

Main Criteria: Forward Education

Secondary Criteria: Alberta Programs of Study, Manitoba Curriculum Frameworks, New Brunswick Curriculum, Newfoundland and Labrador Curriculum Guides, Nova Scotia Curriculum, Prince Edward Island Curriculum, Saskatchewan Curriculum

Subjects: Mathematics, Science, Technology Education

Grades: 5, 6, Key Stage 2

Forward Education

Smart Farming with Automated Watering

Alberta Programs of Study

Mathematics

Grade 6 - Adopted: 2022

GENERAL OUTCOME / COURSE		Grade 6
GENERAL OUTCOME / SPECIFIC OUTCOME		Number: Quantity is measured with numbers that enable counting, labelling, comparing, and operating.
SPECIFIC OUTCOME / ILLUSTRATIVE EXAMPLE		In what ways can equivalent ratios support proportional reasoning?

ILLUSTRATIVE EXAMPLE

Students apply equivalence to the interpretation of ratios and rates.

Alberta Programs of Study

Science

Grade 5 - Adopted: 1996

GENERAL OUTCOME / COURSE	AB.5-2.	Science Inquiry: Recognize the importance of accuracy in observation and measurement; and, with guidance, apply suitable methods to record, compile, interpret and evaluate observations and measurements.
GENERAL OUTCOME / SPECIFIC OUTCOME	5-2.3.	Explore and Investigate: Students will identify one or more ways of finding answers to given questions.
GENERAL OUTCOME / SPECIFIC OUTCOME	5-2.6.	Explore and Investigate: Students will select appropriate materials and identify how they will be used.
GENERAL OUTCOME / SPECIFIC OUTCOME	5-2.10.	Reflect and Interpret: Students will record observations and measurements accurately, using a chart format where appropriate. Computer resources may be used for record keeping and for display and interpretation of data.
GENERAL OUTCOME / SPECIFIC OUTCOME	5-2.13.	Reflect and Interpret: Students will identify possible applications of what was learned.
GENERAL OUTCOME / COURSE	AB.5-3.	Problem Solving through Technology: Design and carry out an investigation of a practical problem, and develop a possible solution.

GENERAL OUTCOME / SPECIFIC OUTCOME	5-3.4.	Explore and Investigate: Students will attempt a variety of strategies and modify procedures, as needed (troubleshoot problems).
GENERAL OUTCOME / SPECIFIC OUTCOME	5-3.8.	Reflect and Interpret: Students will evaluate the procedures used to solve the problem and identify possible improvements.
GENERAL OUTCOME / SPECIFIC OUTCOME	5-3.9.	Reflect and Interpret: Students will evaluate a design or product, based on a given set of questions or criteria. The criteria/questions may be provided by the teacher or developed by the students.
GENERAL OUTCOME / SPECIFIC OUTCOME	5-3.10.	Reflect and Interpret: Students will identify new applications for the design or problem solution.
GENERAL OUTCOME / COURSE	AB.5-4.	Attitudes: Demonstrate positive attitudes for the study of science and for the application of science in responsible ways.
GENERAL OUTCOME / SPECIFIC OUTCOME	5-4.2.	Students will show growth in acquiring and applying confidence in personal ability to learn and develop problem-solving skills.
GENERAL OUTCOME / SPECIFIC OUTCOME	5-4.3.	Students will show growth in acquiring and applying inventiveness and open-mindedness.
GENERAL OUTCOME / SPECIFIC OUTCOME	5-4.5.	Students will show growth in acquiring and applying flexibility in considering new ideas.
GENERAL OUTCOME / SPECIFIC OUTCOME	5-4.6.	Students will show growth in acquiring and applying critical-mindedness in examining evidence and determining what the evidence means.
GENERAL OUTCOME / SPECIFIC OUTCOME	5-4.11.	Students will show growth in acquiring and applying respect for living things and environments, and commitment for their care.

Alberta Programs of Study

Science

Grade 6 - Adopted: 1996

GENERAL OUTCOME / COURSE	AB.6-2.	Science Inquiry: Recognize the importance of accuracy in observation and measurement; and apply suitable methods to record, compile, interpret and evaluate observations and measurements.
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GENERAL OUTCOME / SPECIFIC OUTCOME	6-2.3.	Explore and Investigate: Students will identify one or more ways of finding answers to given questions.
GENERAL OUTCOME / SPECIFIC OUTCOME	6-2.9.	Explore and Investigate: Students will select appropriate materials and identify how they will be used.
GENERAL OUTCOME / SPECIFIC OUTCOME	6-2.14.	Reflect and Interpret: Students will record observations and measurements accurately, using a chart format where appropriate. Computer resources may be used for record keeping and for display and interpretation of data.
GENERAL OUTCOME / SPECIFIC OUTCOME	6-2.17.	Reflect and Interpret: Students will identify possible applications of what was learned.
GENERAL OUTCOME / COURSE	AB.6-3.	Problem Solving through Technology: Design and carry out an investigation of a practical problem, and develop a possible solution.
GENERAL OUTCOME / SPECIFIC OUTCOME	6-3.4.	Explore and Investigate: Students will attempt a variety of strategies and modify procedures, as needed (troubleshoot problems).
GENERAL OUTCOME / SPECIFIC OUTCOME	6-3.8.	Reflect and Interpret: Students will evaluate procedures used and identify possible improvements.
GENERAL OUTCOME / SPECIFIC OUTCOME	6-3.9.	Reflect and Interpret: Students will evaluate a design or product, based on a given set of questions or criteria. The criteria/questions may be provided by the teacher or developed by the students. .
GENERAL OUTCOME / SPECIFIC OUTCOME	6-3.10.	Reflect and Interpret: Students will identify positive and negative impacts that may arise and potential risks that need to be monitored: What good effects and what bad effects could this solution have? What would we need to look for to be sure that it is working as intended?
GENERAL OUTCOME / SPECIFIC OUTCOME	6-3.11.	Reflect and Interpret: Students will identify new applications for the design or problem solution.
GENERAL OUTCOME / COURSE	AB.6-4.	Attitudes: Demonstrate positive attitudes for the study of science and for the application of science in responsible ways.
GENERAL OUTCOME / SPECIFIC OUTCOME	6-4.2.	Students will show growth in acquiring and applying confidence in personal ability to learn and develop problem-solving skills.

GENERAL OUTCOME / SPECIFIC OUTCOME	6-4.3.	Students will show growth in acquiring and applying inventiveness and open-mindedness.
GENERAL OUTCOME / SPECIFIC OUTCOME	6-4.5.	Students will show growth in acquiring and applying flexibility in considering new ideas.
GENERAL OUTCOME / SPECIFIC OUTCOME	6-4.6.	Students will show growth in acquiring and applying critical-mindedness in examining evidence and determining what the evidence means.
GENERAL OUTCOME / SPECIFIC OUTCOME	6-4.11.	Students will show growth in acquiring and applying respect for living things and environments, and commitment for their care.
GENERAL OUTCOME / COURSE	AB.6-8.	Topic D: Evidence and Investigation: Apply observation and inference skills to recognize and interpret patterns and to distinguish a specific pattern from a group of similar patterns.

**Manitoba Curriculum Frameworks
Science**

Grade 5 - 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 / SPECIFIC OUTCOME	GLO-A5.	Recognize that science and technology interact with and advance one another
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
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STRAND / SPECIFIC OUTCOME	GLO-C3.	Demonstrate appropriate problem-solving skills while seeking solutions to technological challenges
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STRAND / SPECIFIC OUTCOME	GLO-C4.	Demonstrate appropriate critical thinking and decision-making skills when choosing a course of action based on scientific and technological information
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STRAND / SPECIFIC OUTCOME	GLO-C5.	Demonstrate curiosity, scepticism, creativity, open-mindedness, accuracy, precision, honesty, and persistence, and appreciate their importance as scientific and technological habits of mind
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STRAND / SPECIFIC OUTCOME	GLO-C6.	Employ effective communication skills and utilize information technology to gather and share scientific and technological ideas and data
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STRAND / SPECIFIC OUTCOME	GLO-C8.	Evaluate, from a scientific perspective, information and ideas encountered during investigations and in daily life
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STRAND / COURSE / GENERAL OUTCOME	MB.5-0.	Overall Skills and Attitudes - Specific Learning Outcomes
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STRAND / SPECIFIC OUTCOME	5-0-1.	Initiating
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GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	5-0-1b.	Identify various methods for finding the answer to a specific question and, with guidance, select one to implement. (GLO: C2)
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GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	5-0-1c.	Identify practical problems to solve. (GLO: C3)
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GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	5-0-1d.	Identify various methods to solve a practical problem and select and justify one to implement. (GLO: C3)
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STRAND / COURSE / GENERAL OUTCOME	MB.5-0.	Overall Skills and Attitudes - Specific Learning Outcomes
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STRAND / SPECIFIC OUTCOME	5-0-3.	Planning
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GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	5-0-3d.	Develop criteria to evaluate a prototype or consumer product. (GLO: C3)
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STRAND / COURSE / GENERAL OUTCOME	MB.5-0.	Overall Skills and Attitudes - Specific Learning Outcomes
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STRAND / SPECIFIC OUTCOME	5-0-4.	Implementing a Plan
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GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	5-0-4b.	Construct a prototype. (GLO: C3)
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STRAND / COURSE / GENERAL OUTCOME	MB.5-0.	Overall Skills and Attitudes - Specific Learning Outcomes
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STRAND / SPECIFIC OUTCOME	5-0-5.	Observing, Measuring, Recording
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GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	5-0-5a.	Make observations that are relevant to a specific question. (GLO: A1, A2, C2)
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GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	5-0-5b.	Test a prototype or consumer product with respect to pre-determined criteria. (GLO: C3, C5)
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GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	5-0-5c.	Select and use tools and instruments to observe, measure, and construct. (GLO: C2, C3, C5)
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GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	5-0-5d.	Evaluate the appropriateness of units and measuring tools in practical contexts. (GLO: C2, C5)
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GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	5-0-5f.	Record and organize observations in a variety of ways. (GLO: C2, C6)
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STRAND / COURSE / GENERAL OUTCOME	MB.5-0.	Overall Skills and Attitudes - Specific Learning Outcomes
STRAND / SPECIFIC OUTCOME	5-0-6.	Analysing and Interpreting

GENERAL
OUTCOME /
SPECIFIC
OUTCOME /
SKILL

5-0-6a. Construct graphs to display data, and interpret and evaluate these and other graphs. (GLO: C2, C6)

GENERAL
OUTCOME /
SPECIFIC
OUTCOME /
SKILL

5-0-6c. Identify and make improvements to a prototype and explain the rationale for the (GLO: C3, C4)

STRAND / COURSE / GENERAL OUTCOME	MB.5-0.	Overall Skills and Attitudes - Specific Learning Outcomes
STRAND / SPECIFIC OUTCOME	5-0-7.	Concluding and Applying

GENERAL
OUTCOME /
SPECIFIC
OUTCOME /
SKILL

5-0-7e. Identify new practical problems to solve. (GLO: C3)

STRAND / COURSE / GENERAL OUTCOME	MB.5-0.	Overall Skills and Attitudes - Specific Learning Outcomes
STRAND / SPECIFIC OUTCOME	5-0-8.	Reflecting on Science and Technology

GENERAL
OUTCOME /
SPECIFIC
OUTCOME /
SKILL

5-0-8c. Recognize that technology is a way of solving problems in response to human needs. (GLO: A3, B2)

GENERAL
OUTCOME /
SPECIFIC
OUTCOME /
SKILL

5-0-8d. Provide examples of technologies from the past and describe how they have evolved over time. (GLO: B1)

STRAND / COURSE / GENERAL OUTCOME	MB.5-0.	Overall Skills and Attitudes - Specific Learning Outcomes
STRAND / SPECIFIC OUTCOME	5-0-9.	Demonstrating Scientific and Technological Attitudes

GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	5-0-9c.	Demonstrate confidence in their ability to carry out investigations in science and technology. (GLO: C5)
GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	5-0-9d.	Appreciate the importance of creativity, accuracy, honesty, and perseverance as scientific and technological habits of mind. (GLO: C5)
GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	5-0-9e.	Be sensitive to and develop a sense of responsibility for the welfare of other humans, other living things, and the environment. (GLO: B5)

Manitoba Curriculum Frameworks

Science

Grade 6 - Adopted: 2006

STRAND / COURSE / GENERAL OUTCOME	MB.GLO- A.	Foundation A: Nature of Science and Technology
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STRAND / SPECIFIC OUTCOME	GLO-A3.	Distinguish critically between science and technology in terms of their respective contexts, goals, methods, products, and values
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STRAND / SPECIFIC OUTCOME	GLO-A5.	Recognize that science and technology interact with and advance one another
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STRAND / COURSE / GENERAL OUTCOME	MB.GLO- B.	Foundation B: Science, Technology, Society, and Environment (STSE)
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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.
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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
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STRAND / SPECIFIC OUTCOME	GLO-B5.	Identify and demonstrate actions that promote a sustainable environment, society and economy, both locally and globally
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STRAND / COURSE / GENERAL OUTCOME	MB.GLO- C.	Foundation C: Scientific and Technological Skills and Attitudes
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STRAND / SPECIFIC OUTCOME	GLO-C3.	Demonstrate appropriate problem-solving skills while seeking solutions to technological challenges
STRAND / SPECIFIC OUTCOME	GLO-C4.	Demonstrate appropriate critical thinking and decision-making skills when choosing a course of action based on scientific and technological information
STRAND / SPECIFIC OUTCOME	GLO-C5.	Demonstrate curiosity, scepticism, creativity, open-mindedness, accuracy, precision, honesty, and persistence, and appreciate their importance as scientific and technological habits of mind
STRAND / SPECIFIC OUTCOME	GLO-C6.	Employ effective communication skills and utilize information technology to gather and share scientific and technological ideas and data
STRAND / SPECIFIC OUTCOME	GLO-C8.	Evaluate, from a scientific perspective, information and ideas encountered during investigations and in daily life

STRAND / COURSE / GENERAL OUTCOME	MB.6-0.	Overall Skills and Attitudes - Specific Learning Outcomes
STRAND / SPECIFIC OUTCOME	6-0-1.	Initiating

GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	6-0-1b.	Identify various methods for finding the answer to a specific question and select one to implement. (GLO: C2)
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GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	6-0-1c.	Identify practical problems to solve. (GLO: C3)
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GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	6-0-1d.	Identify various methods to solve a practical problem and select and justify one to implement. (GLO: C3)
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STRAND / COURSE / GENERAL OUTCOME	MB.6-0.	Overall Skills and Attitudes - Specific Learning Outcomes
STRAND / SPECIFIC OUTCOME	6-0-3.	Planning

GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	6-0-3d.	Develop criteria to evaluate a prototype or consumer product. (GLO: C3)
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STRAND / COURSE / GENERAL OUTCOME	MB.6-0.	Overall Skills and Attitudes - Specific Learning Outcomes
STRAND / SPECIFIC OUTCOME	6-0-4.	Implementing a Plan

GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	6-0-4b.	Construct a prototype. (GLO: C3)
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STRAND / COURSE / GENERAL OUTCOME	MB.6-0.	Overall Skills and Attitudes - Specific Learning Outcomes
STRAND / SPECIFIC OUTCOME	6-0-5.	Observing, Measuring, Recording

GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	6-0-5a.	Make observations that are relevant to a specific question. (GLO: A1, A2, C2)
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GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	6-0-5b.	Test a prototype or consumer product with respect to pre-determined criteria. (GLO: C3, C5)
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GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	6-0-5c.	Select and use tools and instruments to observe, measure, and construct. (GLO: C2, C3, C5)
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GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	6-0-5d.	Evaluate the appropriateness of units and measuring tools in practical contexts. (GLO: C2, C5)
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GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	6-0-5f.	Record and organize observations in a variety of ways. (GLO: C2, C6)
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STRAND / COURSE / GENERAL OUTCOME	MB.6-0.	Overall Skills and Attitudes - Specific Learning Outcomes
STRAND / SPECIFIC OUTCOME	6-0-6.	Analysing and Interpreting

GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	6-0-6a.	Construct graphs to display data, and interpret and evaluate these and other graphs. (GLO: C2, C6)
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GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	6-0-6c.	Identify and make improvements to a prototype and explain the rationale for the changes. (GLO: C3, C4)
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STRAND / COURSE / GENERAL OUTCOME	MB.6-0.	Overall Skills and Attitudes - Specific Learning Outcomes
STRAND / SPECIFIC OUTCOME	6-0-7.	Concluding and Applying

GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	6-0-7e.	Identify new practical problems to solve. (GLO: C3)
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STRAND / COURSE / GENERAL OUTCOME	MB.6-0.	Overall Skills and Attitudes - Specific Learning Outcomes
STRAND / SPECIFIC OUTCOME	6-0-8.	Reflecting on Science and Technology

GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	6-0-8c.	Recognize that technology is a way of solving problems in response to human needs. (GLO: A3, B2)
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GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	6-0-8d.	Provide examples of technologies from the past and describe how they have evolved over time. (GLO: B1)
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STRAND / COURSE / GENERAL OUTCOME	MB.6-0.	Overall Skills and Attitudes - Specific Learning Outcomes
STRAND / SPECIFIC OUTCOME	6-0-9.	Demonstrating Scientific and Technological Attitudes

GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	6-0-9c.	Demonstrate confidence in their ability to carry out investigations in science and technology. (GLO: C5)
GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	6-0-9d.	Appreciate the importance of creativity, accuracy, honesty, and perseverance as scientific and technological habits of mind. (GLO: C5)
GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	6-0-9e.	Be sensitive to and develop a sense of responsibility for the welfare of other humans, other living things, and the environment. (GLO: B5)

New Brunswick Curriculum

Mathematics

Grade 5 - Adopted: 2009

DOCUMENT/GENERAL LEARNING OUTCOME		Grade 5
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	T.	select and use technologies as tools for learning and solving problems (Technology: T)
SECTION/SPECIFIC LEARNING OUTCOME	V.	develop visualization skills to assist in processing information, making connections and solving problems (Visualization: V).

New Brunswick Curriculum

Mathematics

Grade 6 - Adopted: 2010

DOCUMENT/GENERAL LEARNING OUTCOME		Grade 6
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	T.	select and use technologies as tools for learning and solving problems (Technology: T)
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 6
CATEGORY	PR.	Patterns & Relations (PR): Represent algebraic expressions in multiple ways

SECTION/SPECIFIC LEARNING OUTCOME	PR3.	Represent generalizations arising from number relationships using equations with letter variables. [C, CN, PS, R, V]
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**New Brunswick Curriculum
Science
Grade 5 - Adopted: 2002**

DOCUMENT/GENERAL LEARNING OUTCOME		Atlantic Canada Science Curriculum (Specific curriculum outcomes)
CATEGORY		Science 5 Curriculum
SECTION/SPECIFIC LEARNING OUTCOME		Unit 4 – Earth and Space Science: Weather
UNIT/SPECIFIC LEARNING OUTCOME		Environmental Issues

SPECIFIC LEARNING OUTCOME		identify positive and negative effects of technologies that affect weather and the environment (108-1)
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**Newfoundland and Labrador Curriculum Guides
Mathematics
Grade 6 - Adopted: 2015**

COURSE / STRAND	NL.6N.	Number
STRAND / GCO		Number: Develop number sense.

GCO / SCO	6N5.	Demonstrate an understanding of ratio, concretely, pictorially and symbolically. [C, CN, PS, R, V]
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OUTCOME / INDICATOR 6N5.6. Demonstrate an understanding of equivalent ratios.

Newfoundland and Labrador Curriculum Guides
Science
Grade 5 - Adopted: 2017

COURSE / STRAND	NL.5.GC O.	General Curriculum Outcomes
STRAND / GCO	5.GCO.1	Science, Technology, Society, and the Environment – 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.

GCO / SCO 5.GCO.1.1. Demonstrate that science and technology use specific processes to investigate the natural and constructed world or to seek solutions to practical problems

GCO / SCO 5.GCO.1.2. Demonstrate that science and technology develop over time

GCO / SCO 5.GCO.1.3. Describe ways that science and technology work together in investigating questions and problems and in meeting specific needs

GCO / SCO 5.GCO.1.4. Describe applications of science and technology that have developed in response to human and environmental needs

GCO / SCO 5.GCO.1.5. Describe positive and negative effects that result from applications of science and technology in their own lives, the lives of others, and the environment

COURSE / STRAND	NL.5.GC O.	General Curriculum Outcomes
STRAND / GCO	5.GCO.2	Skills – Students will develop the skills required for scientific and technological inquiry, for solving problems, for communicating scientific ideas and results, for working collaboratively, and for making informed decisions.

GCO / SCO 5.GCO.2.2. Observe and investigate their environment and record the results

GCO / SCO 5.GCO.2.3. Interpret findings from investigations using appropriate methods

COURSE / STRAND	NL.5.GC O.	General Curriculum Outcomes
STRAND / GCO	5.GCO.4.	Attitudes – 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.

GCO / SCO 5.GCO.4.1. Appreciate the role and contribution of science and technology in their understanding of the world

GCO / SCO 5.GCO.4.2. Realize that the applications of science and technology can have both intended and unintended effects

GCO / SCO	5.GCO.4. Show interest and curiosity about objects and events within different environments 4.
GCO / SCO	5.GCO.4. Willingly observe, question, explore, and investigate 5.
GCO / SCO	5.GCO.4. Be sensitive to and develop a sense of responsibility for the welfare of other people, other living things, and the environment 11.

COURSE / STRAND	NL.5.SCO	Specific Curriculum Outcomes
STRAND / GCO	5.SCO.i.	Unit i: Integrated Skills
GCO / SCO		Initiating and Planning

OUTCOME / INDICATOR 5.SCO.i.7 Identify appropriate tools, instruments, and materials to complete investigations [GCO 2]
.0.

COURSE / STRAND	NL.5.SCO	Specific Curriculum Outcomes
STRAND / GCO	5.SCO.i.	Unit i: Integrated Skills
GCO / SCO		Performing and Recording

OUTCOME / INDICATOR 5.SCO.i.8 Carry out procedures to explore a given problem and to ensure a fair test, controlling major variables [GCO 2]
.0.

OUTCOME / INDICATOR 5.SCO.i.9 Select and use tools [GCO 2]
.0.

OUTCOME / INDICATOR 5.SCO.i.1 Follow procedures [GCO 2]
0.0.

OUTCOME / INDICATOR 5.SCO.i.1 Select and use tools for measuring [GCO 2]
1.0.

OUTCOME / INDICATOR 5.SCO.i.1 Make observations and collect information that is relevant to the question or problem [GCO 2]
2.0.

OUTCOME / INDICATOR 5.SCO.i.1 Record observations [GCO 2]
4.0.

OUTCOME / INDICATOR 5.SCO.i.1 Identify and use a variety of sources and technologies to gather relevant information [GCO 2]
5.0.

OUTCOME / INDICATOR 5.SCO.i.1 Construct and use devices for a specific purpose [GCO 2]
6.0.

COURSE / STRAND	NL.5.SCO	Specific Curriculum Outcomes
STRAND / GCO	5.SCO.i.	Unit i: Integrated Skills
GCO / SCO		Analyzing and Interpreting

OUTCOME / INDICATOR	5.SCO.i.1 8.0.	Compile and display data [GCO2]
OUTCOME / INDICATOR	5.SCO.i.1 9.0.	Identify and suggest explanations for patterns and discrepancies in data [GCO 2]
OUTCOME / INDICATOR	5.SCO.i.2 2.0.	Suggest improvements to a design or constructed object [GCO 2]

Newfoundland and Labrador Curriculum Guides

Science

Grade 6 - Adopted: 2018

COURSE / STRAND	NL.6.GCO.	General Curriculum Outcomes
STRAND / GCO	6.GCO.1	Science, Technology, Society, and the Environment – 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.

GCO / SCO 6.GCO.1.1. Demonstrate that science and technology use specific processes to investigate the natural and constructed world or to seek solutions to practical problems

GCO / SCO 6.GCO.1.2. Demonstrate that science and technology develop over time

GCO / SCO 6.GCO.1.3. Describe ways that science and technology work together in investigating questions and problems and in meeting specific needs

GCO / SCO 6.GCO.1.4. Describe applications of science and technology that have developed in response to human and environmental needs

GCO / SCO 6.GCO.1.5. Describe positive and negative effects that result from applications of science and technology in their own lives, the lives of others, and the environment

COURSE / STRAND	NL.6.GCO.	General Curriculum Outcomes
STRAND / GCO	6.GCO.2	Skills – Students will develop the skills required for scientific and technological inquiry, for solving problems, for communicating scientific ideas and results, for working collaboratively, and for making informed decisions.

GCO / SCO 6.GCO.2.2. Observe and investigate their environment and record the results

GCO / SCO 6.GCO.2.3. Interpret findings from investigations using appropriate methods

COURSE / STRAND	NL.6.GCO.	General Curriculum Outcomes
STRAND / GCO	6.GCO.3	Knowledge – Students will construct knowledge and understandings of concepts in life science, physical science, and Earth and space science, and apply these understandings to interpret, integrate, and extend their knowledge.

GCO / SCO 6.GCO.3.2. Describe and predict causes, effects, and patterns related to change in living and non-living things

COURSE / STRAND	NL.6.GC.O.	General Curriculum Outcomes
STRAND / GCO	6.GCO.4.	Attitudes – 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.

GCO / SCO	6.GCO.4.1.	Appreciate the role and contribution of science and technology in their understanding of the world
GCO / SCO	6.GCO.4.2.	Realize that the applications of science and technology can have both intended and unintended effects
GCO / SCO	6.GCO.4.5.	Willingly observe, question, explore, and investigate
GCO / SCO	6.GCO.4.8.	Appreciate the importance of accuracy and honesty
GCO / SCO	6.GCO.4.11.	Be sensitive to and develop a sense of responsibility for the welfare of other people, other living things, and the environment

COURSE / STRAND	NL.6.SCO.	Specific Curriculum Outcomes
STRAND / GCO	6.SCO.i.	Unit i: Integrated Skills
GCO / SCO		Initiating and Planning

OUTCOME / INDICATOR	6.SCO.i.6.0.	Identify various methods for finding answers to questions and solutions to problems, and select one that is appropriate [GCO 2]
OUTCOME / INDICATOR	6.SCO.i.8.0.	Identify appropriate tools, instruments, and materials to complete investigations [GCO 2]

COURSE / STRAND	NL.6.SCO.	Specific Curriculum Outcomes
STRAND / GCO	6.SCO.i.	Unit i: Integrated Skills
GCO / SCO		Performing and Recording

OUTCOME / INDICATOR	6.SCO.i.9.0.	Carry out procedures to explore a given problem and to ensure a fair test, controlling major variables [GCO 2]
OUTCOME / INDICATOR	6.SCO.i.1.0.0.	Select and use tools [GCO 2]
OUTCOME / INDICATOR	6.SCO.i.1.1.0.	Follow procedures [GCO 2]
OUTCOME / INDICATOR	6.SCO.i.1.2.0.	Make observations and collect information that is relevant to the question or problem [GCO 2]
OUTCOME / INDICATOR	6.SCO.i.1.3.0.	Record observations [GCO 2]

OUTCOME / INDICATOR	6.SCO.i.1 4.0.	Identify and use a variety of sources and technologies to gather relevant information [GCO 2]
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OUTCOME / INDICATOR	6.SCO.i.1 6.0.	Construct and use devices for a specific purpose [GCO 2]
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COURSE / STRAND	NL.6.SCO	Specific Curriculum Outcomes
STRAND / GCO	6.SCO.i.	Unit i: Integrated Skills
GCO / SCO		Analyzing and Interpreting

OUTCOME / INDICATOR	6.SCO.i.1 8.0.	Compile and display data [GCO 2]
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OUTCOME / INDICATOR	6.SCO.i.2 2.0.	Suggest improvements to a design or constructed object [GCO 2]
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COURSE / STRAND	NL.6.SCO	Specific Curriculum Outcomes
STRAND / GCO	6.SCO.4	Unit 4: Diversity of Life
GCO / SCO		How Can We Protect Biodiversity?

OUTCOME / INDICATOR	6.SCO.4. 65.0.	Describe how personal actions help conserve natural resources and protect the environment and their region [GCO 1]
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**Nova Scotia Curriculum
Mathematics
Grade 5 - Adopted: 2015**

GENERAL LEARNING OUTCOME	NS.5.SCO	Specific Curriculum Outcomes
CURRICULUM OUTCOME	5.SCO.P R.	Patterns and Relations (PR)
GRADE LEVEL EXPECTATION	5.SCO.P R02.	Students will be expected to solve problems involving single-variable, one-step equations with whole number coefficients and whole number solutions. [C, CN, PS, R]

EXPECTATION	5.SCO.P R02.06.	Identify the unknown in a problem; represent the problem with an equation; and solve the problem concretely, pictorially, or symbolically
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**Nova Scotia Curriculum
Mathematics
Grade 6 - Adopted: 2014**

GENERAL LEARNING OUTCOME	NS.6.SCO	Specific Curriculum Outcomes
CURRICULUM OUTCOME	6.SCO.N	Number (N)
GRADE LEVEL EXPECTATION	6.SCO.N 05.	Students will be expected to demonstrate an understanding of ratio, concretely, pictorially, and symbolically. [C, CN, PS, R, V]

EXPECTATION	6.SCO.N 05.07.	Verify that two ratios are or are not equivalent using concrete materials.
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**Nova Scotia Curriculum
Science
Grade 5 - Adopted: 2015**

GENERAL LEARNING OUTCOME	NS.5.GC O.	General Curriculum Outcomes
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CURRICULUM OUTCOME	5.GCO.1	STSE/Knowledge
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GRADE LEVEL EXPECTATION	5.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. (STSE)
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GRADE LEVEL EXPECTATION	5.GCO.1.3.	Students will construct knowledge and understandings of concepts in life science, physical science, and Earth and space science, and apply these understandings to interpret, integrate, and extend their knowledge. (Knowledge)
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GENERAL LEARNING OUTCOME	NS.5.GC O.	General Curriculum Outcomes
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CURRICULUM OUTCOME	5.GCO.2	Skills
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GRADE LEVEL EXPECTATION	5.GCO.2.2.	Students will develop the skills required for scientific and technological inquiry, for solving problems, for communicating scientific ideas and results, for working collaboratively, and for making informed decisions.
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GENERAL LEARNING OUTCOME	NS.5.GC O.	General Curriculum Outcomes
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CURRICULUM OUTCOME	5.GCO.3	Attitudes
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GRADE LEVEL EXPECTATION	5.GCO.3.4.	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.
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**Nova Scotia Curriculum
Science
Grade 6 - Adopted: 2015**

GENERAL LEARNING OUTCOME	NS.6.GC O.	General Curriculum Outcomes
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CURRICULUM OUTCOME	6.GCO.1	STSE/Knowledge
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GRADE LEVEL EXPECTATION	6.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. (STSE)
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GRADE LEVEL EXPECTATION	6.GCO.1.3.	Students will construct knowledge and understandings of concepts in life science, physical science, and Earth and space science, and apply these understandings to interpret, integrate, and extend their knowledge. (Knowledge)
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GENERAL LEARNING OUTCOME	NS.6.GC O.	General Curriculum Outcomes
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CURRICULUM OUTCOME	6.GCO.2	Skills
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GRADE LEVEL EXPECTATION	6.GCO.2.	Students will develop the skills required for scientific and technological inquiry, for solving problems, for communicating scientific ideas and results, for working collaboratively, and for making informed decisions.
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GENERAL LEARNING OUTCOME	NS.6.GCO.	General Curriculum Outcomes
CURRICULUM OUTCOME	6.GCO.3	Attitudes

GRADE LEVEL EXPECTATION	6.GCO.3.4.	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.
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Prince Edward Island Curriculum
Mathematics
Grade 6 - Adopted: 2012

STRAND / COURSE	PE.6.PR.	Patterns and Relations (PR): Use patterns to describe the world and solve problems.
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GENERAL LEARNING OUTCOME	6.PR4.	Demonstrate and explain the meaning of preservation of equality concretely, pictorially and symbolically.
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Prince Edward Island Curriculum
Science
Grade 5 - Adopted: 2012

STRAND / COURSE	PE.5.4.	Earth and Space Science: Weather
GENERAL LEARNING OUTCOME	5.4.6.	Environmental Issues
CURRICULUM OUTCOME		Students will be expected to

GRADE LEVEL EXPECTATION	5.4.6.2.	Identify positive and negative effects of technologies that affect weather and the environment (108-1).
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Saskatchewan Curriculum
Mathematics
Grade 6 - Adopted: 2009

OUTCOME / COURSE	SK.P6.	Patterns and Relationships
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FOCUS	P6.2.	Extend understanding of preservation of equality concretely, pictorially, physically, and symbolically. [C, CN, R]
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Saskatchewan Curriculum
Science
Grade 5 - Adopted: 2011

OUTCOME / COURSE	SK.WE.	Earth and Space Science: Weather (WE)
FOCUS	WE5.1.	Measure and represent local weather, including temperature, wind speed and direction, amount of sunlight, precipitation, relative humidity, and cloud cover. [CP, SI, TPS]

OUTCOME	WE5.1.I.	Pose new questions about local weather conditions based on what was learned.
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Saskatchewan Curriculum

Science

Grade 6 - Adopted: 2009

OUTCOME / COURSE	SK.DL.	Life Science: Diversity of Living Things (DL)
FOCUS	DL6.1.	Recognize, describe, and appreciate the diversity of living things in local and other ecosystems, and explore related careers. [CP, SI]

OUTCOME DL6.1.c. Show respect for other people, living things, and the environment when observing ecosystems.