.	Identifying factors that may hinder or enhance project development, for example intercultural understanding
INDICATOR	ACTDEP. 7-8.2.4.	Developing models, prototypes or samples using a range of materials, tools and equipment to test the functionality of ideas
INDICATOR	ACTDEP. 7-8.2.5.	Producing annotated concept sketches and drawings, using: technical terms, scale, symbols, pictorial and aerial views to draw environments; production drawings, orthogonal drawings; patterns and templates to explain design ideas
INDICATOR	ACTDEP. 7-8.2.6.	Documenting and communicating the generation and development of design ideas for an intended audience, for example developing a digital portfolio with images and text which clearly communicates each step of a design process

STRAND / DOMAIN		Digital Technologies
OUTCOME / INDICATOR	ACTDIP. 7-8.	Digital Technologies Processes and Production Skills
INDICATOR	ACTDIP. 7-8.7.	Design algorithms represented diagrammatically and in English, and trace algorithms to predict output for a given input and to identify errors (ACTDIP029)
INDICATOR	ACTDIP.7 -8.7.2.	checking the accuracy of an algorithm before it is implemented, for example desk checking it with test data to see if the instructions produce the expected results
INDICATOR	ACTDIP.7 -8.7.4.	using structured English to express algorithmic instructions, for example using conventional statements such as 'while' and 'endwhile' in a 'while loop' when describing interactive instruction

STRAND / DOMAIN		Digital Technologies
OUTCOME / INDICATOR	ACTDIP. 7-8.	Digital Technologies Processes and Production Skills
INDICATOR	ACTDIP. 7-8.8.	Implement and modify programs with user interfaces involving branching, iteration and functions in a general-purpose programming language (ACTDIP030)
INDICATOR	ACTDIP.7 -8.8.1.	developing and modifying digital solutions by implementing instructions contained in algorithms through programs
INDICATOR	ACTDIP.7 -8.8.3.	programming a robot to recognise particular objects and to treat them differently, for example choose objects based on colour

STRAND / DOMAIN		Digital Technologies
OUTCOME / INDICATOR	ACTDIP. 7-8.	Digital Technologies Processes and Production Skills
INDICATOR	ACTDIP. 7-8.9.	Evaluate how student solutions and existing information systems meet needs, are innovative, and take account of future risks and sustainability (ACTDIP031)
INDICATOR	ACTDIP.7 -8.9.1.	comparing student solutions with existing solutions that solve similar problems, for example identifying differences in the user interface of two adventure games and explaining how these differences affect the usability or appeal of the game
INDICATOR	ACTDIP.7 -8.9.2.	judging the quality of a student solution based on specific criteria such as meeting an economic need or contributing to social sustainability

Nova Scotia Curriculum
Mathematics
Grade **7** - Adopted: **2015**

GENERAL LEARNING OUTCOME	NS.7.SCO .	Specific Curriculum Outcomes
CURRICULUM OUTCOME	7.SCO.N .	Number (N)
GRADE LEVEL EXPECTATION	7.SCO.N 02.	Students will be expected to demonstrate an understanding of the addition, subtraction, multiplication, and division of decimals to solve problems (for more than one-digit divisors or more than two-digit multipliers, the use of technology is expected). [ME, PS, T]
EXPECTATION	7.SCO.N 02.04.	Represent concretely, pictorially, and symbolically the multiplication and division of decimal numbers.
EXPECTATION	7.SCO.N 02.05.	Create and solve a given problem involving the addition of two or more decimal numbers.
EXPECTATION	7.SCO.N 02.07.	Create and solve a given problem involving the multiplication of decimal numbers.
EXPECTATION	7.SCO.N 02.08.	Create and solve a given problem involving the division of decimal numbers.
EXPECTATION	7.SCO.N 02.09.	Solve a given problem involving the multiplication or division of decimal numbers with two-digit multipliers or one-digit divisors (whole numbers or decimals) without the use of technology.
EXPECTATION	7.SCO.N 02.10.	Solve a given problem involving the multiplication or division of decimal numbers with more than two-digit multipliers or more than one-digit divisors (whole numbers or decimals) with the use of technology.
EXPECTATION	7.SCO.N 02.12.	Solve a given problem that involves operations on decimals (limited to thousandths), taking into consideration the order of operations.

GENERAL LEARNING OUTCOME	NS.7.SCO .	Specific Curriculum Outcomes
CURRICULUM OUTCOME	7.SCO.P R.	Patterns and Relations (PR)

GRADE LEVEL EXPECTATION	7.SCO.P R06.	**Students will be expected to model and solve, concretely, pictorially, and symbolically, problems that can be represented by one-step linear equations of the form x + a = b, where a and b are integers. [CN, PS, R, V]**
EXPECTATION	7.SCO.P R06.01.	Represent a given problem with a linear equation, and solve the equation using concrete models.
EXPECTATION	7.SCO.P R06.02.	Draw a visual representation of the steps required to solve a given linear equation.
EXPECTATION	7.SCO.P R06.03.	Solve a given problem using a linear equation and record the process.
EXPECTATION	7.SCO.P R06.04.	Verify the solution to a given linear equation using concrete materials and diagrams.

GENERAL LEARNING OUTCOME	NS.7.SCO.	Specific Curriculum Outcomes
CURRICULUM OUTCOME	**7.SCO.P R.**	**Patterns and Relations (PR)**
GRADE LEVEL EXPECTATION	7.SCO.P R07.	**Students will be expected to model and solve, concretely, pictorially, and symbolically, where a, b, and c are whole numbers, problems that can be represented by linear equations of the form: ax + b = c; ax = b; x/a=b, a ≠ 0 [CN, PS, R, V]**
EXPECTATION	7.SCO.P R07.01.	Represent a given problem with a linear equation, and solve the equation using concrete models.
EXPECTATION	7.SCO.P R07.02.	Draw a visual representation of the steps used to solve a given linear equation.
EXPECTATION	7.SCO.P R07.03.	Solve a given problem using a linear equation and record the process.
EXPECTATION	7.SCO.P R07.04.	Verify the solution to a given linear equation using concrete materials and diagrams.

GENERAL LEARNING OUTCOME	NS.7.SCO.	Specific Curriculum Outcomes
CURRICULUM OUTCOME	**7.SCO.S P.**	**Statistics and Probability**
GRADE LEVEL EXPECTATION	7.SCO.S P05.	**Students will be expected to identify the sample space (where the combined sample space has 36 or fewer elements) for a probability experiment involving two independent events. [C, ME, PS]**
EXPECTATION	7.SCO.S P05.02.	Identify the sample space (all possible outcomes) for each of two independent events using a tree diagram, table, or other graphic organizer.

Nova Scotia Curriculum

Mathematics

Grade **8** - Adopted: **2015**

GENERAL LEARNING OUTCOME	NS.8.SCO.	Specific Curriculum Outcomes

CURRICULUM OUTCOME	8.SCO.PR.	Patterns and Relations (PR)
GRADE LEVEL EXPECTATION	8.SCO.PR01.	Students will be expected to graph and analyze two-variable linear relations. [C, ME, PS, R, T, V]

EXPECTATION	8.SCO.PR01.01.	Determine the missing value in an ordered pair for a given equation.

GENERAL LEARNING OUTCOME	NS.8.SCO.	Specific Curriculum Outcomes
CURRICULUM OUTCOME	8.SCO.PR.	Patterns and Relations (PR)
GRADE LEVEL EXPECTATION	8.SCO.PR02.	Students will be expected to model and solve problems, concretely, pictorially, and symbolically, where a, b, and c are integers, using linear equations of the form ax = b; x/a = b, a ≠ 0; ax + b = c; x/a + b = c, a ≠ 0; a(x + b) = c [C, CN, PS, V]

EXPECTATION	8.SCO.PR02.01.	Model a given problem with a linear equation, and solve the equation using concrete models.
EXPECTATION	8.SCO.PR02.02.	Verify the solution to a given linear equation, using a variety of methods, including concrete materials, diagrams, and substitution.
EXPECTATION	8.SCO.PR02.04.	Solve a given linear equation symbolically.
EXPECTATION	8.SCO.PR02.05.	Identify and correct an error in a given incorrect solution of a linear equation.
EXPECTATION	8.SCO.PR02.07.	Solve a given problem, using a linear equation, and record the process.

Nova Scotia Curriculum
Science
Grade **7** - Adopted: **2015**

GENERAL LEARNING OUTCOME	NS.7.GCO.	General Curriculum Outcomes
CURRICULUM OUTCOME	7.GCO.1.	STSE

GRADE LEVEL EXPECTATION	7.GCO.1.1.	Students will develop an understanding of the nature of science and technology, of the relationships

GENERAL LEARNING OUTCOME	NS.7.GCO.	General Curriculum Outcomes
CURRICULUM OUTCOME	7.GCO.4.	ATTITUDES

GRADE LEVEL EXPECTATION	7.GCO.4.4.	Students will be encouraged to develop attitudes that support the responsible acquisition and application of scientific and technological knowledge to the mutual benefit of self, society, and the environment.

GENERAL LEARNING OUTCOME	NS.7.SCO.	Specific Curriculum Outcomes

CURRICULUM OUTCOME	7.SCO.LS.	Life Science: Interactions Within Ecosystems (25%)
GRADE LEVEL EXPECTATION	7.SCO.LS.2.	FOOD CHAINS, FOOD WEBS, AND DECOMPOSERS

EXPECTATION	7.SCO.LS.2.3.	Describe essential conditions to the growth and reproduction of plants and microorganisms in an ecosystem, providing examples related to aspects of the human food supply (304-3, 111-1)

GENERAL LEARNING OUTCOME	NS.7.SCO.	Specific Curriculum Outcomes
CURRICULUM OUTCOME	7.SCO.LS.	Life Science: Interactions Within Ecosystems (25%)
GRADE LEVEL EXPECTATION	7.SCO.LS.4.	ACTION

EXPECTATION	7.SCO.LS.4.1.	Defend a proposal to protect a habitat and provide examples of various issues that can be addressed in multiple ways (113-11, 211-5, 113-10)

Nova Scotia Curriculum
Science
Grade **8** - Adopted: **2015**

GENERAL LEARNING OUTCOME	NS.8.GCO.	General Curriculum Outcomes
CURRICULUM OUTCOME	8.GCO.1.	STSE

GRADE LEVEL EXPECTATION	8.GCO.1.1.	Students will develop an understanding of the nature of science and technology, of the relationships between science and technology, and of the social and environmental contexts of science and technology.

GENERAL LEARNING OUTCOME	NS.8.GCO.	General Curriculum Outcomes
CURRICULUM OUTCOME	8.GCO.4.	ATTITUDES

GRADE LEVEL EXPECTATION	8.GCO.4.1.	Students will be encouraged to develop attitudes that support the responsible acquisition and application of scientific and technological knowledge to the mutual benefit of self, society, and the environment.

Prince Edward Island Curriculum
Mathematics
Grade **7** - Adopted: **2012**

STRAND / COURSE	PE.7.N.	Number (N)
GENERAL LEARNING OUTCOME	6.SP4.	Develop number sense.

CURRICULUM OUTCOME	7.N2.	Demonstrate an understanding of the addition, subtraction, multiplication and division of decimals (for more than 1-digit divisors or 2-digit multipliers, the use of technology is expected) to solve problems.

STRAND / COURSE	PE.7.PR.	Patterns and Relations (PR)

GENERAL LEARNING OUTCOME	6.SP4.	Represent algebraic expressions in multiple ways.
CURRICULUM OUTCOME	7.PR7.	Model and solve problems that can be represented by linear equations of the form:
GRADE LEVEL EXPECTATION	7.PR7.1.	ax + b = c concretely, pictorially and symbolically, where a, b and c are whole numbers.

Prince Edward Island Curriculum
Mathematics
Grade **8** - Adopted: **2012**

STRAND / COURSE	PE.8.PR.	Patterns and Relations (PR)
GENERAL LEARNING OUTCOME	6.SP4.	Represent algebraic expressions in multiple ways.
CURRICULUM OUTCOME	8.PR2.	Model and solve problems using linear equations of the form:
GRADE LEVEL EXPECTATION	8.PR2.3.	ax + b = c concretely, pictorially and symbolically, where a, b and c are integers.
GRADE LEVEL EXPECTATION	8.PR2.4.	x/a + b = c, a = 0 concretely, pictorially and symbolically, where a, b and c are integers.
GRADE LEVEL EXPECTATION	8.PR2.5.	a(x + b) = c concretely, pictorially and symbolically, where a, b and c are integers.

Prince Edward Island Curriculum
Science
Grade **7** - Adopted: **2012**

STRAND / COURSE	PE.7.1.	Life Science: Interactions Within Ecosystems
GENERAL LEARNING OUTCOME	7.1.5.	Action
CURRICULUM OUTCOME		Students will be expected to
GRADE LEVEL EXPECTATION	7.1.5.1.	Propose and defend a course of action to protect the local habitat of a particular organism (113-11, 211-5).

Programme de formation de l'école québécoise - Progression des apprentissages
Mathematics
Grade **7** - Adopted: **2009**

STRAND	QC.3.	Arithmétique: opérations sur les nombres réels
STANDARD	3.3.	Les nombres décimaux jusqu'à millièmes
SUBSTRAND	3.3.c.	Calcule par écrit
COMPETENCY	3.3.c.i.	Additions et des soustractions de nombres dont le résultat ne va pas au-delà de la deuxième décimale
COMPETENCY	3.3.c.ii.	Multiplications de nombres dont le produit ne va pas au-delà de la deuxième décimale

STRAND	QC.3.	Arithmétique: opérations sur les nombres réels
STANDARD	3.7.	Calcule, par écrit, les quatre opérations1 avec les numéros qui sont faciles à travailler avec (y compris un grand nombre), en utilisant des moyens équivalents de l'écriture des nombres et les propriétés des opérations
SUBSTRAND	3.7.a.	Nombres écrits en notation décimale, en utilisant les règles de signes

Programme de formation de l'école québécoise - Progression des apprentissages
Mathematics
Grade **8** - Adopted: **2009**

STRAND	QC.3.	Arithmétique: opérations sur les nombres réels
STANDARD	3.7.	Calcule, par écrit, les quatre opérations1 avec les numéros qui sont faciles à travailler avec (y compris un grand nombre), en utilisant des moyens équivalents de l'écriture des nombres et les propriétés des opérations
SUBSTRAND	3.7.a.	Nombres écrits en notation décimale, en utilisant les règles de signes

Programme de formation de l'école québécoise - Progression des apprentissages
Science
Grade **7** - Adopted: **2009**

STRAND	QC.3.	Parcours de formation générale: La Terre et l'espace
STANDARD	3.A.	Caractéristiques de la Terre
SUBSTRAND	3.A.2.	Lithosphère
COMPETENCY	3.A.2.a.	Les caractéristiques générales de la lithosphère
OBJECTIVE	3.A.2.a.ii.	Décrit les principales relations entre la lithosphère et l'activité humaine (par exemple la survie, l'agriculture, l'exploitation minière, l'aménagement du territoire)

Programme de formation de l'école québécoise - Progression des apprentissages
Science
Grade **8** - Adopted: **2009**

STRAND	QC.3.	Parcours de formation générale: La Terre et l'espace
STANDARD	3.A.	Caractéristiques de la Terre
SUBSTRAND	3.A.2.	Lithosphère
COMPETENCY	3.A.2.a.	Les caractéristiques générales de la lithosphère
OBJECTIVE	3.A.2.a.ii.	Décrit les principales relations entre la lithosphère et l'activité humaine (par exemple la survie, l'agriculture, l'exploitation minière, l'aménagement du territoire)

Québec Education Program Progression of Learning
Mathematics
Grade **7** - Adopted: **2009/Updated 2016**

STRAND	QC.3.	Arithmetic: Operations involving real numbers
STANDARD	3.3.	Decimal numbers up to thousandths
SUBSTRAND	3.3.c.	Computes in writing
COMPETENCY	3.3.c.i.	Additions and subtractions of numbers whose result does not go beyond the second decimal place
COMPETENCY	3.3.c.ii.	Multiplications of numbers whose product does not go beyond the second decimal place

STRAND	QC.3.	Arithmetic: Operations involving real numbers
STANDARD	3.7.	Computes, in writing, the four operations1 with numbers that are easy to work with (including large numbers), using equivalent ways of writing numbers and the properties of operations
SUBSTRAND	3.7.a.	Numbers written in decimal notation, using rules of signs

Québec Education Program Progression of Learning
Mathematics
Grade **8** - Adopted: **2009/Updated 2016**

STRAND	QC.3.	Arithmetic: Operations involving real numbers
STANDARD	3.7.	Computes, in writing, the four operations1 with numbers that are easy to work with (including large numbers), using equivalent ways of writing numbers and the properties of operations
SUBSTRAND	3.7.a.	Numbers written in decimal notation, using rules of signs

Québec Education Program Progression of Learning
Science
Grade **7** - Adopted: **2009**

STRAND	QC.3.	General Education Path: The Earth and Space
STANDARD	3.A.	Characteristics of the Earth
SUBSTRAND	3.A.2.	Lithosphere
COMPETENCY	3.A.2.a.	General characteristics of the lithosphere
OBJECTIVE	3.A.2.a.ii.	Describes the main relationships between the lithosphere and human activity (e.g. survival, agriculture, mining, land-use planning)

Québec Education Program Progression of Learning
Science
Grade **8** - Adopted: **2009**

STRAND	QC.3.	General Education Path: The Earth and Space
STANDARD	3.A.	Characteristics of the Earth
SUBSTRAND	3.A.2.	Lithosphere
COMPETENCY	3.A.2.a.	General characteristics of the lithosphere
OBJECTIVE	3.A.2.a.ii.	Describes the main relationships between the lithosphere and human activity (e.g. survival, agriculture, mining, land-use planning)

Saskatchewan Curriculum
Mathematics
Grade **7** - Adopted: **2007**

OUTCOME / COURSE	SK.N7.	Number
FOCUS	N7.2.	Students will expand and demonstrate understanding of the addition, subtraction, multiplication, and division of decimals to greater numbers of decimal places, and the order of operations. [C, CN, ME, PS, R, T]

OUTCOME / COURSE	SK.P7.	Patterns and Relations

FOCUS	P7.1.	Students will demonstrate an understanding of the relationships between oral and written patterns, graphs and linear relations. [C, CN, R]
FOCUS	P7.3.	Students will demonstrate an understanding of one- and two-step linear equations of the form ax / b + c = d (where a, b, c, and d are whole numbers, c is less than or equal to d and b is not equal to 0) by modeling the solution of the equations concretely, pictorially, physically, and symbolically and explaining the solution in terms of the preservation of equality. [C, CN, PS, R, V]

Saskatchewan Curriculum
Mathematics
Grade **8** - Adopted: **2008**

OUTCOME / COURSE	SK.P8.	**Patterns and Relations**
FOCUS	P8.1.	Students will demonstrate understanding of linear relations concretely, pictorially (including graphs), physically, and symbolically. [CN, ME, PS, R, T, V]
FOCUS	P8.2.	Students will model and solve problems using linear equations of the form: ax = b; x/a = b, a does not equal 0; ax + b = c; x/a + b = c, a does not equal 0; a(x + b) = c, concretely, pictorially, and symbolically, where a, b, and c are integers. [C, CN, PS, V]

Saskatchewan Curriculum
Science
Grade **7** - Adopted: **2009**

OUTCOME / COURSE	SK.IE.	**Life Science: Interactions within Ecosystems (IE)**
FOCUS	**IE7.2.**	**Observe, illustrate, and analyze living organisms within local ecosystems as part of interconnected food webs, populations, and communities. [SI]**
OUTCOME	IE7.2.d.	Show respect for all forms of life when examining ecosystems.

OUTCOME / COURSE	SK.IE.	**Life Science: Interactions within Ecosystems (IE)**
FOCUS	**IE7.3.**	**Evaluate biogeochemical cycles (water, carbon, and nitrogen) as representations of energy flow and the cycling of matter through ecosystems. [CP, SI]**
OUTCOME	IE7.3.f.	Design and conduct an experiment to investigate the conditions essential for the growth of plants (e.g., determine whether nutrients in soil are sufficient to support plant growth, determine the influence of sunlight or other forms of light on plant growth).

OUTCOME / COURSE	SK.IE.	**Life Science: Interactions within Ecosystems (IE)**
FOCUS	**IE7.4.**	**Analyze how ecosystems change in response to natural and human influences, and propose actions to reduce the impact of human behaviour on a specific ecosystem. [DM, CP]**
OUTCOME	IE7.4.g.	Be sensitive and responsible in maintaining a balance between human needs and a sustainable environment by considering both immediate and long-term effects of their course of action or stated position.

OUTCOME / COURSE	SK.EC.	**Earth and Space Science: Earth's Crust and Resources (EC)**
FOCUS	**EC7.3.**	**Investigate the characteristics and formation of the surface geology of Saskatchewan, including soil, and identify correlations between surface geology and past, present, and possible future land uses. [DM, SI]**

OUTCOME	EC7.3.l.	Assess environmental and economic impacts of past and current land use practices in Saskatchewan (e.g., agriculture, urban development, recreation, and road construction), and describe intended and unintended consequences of those practices on self, society, and the environment, including soil degradation.

The Ontario Curriculum
Mathematics
Grade **7** - Adopted: **2020**

STRAND / COURSE		Ontario Mathematics Curriculum Expectations – Grade 7
STRAND / OVERALL EXPECTATION	B.	NUMBER
STAGE / SKILLS	B2.	use knowledge of numbers and operations to solve mathematical problems encountered in everyday life
SUB-ORGANIZER / SPECIFIC EXPECTATION		Multiplication and Division

EXPECTATION	B2.9.	multiply and divide decimal numbers by decimal numbers, in various contexts

STRAND / COURSE		Ontario Mathematics Curriculum Expectations – Grade 7
STRAND / OVERALL EXPECTATION	C.	ALGEBRA
STAGE / SKILLS	C2.	demonstrate an understanding of variables, expressions, equalities, and inequalities, and apply this understanding in various contexts
SUB-ORGANIZER / SPECIFIC EXPECTATION		Equalities and Inequalities

EXPECTATION	C2.3.	solve equations that involve multiple terms, whole numbers, and decimal numbers in various contexts, and verify solutions

STRAND / COURSE		Ontario Mathematics Curriculum Expectations – Grade 7
STRAND / OVERALL EXPECTATION	D.	DATA
STAGE / SKILLS	D1.	manage, analyse, and use data to make convincing arguments and informed decisions, in various contexts drawn from real life
SUB-ORGANIZER / SPECIFIC EXPECTATION		Data Visualization

EXPECTATION	D1.4.	create an infographic about a data set, representing the data in appropriate ways, including in tables and circle graphs, and incorporating any other relevant information that helps to tell a story about the data

The Ontario Curriculum
Mathematics
Grade **8** - Adopted: **2020**

STRAND / COURSE		Ontario Mathematics Curriculum Expectations – Grade 8

STRAND / OVERALL EXPECTATION	C.	ALGEBRA
STAGE / SKILLS	C2.	demonstrate an understanding of variables, expressions, equalities, and inequalities, and apply this understanding in various contexts
SUB- ORGANIZER / SPECIFIC EXPECTATION		Equalities and Inequalities

EXPECTATION	C2.3.	solve equations that involve multiple terms, integers, and decimal numbers in various contexts, and verify solutions

STRAND / COURSE		Ontario Mathematics Curriculum Expectations – Grade 8
STRAND / OVERALL EXPECTATION	D.	DATA
STAGE / SKILLS	D1.	manage, analyse, and use data to make convincing arguments and informed decisions, in various contexts drawn from real life
SUB- ORGANIZER / SPECIFIC EXPECTATION		Data Collection and Organization

EXPECTATION	D1.2.	collect continuous data to answer questions of interest involving two variables, and organize the data sets as appropriate in a table of values

STRAND / COURSE		Ontario Mathematics Curriculum Expectations – Grade 8
STRAND / OVERALL EXPECTATION	D.	DATA
STAGE / SKILLS	D1.	manage, analyse, and use data to make convincing arguments and informed decisions, in various contexts drawn from real life
SUB- ORGANIZER / SPECIFIC EXPECTATION		Data Visualization

EXPECTATION	D1.4.	create an infographic about a data set, representing the data in appropriate ways, including in tables and scatter plots, and incorporating any other relevant information that helps to tell a story about the data

The Ontario Curriculum
Science
Grade **7** - Adopted: **2022**

STRAND / COURSE		Science and Technology Grade 7
STRAND / OVERALL EXPECTATION	STRAND A:	STEM Skills and Connections - Throughout Grade 7, in connection with the learning in the Life Systems, Matter and Energy, Structures and Mechanisms, and Earth and Space Systems strands, students will:
STAGE / SKILLS	A2.	Coding and Emerging Technologies: use coding in investigations and to model concepts, and assess the impact of coding and of emerging technologies on everyday life and in STEM-related fields

SUB- ORGANIZER / SPECIFIC EXPECTATION	A2.2.	identify and describe impacts of coding and of emerging technologies, such as artificial intelligence systems, on everyday life, including skilled trades

STRAND / COURSE		Science and Technology Grade 7
STRAND / OVERALL EXPECTATION	STRAND A:	STEM Skills and Connections - Throughout Grade 7, in connection with the learning in the Life Systems, Matter and Energy, Structures and Mechanisms, and Earth and Space Systems strands, students will:
STAGE / SKILLS	A3.	Applications, Connections, and Contributions: demonstrate an understanding of the practical applications of science and technology, and of contributions to science and technology from people with diverse lived experiences

SUB-ORGANIZER / SPECIFIC EXPECTATION	A3.2.	investigate how science and technology can be used with other subject areas to address real-world problems

STRAND / COURSE		Science and Technology Grade 7
STRAND / OVERALL EXPECTATION	STRAND B:	Life Systems - Interactions in the Environment By the end of Grade 7, students will:
STAGE / SKILLS	B1.	Relating Science and Technology to Our Changing World: assess the impact of human activities and technologies on the environment, and analyse ways to mitigate negative impacts and contribute to environmental sustainability

SUB-ORGANIZER / SPECIFIC EXPECTATION	B1.1.	assess the impact of various technologies on the environment
SUB-ORGANIZER / SPECIFIC EXPECTATION	B1.2.	assess the effectiveness of various ways of mitigating the negative and enhancing the positive impact of human activities on the environment
SUB-ORGANIZER / SPECIFIC EXPECTATION	B1.3.	analyse how diverse First Nations, Métis, and Inuit practices and perspectives contribute to environmental sustainability, including by using approaches such as Two-Eyed Seeing

STRAND / COURSE		Science and Technology Grade 7
STRAND / OVERALL EXPECTATION	STRAND B:	Life Systems - Interactions in the Environment By the end of Grade 7, students will:
STAGE / SKILLS	B2.	Exploring and Understanding Concepts: demonstrate an understanding of interactions between and among biotic and abiotic components in the environment

SUB-ORGANIZER / SPECIFIC EXPECTATION	B2.8.	describe how different approaches to agriculture and to harvesting food from the natural environment can impact an ecosystem, and identify strategies that can be used to maintain and/or restore balance to ecosystems

The Ontario Curriculum
Science
Grade **8** - Adopted: **2022**

STRAND / COURSE		Science and Technology Grade 8

STRAND / OVERALL EXPECTATION	STRAND A:	STEM Skills and Connections - Throughout Grade 8, in connection with the learning in the Life Systems, Matter and Energy, Structures and Mechanisms, and Earth and Space Systems strands, students will:
STAGE / SKILLS	A2.	Coding and Emerging Technologies: use coding in investigations and to model concepts, and assess the impact of coding and of emerging technologies on everyday life and in STEM-related fields

SUB-ORGANIZER / SPECIFIC EXPECTATION	A2.2.	identify and describe impacts of coding and of emerging technologies, such as artificial intelligence systems, on everyday life, including skilled trades

STRAND / COURSE		Science and Technology Grade 8
STRAND / OVERALL EXPECTATION	STRAND A:	STEM Skills and Connections - Throughout Grade 8, in connection with the learning in the Life Systems, Matter and Energy, Structures and Mechanisms, and Earth and Space Systems strands, students will:
STAGE / SKILLS	A3.	Applications, Connections, and Contributions: demonstrate an understanding of the practical applications of science and technology, and of contributions to science and technology from people with diverse lived experiences

SUB-ORGANIZER / SPECIFIC EXPECTATION	A3.2.	investigate how science and technology can be used with other subject areas to address real-world problems