#### 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: 5, 6, Key Stage 2

#### **Forward Education**

#### Smart Farming with Automated Watering

#### Alberta Programs of Study Mathematics

Grade 6 - Adopted: 2022

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

ILLUSTRATIVE EXAMPLE

**GENERAL** 

COURSE

OUTCOME /

AB.5-3.

develop a possible solution.

Students apply equivalence to the interpretation of ratios and rates.

## Alberta Programs of Study

Grade **5** - Adopted: **1996** 

GENERAL 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 OUT COME / COURSE measurements. 5-2.3. **GENERAL** Explore and Investigate: Students will identify one or more ways of finding answers to given questions. OUTCOME / **SPECIFIC** OUTCOME 5-2.6. **GENERAL** Explore and Investigate: Students will select appropriate materials and identify how they will be used. OUTCOME / **SPECIFIC** OUTCOME **GENERAL** 5-2.10. Reflect and Interpret: Students will record observations and measurements accurately, using a chart format where OUTCOME / appropriate. Computer resources may be used for record keeping and for display and interpretation of data. **SPECIFIC** OUTCOME **GENERAL** 5-2.13. Reflect and Interpret: Students will identify possible applications of what was learned. OUTCOME / **SPECIFIC** OUTCOME

Problem Solving through Technology: Design and carry out an investigation of a practical problem, and

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 OUT COME / 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

Grade 6 - Adopted: 1996

GENERAL OUT COME / 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.

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 OUT COME / 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 OUT COME / 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 / 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.
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 / 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	6-4.5.	Students will show growth in acquiring and applying flexibility in considering new ideas.
GENERAL OUTCOME / SPECIFIC OUTCOME	6-4.3.	Students will show growth in acquiring and applying inventiveness and open-mindedness.

### British Columbia Curriculum Mathematics

	Grade 5 - Adopted: 2016		
CURRICULUM ORGANIZER I COURSE	BC.MA.5. CC.	Curricular Competencies	
PRESCRIBED LEARNING OUT COME I ORGANIZER		Students are expected to be able to do the following:	
EXPECTATION / SUB ORGANIZER	5.CC.1.	Reasoning and analyzing	
PRESCRIBED LEARNING OUTCOME	5.CC.1.1.	Use reasoning to explore and make connections	
PRESCRIBED LEARNING OUTCOME	5.CC.1.5.	Model mathematics in contextualized experiences	
CURRICULUM ORGANIZER / COURSE	BC.MA.5. CC.	Curricular Competencies	
PRESCRIBED LEARNING OUT COME / ORGANIZER		Students are expected to be able to do the following:	
EXPECTATION / SUB	5.CC.2.	Understanding and solving	

ORGANIZER

PRESCRIBED LEARNING OUTCOME	5.CC.2.1.	Develop, demonstrate, and apply mathematical understanding through play, inquiry, and problem solving
PRESCRIBED LEARNING OUTCOME	5.CC.2.2.	Visualize to explore mathematical concepts
PRESCRIBED LEARNING OUTCOME	5.CC.2.3.	Develop and use multiple strategies to engage in problem solving
PRESCRIBED LEARNING OUTCOME	5.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 <i>I</i> COURSE	BC.MA.5. CC.	Curricular Competencies
PRESCRIBED LEARNING OUT COME I ORGANIZER		Students are expected to be able to do the following:
EXPECTATION / SUB ORGANIZER	5.CC.3.	Communicating and representing
PRESCRIBED LEARNING OUTCOME	5.CC.3.1.	Communicate mathematical thinking in many ways
PRESCRIBED LEARNING OUTCOME	5.CC.3.3.	Explain and justify mathematical ideas and decisions
CURRICULUM ORGANIZER <i>I</i> COURSE	BC.MA.5. CC.	Curricular Competencies
PRESCRIBED LEARNING OUT COME I ORGANIZER		Students are expected to be able to do the following:
EXPECTATION / SUB ORGANIZER	5.CC.4.	Connecting and reflecting
PRESCRIBED LEARNING OUTCOME	5.CC.4.1.	Reflect on mathematical thinking
PRESCRIBED LEARNING	5.CC.4.2.	Connect mathematical concepts to each other and to other areas and personal interests

OUTCOME

	2011.0	
CURRICULUM ORGANIZER / COURSE	BC.MA.6. BI.	Big ideas
COUNCE		
PRESCRIBED LEARNING OUTCOME / ORGANIZER	6.Bl.3.	Linear relations can be identified and represented using expressions with variables and line graphs and can be used to form generalizations.
CURRICULUM ORGANIZER / COURSE	BC.MA.6. CC.	Curricular Competencies
PRESCRIBED LEARNING OUT COME / ORGANIZER		Students are expected to be able to do the following:
EXPECTATION / SUB ORGANIZER	6.CC.1.	Reasoning and analyzing
PRESCRIBED LEARNING OUTCOME	6.CC.1.1.	Use logic and patterns to solve puzzles and play games
PRESCRIBED LEARNING OUTCOME	6.CC.1.2.	Use reasoning and logic to explore, analyze, and apply mathematical ideas
PRESCRIBED LEARNING OUTCOME	6.CC.1.6.	Model mathematics in contextualized experiences
CURRICULUM ORGANIZER <i>I</i> COURSE	BC.MA.6. CC.	Curricular Competencies
ORGANIZER /	BC.MA.6. CC.	Curricular Competencies  Students are expected to be able to do the following:
ORGANIZER / COURSE PRESCRIBED LEARNING OUTCOME /	BC.MA.6. CC.	
PRESCRIBED LEARNING OUT COME I ORGANIZER EXPECTATION I SUB	6.CC.2.	Students are expected to be able to do the following:
PRESCRIBED LEARNING OUT COME I ORGANIZER  EXPECT ATION I SUB ORGANIZER  PRESCRIBED LEARNING	6.CC.2.1	Students are expected to be able to do the following:  Understanding and solving
ORGANIZER / COURSE  PRESCRIBED LEARNING OUTCOME / ORGANIZER  EXPECT ATION / SUB ORGANIZER  PRESCRIBED LEARNING OUTCOME  PRESCRIBED LEARNING OUTCOME	6.CC.2.1.	Students are expected to be able to do the following:  Understanding and solving  Apply multiple strategies to solve problems in both abstract and contextualized situations

CURRICULUM ORGANIZER <i>I</i> COURSE	BC.MA.6. CC.	Curricular Competencies
PRESCRIBED LEARNING OUT COME I ORGANIZER		Students are expected to be able to do the following:
EXPECTATION / SUB ORGANIZER	6.CC.3.	Communicating and representing
PRESCRIBED LEARNING OUTCOME	6.CC.3.2.	Explain and justify mathematical ideas and decisions
PRESCRIBED LEARNING OUTCOME	6.CC.3.3.	Communicate mathematical thinking in many ways
CURRICULUM ORGANIZER / COURSE	BC.MA.6. CC.	Curricular Competencies
PRESCRIBED LEARNING OUT COME I ORGANIZER		Students are expected to be able to do the following:
EXPECTATION / SUB ORGANIZER	6.CC.4.	Connecting and reflecting
EXPECTATION / SUB		Connecting and reflecting  Reflect on mathematical thinking

### British Columbia Curriculum Science

Grade 5 - Adopted: 2016

	BC.SC.5. CC.	Curricular Competencies
PRESCRIBED LEARNING OUT COME I ORGANIZER		Students are expected to be able to do the following
EXPECTATION / SUB ORGANIZER	5.CC.1.	Questioning and predicting

PRESCRIBED

PRESCRIBED

LEARNING OUTCOME

5.CC.1.2. Make observations in familiar or unfamiliar contexts

6.CC.4.3. Use mathematical arguments to support personal choices

LEARNING OUTCOME

CURRICULUM ORGANIZER / COURSE	BC.SC.5. CC.	Curricular Competencies
PRESCRIBED LEARNING OUTCOME / ORGANIZER		Students are expected to be able to do the following
EXPECTATION / SUB ORGANIZER	5.CC.2.	Planning and conducting
PRESCRIBED LEARNING OUTCOME	5.CC.2.4.	Observe, measure, and record data, using appropriate tools, including digital technologies
CURRICULUM ORGANIZER / COURSE	BC.SC.5. CC.	Curricular Competencies
PRESCRIBED LEARNING OUTCOME / ORGANIZER		Students are expected to be able to do the following
EXPECTATION / SUB ORGANIZER	5.CC.3.	Processing and analyzing data and information
PRESCRIBED LEARNING OUTCOME	5.CC.3.1.	Experience and interpret the local environment
PRESCRIBED LEARNING OUTCOME	5.CC.3.3.	Construct and use a variety of methods, including tables, graphs, and digital technologies, as appropriate, to represent patterns or relationships in data
PRESCRIBED LEARNING OUTCOME	5.CC.3.4.	Identify patterns and connections in data
PRESCRIBED LEARNING OUTCOME	5.CC.3.6.	Demonstrate an openness to new ideas and consideration of alternatives
CURRICULUM ORGANIZER / COURSE	BC.SC.5. CC.	Curricular Competencies
PRESCRIBED LEARNING OUT COME / ORGANIZER		Students are expected to be able to do the following
EXPECTATION / SUB ORGANIZER	5.CC.5.	Applying and innovating

PRESCRIBED LEARNING OUTCOME

PRESCRIBED 5.CC.5.1. Contribute to care for self, others, and community through personal or collaborative approaches

PRESCRIBED LEARNING OUTCOME	5.CC.5.2.	Co-operatively design projects
PRESCRIBED LEARNING OUTCOME	5.CC.5.3.	Transfer and apply learning to new situations
PRESCRIBED LEARNING OUTCOME	5.CC.5.4.	Generate and introduce new or refined ideas when problem solving

	BC.SC.5. CC.	Curricular Competencies
PRESCRIBED LEARNING OUT COME I ORGANIZER		Students are expected to be able to do the following
EXPECTATION / SUB ORGANIZER	5.CC.6.	Communicating

PRESCRIBED

5.CC.6.1. Communicate ideas, explanations, and processes in a variety of ways

LEARNING OUTCOME

CURRICULUM ORGANIZER <i>I</i> COURSE	BC.SC.5. C.	Content
PRESCRIBED LEARNING OUT COME / ORGANIZER		Students are expected to know the following

EXPECTATION / 5.C.9.

The nature of sustainable practices around BC's resources

SUB ORGANIZER

### British Columbia Curriculum Science

Grade 6 - Adopted: 2016

	BC.SC.6. CC.	Curricular Competencies
PRESCRIBED LEARNING OUT COME I ORGANIZER		Students are expected to be able to do the following
EXPECTATION / SUB ORGANIZER	6.CC.1.	Questioning and predicting

PRESCRIBED

 $\hbox{6.CC.1.2} \quad \hbox{Make observations in familiar or unfamiliar contexts}$ 

LEARNING OUTCOME

CURRICHUM	PC SC 6	Curricular Compatancias
CURRICULUM ORGANIZER / COURSE	BC.SC.6. CC.	Curricular Competencies
PRESCRIBED LEARNING OUT COME / ORGANIZER		Students are expected to be able to do the following
EXPECTATION / SUB ORGANIZER	6.CC.2.	Planning and conducting
PRESCRIBED LEARNING OUTCOME	6.CC.2.4.	Observe, measure, and record data, using appropriate tools, including digital technologies
CURRICULUM ORGANIZER / COURSE	BC.SC.6. CC.	Curricular Competencies
PRESCRIBED LEARNING OUTCOME / ORGANIZER		Students are expected to be able to do the following
EXPECTATION / SUB ORGANIZER	6.CC.3.	Processing and analyzing data and information
PRESCRIBED LEARNING OUTCOME	6.CC.3.1.	Experience and interpret the local environment
PRESCRIBED LEARNING OUTCOME	6.CC.3.3.	Construct and use a variety of methods, including tables, graphs, and digital technologies, as appropriate, to represent patterns or relationships in data
PRESCRIBED LEARNING OUTCOME	6.CC.3.4.	Identify patterns and connections in data
PRESCRIBED LEARNING OUTCOME	6.CC.3.6.	Demonstrate an openness to new ideas and consideration of alternatives
CURRICULUM ORGANIZER <i>I</i> COURSE	BC.SC.6. CC.	Curricular Competencies
PRESCRIBED LEARNING OUT COME I ORGANIZER		Students are expected to be able to do the following
EXPECTATION / SUB ORGANIZER	6.CC.5.	Applying and innovating

PRESCRIBED LEARNING OUTCOME

PRESCRIBED 6.CC.5.1. Contribute to care for self, others, and community through personal or collaborative approaches

PRESCRIBED LEARNING OUTCOME	6.CC.5.2.	Co-operatively design projects
PRESCRIBED LEARNING OUTCOME	6.CC.5.3.	Transfer and apply learning to new situations
PRESCRIBED LEARNING OUTCOME	6.CC.5.4.	Generate and introduce new or refined ideas when problem solving
CURRICULUM ORGANIZER / COURSE	BC.SC.6. CC.	Curricular Competencies
ORGANIZER /		Curricular Competencies  Students are expected to be able to do the following
ORGANIZER / COURSE  PRESCRIBED LEARNING OUTCOME /		

# Manitoba Curriculum Frameworks Science

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)
COURSE / GENERAL	В.	Foundation B: Science, Technology, Society, and Environment (STSE)  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-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-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.5-0.	Overall Skills and Attitudes - Specific Learning Outcomes
COURSE / GENERAL	MB.5-0.	Overall Skills and Attitudes - Specific Learning Outcomes  Initiating
COURSE / GENERAL OUTCOME STRAND / SPECIFIC		
COURSE / GENERAL OUTCOME  STRAND / SPECIFIC OUTCOME  GENERAL OUTCOME / SPECIFIC OUTCOME /	5-0-1.	Initiating  Identify various methods for finding the answer to a specific question and, with guidance, select one to implement.

STRAND / COURSE / GENERAL OUTCOME	MB.5-0.	Overall Skills and Attitudes - Specific Learning Outcomes
STRAND / SPECIFIC OUTCOME	5-0-3.	Planning
GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	5-0-3d.	Develop criteria to evaluate a prototype or consumer product. (GLO: C3)
STRAND / COURSE / GENERAL OUTCOME	MB.5-0.	Overall Skills and Attitudes - Specific Learning Outcomes
STRAND / SPECIFIC OUTCOME	5-0-4.	Implementing a Plan
GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	5-0-4b.	Construct a prototype. (GLO: C3)
STRAND / COURSE / GENERAL OUTCOME	MB.5-0.	Overall Skills and Attitudes - Specific Learning Outcomes
STRAND / SPECIFIC OUTCOME	5-0-5.	Observing, Measuring, Recording
GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	5-0-5a.	Make observations that are relevant to a specific question. (GLO: A1, A2, C2)
GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	5-0-5b.	Test a prototype or consumer product with respect to pre-determined criteria. (GLO: C3, C5)
GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	5-0-5c.	Select and use tools and instruments to observe, measure, and construct. (GLO: C2, C3, C5)
GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	5-0-5d.	Evaluate the appropriateness of units and measuring tools in practical contexts. (GLO: C2, C5)

GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	5-0-5f.	Record and organize observations in a variety of ways. (GLO: C2, C6)
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 /	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

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
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 /	6-0-1b.	
SPECIFIC OUTCOME / SKILL		Identify various methods for finding the answer to a specific question and select one to implement. (GLO: C2)
OUTCOME/	6-0-1c.	Identify various methods for finding the answer to a specific question and select one to implement. (GLO: C2)  Identify practical problems to solve. (GLO: C3)
OUTCOME / SKILL GENERAL OUTCOME / SPECIFIC OUTCOME /	6-0-1c. 6-0-1d.	
GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL  GENERAL OUTCOME / SKILL  GENERAL OUTCOME / SPECIFIC OUTCOME /		Identify practical problems to solve. (GLO: C3)

GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	6-0-3d.	Develop criteria to evaluate a prototype or consumer product. (GLO: C3)
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)
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)
GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	6-0-5b.	Test a prototype or consumer product with respect to pre-determined criteria. (GLO: C3, C5)
GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	6-0-5c.	Select and use tools and instruments to observe, measure, and construct. (GLO: C2, C3, C5)
GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	6-0-5d.	Evaluate the appropriateness of units and measuring tools in practical contexts. (GLO: C2, C5)
GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	6-0-5f.	Record and organize observations in a variety of ways. (GLO: C2, C6)

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)
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)
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)
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)
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)
STRAND / COURSE / GENERAL OUTCOME	MB.6-0.	Overall Skills and Attitudes - Specific Learning Outcomes
STRAND / SPECIFIC	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/GE NERAL LEARNING OUTCOME		Grade 5
CATEGORY		MATHEMATICAL PROCESSES
SECTION/SPECI FIC LEARNING OUTCOME	C.	communicate in order to learn and express their understanding of mathematics (Communications: C)
SECTION/SPECI FIC LEARNING OUTCOME	PS.	develop and apply new mathematical knowledge through problem solving (Problem Solving: PS)
SECTION/SPECI FIC LEARNING OUTCOME	R.	develop mathematical reasoning (Reasoning: R)
SECTION/SPECI FIC LEARNING OUTCOME	T.	select and use technologies as tools for learning and solving problems (Technology: T)
SECTION/SPECI FIC LEARNING OUTCOME	V.	develop visualization skills to assist in processing information, making connections and solving problems (Visualization: V).

## New Brunswick Curriculum Mathematics

DOCUMENT/GE NERAL LEARNING OUTCOME	Grade 6
CATEGORY	MATHEMATICAL PROCESSES

SECTION/SPECI FIC LEARNING OUTCOME	C.	communicate in order to learn and express their understanding of mathematics (Communications: C)
SECTION/SPECI FIC LEARNING OUTCOME	PS.	develop and apply new mathematical knowledge through problem solving (Problem Solving: PS)
SECTION/SPECI FIC LEARNING OUTCOME	R.	develop mathematical reasoning (Reasoning: R)
SECTION/SPECI FIC LEARNING OUTCOME	Т.	select and use technologies as tools for learning and solving problems (Technology: T)
SECTION/SPECI FIC LEARNING OUTCOME	V.	develop visualization skills to assist in processing information, making connections and solving problems (Visualization: V).
DOCUMENT/GE NERAL LEARNING OUTCOME		Grade 6
CATEGORY	PR.	Patterns & Relations (PR): Represent algebraic expressions in multiple ways
SECTION/SPECI FIC LEARNING OUTCOME	PR3.	Represent generalizations arising from number relationships using equations with letter variables. [C, CN, PS, R, V]

### New Brunswick Curriculum Science

Grade 5 - Adopted: 2002

DOCUMENT/GE NERAL LEARNING OUTCOME	Atlantic Canada Science Curriculum (Specific curriculum outcomes)
CATEGORY	Science 5 Curriculum
SECTION/SPE CIFIC LEARNING OUT COME	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)

# $\label{lem:condition} \textbf{Newfoundland and Labrador Curriculum Guides} \\ \textbf{Mathematics}$

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]
OUTCOME /	6N5.6.	Demonstrate an understanding of equivalent ratios.

# Newfoundland and Labrador Curriculum Guides Science

COURSE /	NL.5.GC	Grade 5 - Adopted: 2017  General Curriculum Outcomes
STRAND	0.	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
COURSE / STRAND STRAND / GCO		General Curriculum Outcomes  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.
STRAND /	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

GCO / SCO	5.GCO.4. 4.	Show interest and curiosity about objects and events within different environments
GCO / SCO	5.GCO.4. 5.	Willingly observe, question, explore, and investigate
GCO / SCO	5.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.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 .0.	Identify appropriate tools, instruments, and materials to complete investigations [GCO 2]
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 .0.	Carry out procedures to explore a given problem and to ensure a fair test, controlling major variables [GCO 2]
OUTCOME / INDICATOR	5.SCO.i.9 .0.	Select and use tools [GCO 2]
OUTCOME / INDICATOR	5.SCO.i.1 0.0.	Follow procedures [GCO 2]
OUTCOME / INDICATOR	5.SCO.i.1 1.0.	Select and use tools for measuring [GCO 2]
OUTCOME / INDICATOR	5.SCO.i.1 2.0.	Make observations and collect information that is relevant to the question or problem [GCO 2]
OUTCOME / INDICATOR	5.SCO.i.1 4.0.	Record observations [GCO 2]
OUTCOME / INDICATOR	5.SCO.i.1 5.0.	Identify and use a variety of sources and technologies to gather relevant information [GCO 2]
OUTCOME / INDICATOR	5.SCO.i.1 6.0.	Construct and use devices for a specific purpose [GCO 2]
	NII E 000	Specific Curriculum Outcomes
COURSE / STRAND	NL.5.SCO	

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

		Grade <b>6</b> - Adopted. 2018
COURSE / STRAND	NL.6.GC O.	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.GC O.	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

COURSI STRANI		General Curriculum Outcomes
STRAN 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. Describe and predict causes, effects, and patterns related to change in living and non-living things

2.

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]
OUTCOME / INDICATOR	6.SCO.i.1 6.0.	Construct and use devices for a specific purpose [GCO 2]
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]
OUTCOME / INDICATOR	6.SCO.i.2 2.0.	Suggest improvements to a design or constructed object [GCO 2]
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 /	6.SCO.4.	Describe how personal actions help conserve natural resources and protect the environment and their region [GCO

## Northern Territory Curriculum Science

INDICATOR

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STRAND / DOMAIN	ACSHE.5.	Science as a Human Endeavour
OUTCOME / INDICATOR	ACSHE. 5.2.	Use and influence of science
INDICATOR	ACSHE. 5.2.1.	Scientific knowledge is used to solve problems and inform personal and community decisions (ACSHE083)
INDICATOR	ACSHE.5 .2.1.1.	Considering how best to ensure growth of plants
INDICATOR	ACSHE.5 .2.1.2.	Considering how decisions are made to grow particular plants and crops depending on environmental conditions
STRAND / DOMAIN	ACSIS.5.	Science Inquiry Skills
OUT COME / INDICATOR	ACSIS.5.	Planning and conducting
INDICATOR	ACSIS.5 .2.1.	Identify, plan and apply the elements of scientific investigations to answer questions and solve problems using equipment and materials safely and identifying potential risks (ACSIS086)
INDICATOR	ACSIS.5. 2.1.1.	Experiencing a range of ways of investigating questions, including experimental testing, Internet research, field observations and exploring simulations

INDICATOR	ACSIS.5. 2.1.4.	Considering different ways to approach problem solving, including researching, using trial and error, experimental testing and creating models
STRAND / DOMAIN	ACSIS.5.	Science Inquiry Skills
OUTCOME / INDICATOR	ACSIS.5.	Planning and conducting
INDICATOR	ACSIS.5 .2.2.	Decide variables to be changed and measured in fair tests, and observe measure and record data with accuracy using digital technologies as appropriate (ACSIS087)
INDICATOR	ACSIS.5. 2.2.2.	Using tools to accurately measure objects and events in investigation and exploring which tools provide the most accurate measurements
INDICATOR	ACSIS.5. 2.2.4.	Recording data in tables and diagrams or electronically as digital images and spreadsheets
STRAND / DOMAIN	ACSIS.5.	Science Inquiry Skills
OUTCOME / INDICATOR	ACSIS.5.	Processing and analysing data and information
INDICATOR	ACSIS.5 .3.1.	Construct and use a range of representations, including tables and graphs, to represent and describe observations, patterns or relationships in data using digital technologies as appropriate (ACSIS090)
INDICATOR	ACSIS.5. 3.1.1.	Constructing tables, graphs and other graphic organisers to show trends in data
INDICATOR	ACSIS.5. 3.1.2.	Identifying patterns in data and developing explanations that fit these patterns
STRAND / DOMAIN	ACSIS.5.	Science Inquiry Skills
OUTCOME / INDICATOR	ACSIS.5.	Communicating
INDICATOR	ACSIS.5 .5.1.	Construct and use a range of representations, including tables and graphs, to represent and describe observations, patterns or relationships in data using digital technologies as appropriate (ACSIS090)

INDICATOR ACSIS.5. Constructing multi-modal texts to communicate science ideas 5.1.2.

# Northern Territory Curriculum Science

Grade 6 - Adopted: 2016

STRAND / DOMAIN	ACSSU.6.	Science Understanding
OUTCOME / INDICATOR	ACSSU. 6.1.	Biological sciences
INDICATOR	ACSSU. 6.1.1.	The growth and survival of living things are affected by physical conditions of their environment (ACSSU094)

INDICATOR ACSSU.6 Investigating how changing the physical conditions for plants impacts on their growth and survival such as salt water, .1.1.1. use of fertilizers and soil types

DOMAIN	ACGITE.0.	Soletice as a Haman Endeavour
OUTCOME / INDICATOR	ACSHE. 6.1	Nature and development of science
INDICATOR	ACSHE. 6.1.1.	Science involves testing predictions by gathering data and using evidence to develop explanations of events and phenomena and reflects historical and cultural contributions (ACSHE098)
INDICATOR	ACSHE.6 .1.1.1.	Investigating how knowledge about the effects of using the Earth's resources has changed over time
STRAND / DOMAIN	ACSIS.6.	Science Inquiry Skills
OUT COME / INDICATOR	ACSIS.6.	Processing and analysing data and information
INDICATOR	ACSIS.6 .3.1.	Construct and use a range of representations, including tables and graphs, to represent and describe observations, patterns or relationships in data using digital technologies as appropriate (ACSIS107)
INDICATOR	ACSIS.6. 3.1.1.	Exploring how different representations can be used to show different aspects of relationships, processes or trends
STRAND / DOMAIN	ACSIS.6.	Science Inquiry Skills
OUT COME / INDICATOR	ACSIS.6. 5.	Communicating
INDICATOR	ACSIS.6 .5.1.	Communicate ideas, explanations and processes using scientific representations in a variety of ways, including multi- modal texts (ACSIS110)
INDICATOR	ACSIS.6. 5.1.1.	Discussing the best way to communicate science ideas and what should be considered when planning a text
INDICATOR	ACSIS.6. 5.1.2.	Using a variety of communication modes, such as reports, explanations, arguments, debates and procedural accounts, to communicate science ideas

ACSHE.6. Science as a Human Endeavour

STRAND/

# Northern Territory Curriculum Technology Education Grade 5 - Adopted: 2016 (ACARA)

STRAND / DOMAIN		Design and Technologies
OUT COME / INDICATOR	ACT DEK	Design and Technologies Knowledge and Understanding
INDICATOR	ACT DE K.5-6.3.	Investigate how and why food and fibre are produced in managed environments and prepared to enable people to grow and be healthy (ACTDEK021)
INDICATOR	ACTDEK. 5-6.3.1.	Investigating and experimenting with different tools, equipment and methods of preparing soil and the effect on soil quality and sustainability including conserving and recycling nutrients, for example when designing a sustainable school vegetable garden or cropping area
INDICATOR	ACTDEK. 5-6.3.2.	Describing the relationship between plant types and animal breeds and their environmental suitability when selecting suitable plants or animals for an environment
INDICATOR	ACTDEK. 5-6.3.3.	Sequencing the process of converting 'on-farm' food or fibre products into a product suitable for retail sale, that is, the 'paddock to plate' supply chain, or when making yarn or fabric from fibre using current food guides and government-endorsed food policies to plan food choices

STRAND / DOMAIN		Design and Technologies
OUTCOME / INDICATOR	ACTDEP .5-6.	Design and Technologies Processes and Production Skills
INDICATOR	ACT DE P.5-6.2.	Generate, develop and communicate design ideas and processes for audiences using appropriate technical terms and graphical representation techniques (ACTDEP025)
INDICATOR	ACTDEP. 5-6.2.1.	Generating a range of design ideas for products, services or environments using prior knowledge, skills and research
INDICATOR	ACTDEP. 5-6.2.2.	Developing alternative design ideas and considering implications for the future to broaden the appeal and acceptance of design ideas
INDICATOR	ACTDEP. 5-6.2.3.	Analysing and modifying design ideas to enhance and improve the sustainability of the product, service, environment or system
INDICATOR	ACTDEP. 5-6.2.4.	Representing and communicating design ideas using modelling and drawing standards including the use of digital technologies, for example scale; symbols and codes in diagrams; pictorial maps and aerial views using web mapping service applications
INDICATOR	ACTDEP. 5-6.2.5.	Experimenting with materials, tools and equipment to refine design ideas, for example considering the selection of materials and joining techniques to suit the purpose of a product
STRAND / DOMAIN		Design and Technologies
OUTCOME / INDICATOR	ACT DEP .5-6.	Design and Technologies Processes and Production Skills
INDICATOR	ACT DE P.5-6.5.	Develop project plans that include consideration of resources when making designed solutions individually and collaboratively (ACTDEP028)
INDICATOR	ACTDEP. 5-6.5.1.	Examining the essential features of existing processes to inform project planning including safe work practices that minimise risk
INDICATOR	ACTDEP. 5-6.5.2.	Setting milestones for production processes and allocating roles to team members
INDICATOR	ACTDEP. 5-6.5.3.	Identifying when materials, tools and equipment are required for making the solution
INDICATOR	ACTDEP. 5-6.5.4.	Outlining the planning and production steps needed to produce a product, service or environment using digital technologies
INDICATOR	ACTDEP. 5-6.5.5.	Reflecting on planned steps to see if improvements can be made
STRAND / DOMAIN		Digital Technologies
OUTCOME / INDICATOR	ACTDIP. 5-6.	Digital Technologies Processes and Production Skills

Define problems in terms of and functional requirements drawing on previously solved problems (ACTDIP017)

ACT DIP. 5-6.2.

**INDICATOR** 

INDICATOR	ACTDIP. 5-6.2.4.	describing in simple terms the nature of a problem and what a solution needs to achieve, for example what need the problem is associated with, who the solution is needed for, what data are needed and what features the solution would need to include
STRAND / DOMAIN		Digital Technologies
OUTCOME / INDICATOR	ACT DIP. 5-6.	Digital Technologies Processes and Production Skills
INDICATOR	ACT DIP. 5-6.2.	Define problems in terms of data and functional requirements drawing on previously solved problems (ACTDIP017)
INDICATOR	ACTDIP. 5-6.2.8.	describing in simple terms the nature of a problem and what a solution needs to achieve, for example what need the problem is associated with, who the solution is needed for, what data are needed and what features the solution would need to include

# Northern Territory Curriculum Technology Education Grade 6 - Adopted: 2016 (ACARA)

Design and Technologies

STRAND /

DOMAIN		
OUTCOME / INDICATOR	ACTDEK .5-6.	Design and Technologies Knowledge and Understanding
INDICATOR	ACT DE K.5-6.3.	Investigate how and why food and fibre are produced in managed environments and prepared to enable people to grow and be healthy (ACTDEK021)
INDICATOR	ACTDEK. 5-6.3.1.	Investigating and experimenting with different tools, equipment and methods of preparing soil and the effect on soil quality and sustainability including conserving and recycling nutrients, for example when designing a sustainable school vegetable garden or cropping area
INDICATOR	ACTDEK. 5-6.3.2.	Describing the relationship between plant types and animal breeds and their environmental suitability when selecting suitable plants or animals for an environment
INDICATOR	ACTDEK. 5-6.3.3.	Sequencing the process of converting 'on-farm' food or fibre products into a product suitable for retail sale, that is, the 'paddock to plate' supply chain, or when making yarn or fabric from fibre using current food guides and government-endorsed food policies to plan food choices
STRAND / DOMAIN		Design and Technologies
OUTCOME / INDICATOR	ACTDEP	Design and Technologies Processes and Production Skills
		Design and Technologies Processes and Production Skills  Generate, develop and communicate design ideas and processes for audiences using appropriate technical terms and graphical representation techniques (ACTDEP025)
INDICATOR	.5-6. ACT DE P.5-6.2.	Generate, develop and communicate design ideas and processes for audiences using appropriate
INDICATOR	.5-6.  ACT DE P.5-6.2.  ACT DEP.	Generate, develop and communicate design ideas and processes for audiences using appropriate technical terms and graphical representation techniques (ACTDEP025)  Generating a range of design ideas for products, services or environments using prior knowledge, skills and research

OUTCOME / INDICATOR   ACTDEP   Design and Technologies Processes and Production Skills    INDICATOR   ACTDEP   Develop project plans that include consideration of resources when making designed solutions individually and collaboratively (ACTDEPO28)  INDICATOR   ACTDEP   Examining the essential features of existing processes to inform project planning including safe work practices that minimise risk  INDICATOR   ACTDEP   Setting milestones for production processes and allocating roles to team members   5-6.5.2.		
STRAND / Design and Technologies  OUTCOME/ J. ACTDEP InDICATOR J. ACTDEP P.5-6.5.  INDICATOR ACTDEP Examining the essential heatures of existing processes to inform project planning including safe work practices that minimise risk  INDICATOR ACTDEP. Examining the essential heatures of existing processes to inform project planning including safe work practices that minimise risk  INDICATOR ACTDEP. Setting milestones for production processes and allocating roles to team members 5-6.5.2.  INDICATOR ACTDEP. Identifying when materials, tools and equipment are required for making the solution 5-6.5.3.  INDICATOR ACTDEP. Outlining the planning and production steps needed to produce a product, service or environment using digital technologies  INDICATOR ACTDEP. Reflecting on planned steps to see if improvements can be made 5-6.5.5.  DIGITATION ACTDEP. Digital Technologies Processes and Production Skills 5-6.2.  INDICATOR ACTDIP. describing in simple terms the nature of a problem and what a solution needs to achieve, for example what need the problem is associated with, who the solution is needed for, what data are needed and what features the solution would need to include  STRAND / Digital Technologies Processes and Production Skills  STRAND / Digital Technologies  OUTCOME / ACTDIP. Digital Technologies Processes and Production Skills  STRAND / Sec. Problem is associated with, who the solution is needed for, what data are needed and what features the solution would need to include  STRAND / Define problems in terms of data and functional requirements drawing on previously solved  Digital Technologies Processes and Production Skills  STRAND / Define problems in terms of data and functional requirements drawing on previously solved	INDICATOR	technologies, for example scale; symbols and codes in diagrams; pictorial maps and aerial views using web
OUTCOME / S-6.2.  ACTDEP S-6.5.  INDICATOR ACTDEP Identifying when materials, tools and equipment are required for making the solution S-6.5.2.  INDICATOR ACTDEP Identifying when materials, tools and equipment are required for making the solution S-6.5.3.  INDICATOR ACTDEP Identifying when materials, tools and equipment are required for making the solution S-6.5.3.  INDICATOR ACTDEP Identifying when materials is tools and equipment are required for making the solution S-6.5.3.  INDICATOR ACTDEP Identifying when materials is tools and equipment are required for making the solution S-6.5.3.  INDICATOR ACTDEP Identifying when materials is tools and equipment are required for making the solution S-6.5.3.  INDICATOR ACTDEP Identifying when materials is tools and equipment are required for making the solution State S-6.5.3.  INDICATOR ACTDEP Identifying when materials is tools and equipment are required for making the solution State S-6.5.3.  INDICATOR ACTDEP Identifying when materials is tools and equipment are required for making the solution State S-6.5.3.  INDICATOR ACTDEP Identifying when materials is tools and equipment are required for making the solution State S-6.3.  INDICATOR ACTDEP Identifying when materials is tools and equipment are required for making the solution state S-6.3.  INDICATOR ACTDEP Identifying when materials is tools and equipment are required for making the solution state S-6.3.  INDICATOR ACTDEP Identifying when materials is tools and equipment are required for making the solution state S-6.3.  INDICATOR ACTDEP Identifying when materials is tools and equipment are required for making the solution state S-6.3.  INDICATOR ACTDEP Identifying when materials is tools and equipment are required for making the solution state S-6.3.  INDICATOR ACTDEP	INDICATOR	
INDICATOR   S-6.	STRAND / DOMAIN	Design and Technologies
INDICATOR ACTDEP. Examining the essential features of existing processes to inform project planning including safe work practices that minimise risk  INDICATOR ACTDEP. Setting milestones for production processes and allocating roles to team members 5-6.5.2.  INDICATOR ACTDEP. Identifying when materials, tools and equipment are required for making the solution 5-6.5.3.  INDICATOR ACTDEP. Outlining the planning and production steps needed to produce a product, service or environment using digital technologies  INDICATOR ACTDEP. Reflecting on planned steps to see if improvements can be made  STRAND / Digital Technologies  INDICATOR ACTDIP. Define problems in terms of and functional requirements drawing on previously solved problems 5-6.2.  INDICATOR ACTDIP. describing in simple terms the nature of a problem and what a solution needs to achieve, for example what need the problem is associated with, who the solution is needed for, what data are needed and what features the solution would need to include  STRAND / Digital Technologies  Digital Technologies Processes and Production Skills  Fig. 8.		Design and Technologies Processes and Production Skills
INDICATOR ACTDEP. Setting milestones for production processes and allocating roles to team members 5-6.5.2.  INDICATOR ACTDEP. Identifying when materials, tools and equipment are required for making the solution 5-6.5.3.  INDICATOR ACTDEP. Outlining the planning and production steps needed to produce a product, service or environment using digital technologies  INDICATOR ACTDEP. Reflecting on planned steps to see if improvements can be made 5-6.5.5.  STRAND / Digital Technologies  OUTCOME / S-6.2.  INDICATOR ACTDIP. Define problems in terms of and functional requirements drawing on previously solved problems (ACTDIP) 5-6.2.4. describing in simple terms the nature of a problem and what a solution needs to actieve, for example what need the problem is associated with, who the solution is needed for, what data are needed and what features the solution would need to include  DIGITATOR ACTDIP. Digital Technologies  DOMAIN Digital Technologies  OUTCOME / S-6.2.  Digital Technologies  DIGITATOR ACTDIP. Digital Technologies Processes and Production Skills  STRAND / Digital Technologies  DIGITATOR ACTDIP. Digital Technologies Processes and Production Skills  STRAND / Digital Technologies  DOMAIN Digital Technologies Processes and Production Skills  STRAND / Digital Technologies  DIGITATOR ACTDIP. Digital Technologies Processes and Production Skills  STRAND / Digital Technologies Processes and Production Skills  STRAND / Digital Technologies Processes and Production Skills  STRAND / Digital Technologies Processes and Production Skills	INDICATOR	
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INDICATOR ACTDIP. STRAND / DOMAIN  Digital Technologies  Digital Technologies Processes and Production Skills  INDICATOR ACTDIP. S-6.2.4. describing in simple terms the nature of a problem and what a solution needs to achieve, for example what need the problem is associated with, who the solution is needed for, what data are needed and what features the solution would need to include  Digital Technologies  INDICATOR ACTDIP. S-6.2.4. Digital Technologies Processes and Production Skills  STRAND / DOMAIN  Digital Technologies  OUTCOME / INDICATOR ACTDIP. S-6.2.4. Digital Technologies Processes and Production Skills  OUTCOME / S-6. Digital Technologies Processes and Production Skills  INDICATOR ACTDIP. Digital Technologies Processes and Production Skills  INDICATOR ACTDIP. Define problems in terms of data and functional requirements drawing on previously solved	INDICATOR	Identifying when materials, tools and equipment are required for making the solution
Digital Technologies  OUTCOME / INDICATOR ACTDIP. 5-6.  INDICATOR ACTDIP. 5-6.2.  INDICATOR ACTDIP. 5-6.4.  Digital Technologies processes and functional requirements drawing on previously solved problems (ACTDIPO17)  INDICATOR ACTDIP. 5-6.4.  Digital Technologies  OUTCOME / INDICATOR ACTDIP. Digital Technologies Processes and Production Skills INDICATOR ACTDIP. 5-6.  Digital Technologies Processes and Production Skills INDICATOR ACTDIP. Define problems in terms of data and functional requirements drawing on previously solved	INDICATOR	
OUTCOME / INDICATOR ACTDIP. 5-6.  INDICATOR ACTDIP. 5-6.2.  ACTDIP. 5-6.2.  Define problems in terms of and functional requirements drawing on previously solved problems (ACTDIP017)  ACTDIP. 5-6.2.4.  Define problems in terms of and functional requirements drawing on previously solved problems (ACTDIP017)  ACTDIP. 5-6.2.4.  Define problems in terms of and functional requirements drawing on previously solved problems and what a solution needs to achieve, for example what need the problem is associated with, who the solution is needed for, what data are needed and what features the solution would need to include  Digital Technologies  OUTCOME / INDICATOR ACTDIP. Digital Technologies Processes and Production Skills  INDICATOR ACTDIP. Define problems in terms of data and functional requirements drawing on previously solved	INDICATOR	Reflecting on planned steps to see if improvements can be made
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INDICATOR  ACTDIP. describing in simple terms the nature of a problem and what a solution needs to achieve, for example what need the problem is associated with, who the solution is needed for, what data are needed and what features the solution would need to include  STRAND / DOMAIN  Digital Technologies  OUTCOME / INDICATOR  ACTDIP. Digital Technologies Processes and Production Skills  INDICATOR  ACTDIP. Define problems in terms of data and functional requirements drawing on previously solved		Digital Technologies Processes and Production Skills
5-6.2.4. problem is associated with, who the solution is needed for, what data are needed and what features the solution would need to include  STRAND / DOMAIN  Digital Technologies  OUTCOME / INDICATOR  ACTDIP. Digital Technologies Processes and Production Skills  INDICATOR  ACTDIP. Define problems in terms of data and functional requirements drawing on previously solved	INDICATOR	
OUTCOME / ACTDIP. Digital Technologies Processes and Production Skills INDICATOR ACTDIP. Define problems in terms of data and functional requirements drawing on previously solved	INDICATOR	problem is associated with, who the solution is needed for, what data are needed and what features the solution
INDICATOR 5-6.  INDICATOR ACT DIP. Define problems in terms of data and functional requirements drawing on previously solved	STRAND / DOMAIN	Digital Technologies
		Digital Technologies Processes and Production Skills
	INDICATOR	

ACTDIP. describing in simple terms the nature of a problem and what a solution needs to achieve, for example what need the

problem is associated with, who the solution is needed for, what data are needed and what features the solution

INDICATOR

5-6.2.8.

would need to include

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 Identify the unknown in a problem; represent the problem with an equation; and solve the problem concretely,

R02.06. pictorially, or symbolically

### 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		Students will be expected to demonstrate an understanding of ratio, concretely, pictorially, and symbolically. [C, CN, PS, R, V]

EXPECTATION

6.SCO.N Verify that two ratios are or are not equivalent using concrete materials.

05.07.

## Nova Scotia Curriculum Science

GENERAL LEARNING OUTCOME	NS.5.GC O.	General Curriculum Outcomes
CURRICULUM OUT COME	5.GCO.1	STSE/Knowledge
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)
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)
GENERAL LEARNING OUT COME	NS.5.GC O.	General Curriculum Outcomes
CURRICULUM OUT COME	5.GCO.2	Skills
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.
GENERAL LEARNING OUT COME	NS.5.GC O.	General Curriculum Outcomes
CURRICULUM OUTCOME	5.GCO.3	Attitudes

GRADE LEVEL 5.GCO.3. Students will be encouraged to develop attitudes that support the responsible acquisition and application of scientific EXPECTATION 4. and technological knowledge to the mutual benefit of self, society, and the environment.

### Nova Scotia Curriculum Science

Grade 6 - Adopted: 2015

		Grade 6 - Adopted, 2015
GENERAL LEARNING OUTCOME	NS.6.GC O.	General Curriculum Outcomes
CURRICULUM OUTCOME	6.GCO.1	ST SE/Knowledge
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)
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)
GENERAL LEARNING OUTCOME	NS.6.GC O.	General Curriculum Outcomes
CURRICULUM OUT COME	6.GCO.2	Skills
GRADE LEVEL EXPECTATION	6.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.
GENERAL LEARNING OUTCOME	NS.6.GC O.	General Curriculum Outcomes
CURRICULUM OUT COME	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.

## 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.
GENERAL LEARNING OUTCOME	6.PR4.	Demonstrate and explain the meaning of preservation of equality concretely, pictorially and symbolically.

## Prince Edward Island Curriculum Science

STRAND / COURSE	PE.5.4.	Earth and Space Science: Weather
GENERAL LEARNING OUT COME	5.4.6.	Environmental Issues

CURRICULUM OUT COME		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).

### Programme de formation de l'école québécoise - Progression des apprentissages Science

re aux  exemple chariot, roue hydraulique, éolienne)
exemple chariot, roue hydraulique, éolienne)
nines simples, bielles)
de de vie des gens et l'environnement (ex.:
teau, clé, gabarit simple)
s structures (ponts, par exemple, les nodèles (ex.: planeur) et des circuits
de de vie des gens et l'environnement teau, clé, gabarit simple) s structures (ponts, par exemple,

<b>2.D. 2.D.7. 2.</b> D.7.a.	Dessine et découpe des pièces à partir de matériaux divers en utilisant des outils appropriés  Utilise des méthodes appropriées d'assemblage (p.ex. vis, colle, clous, punaises, noix)  Utiliser les outils appropriés pour les travaux de finition correcte  Utilise des machines simples, des mécanismes ou des composants électriques pour concevoir ou fabriquer un objet  Terre et Espace  Systèmes et interaction  Technologies liées à la Terre, l'atmosphère et l'espace  Reconnaître l'influence et l'impact des technologies liées à la Terre, l'atmosphère et l'espace sur le chemin de vie des gens et l'environnement (par exemple le matériel de prospection, instruments météorologiques, sismographe, télescope, satellite, une station spatiale)	
1.E.4.f. 1.E.4.g. 2.C.2. 2.D. 2.D.7.	Utiliser les outils appropriés pour les travaux de finition correcte  Utilise des machines simples, des mécanismes ou des composants électriques pour concevoir ou fabriquer un objet  Terre et Espace  Systèmes et interaction  Technologies liées à la Terre, l'atmosphère et l'espace  Reconnaître l'influence et l'impact des technologies liées à la Terre, l'atmosphère et l'espace sur le chemin de vie des gens et l'environnement (par exemple le matériel de prospection, instruments météorologiques, sismographe,	
1.E.4.g. QC.2. 2.D. 2.D.7.	Utilise des machines simples, des mécanismes ou des composants électriques pour concevoir ou fabriquer un objet  Terre et Espace  Systèmes et interaction  Technologies liées à la Terre, l'atmosphère et l'espace  Reconnaître l'influence et l'impact des technologies liées à la Terre, l'atmosphère et l'espace sur le chemin de vie des gens et l'environnement (par exemple le matériel de prospection, instruments météorologiques, sismographe,	
2.D. 2.D.7. 2.D.7.	Terre et Espace  Systèmes et interaction  Technologies liées à la Terre, l'atmosphère et l'espace  Reconnaître l'influence et l'impact des technologies liées à la Terre, l'atmosphère et l'espace sur le chemin de vie des gens et l'environnement (par exemple le matériel de prospection, instruments météorologiques, sismographe,	
<b>2.D. 2.D.7. 2.</b> D.7.a.	Systèmes et interaction  Technologies liées à la Terre, l'atmosphère et l'espace  Reconnaître l'influence et l'impact des technologies liées à la Terre, l'atmosphère et l'espace sur le chemin de vie des gens et l'environnement (par exemple le matériel de prospection, instruments météorologiques, sismographe,	
<b>2.D.7.</b> 2.D.7.a.	Technologies liées à la Terre, l'atmosphère et l'espace  Reconnaître l'influence et l'impact des technologies liées à la Terre, l'atmosphère et l'espace sur le chemin de vie des gens et l'environnement (par exemple le matériel de prospection, instruments météorologiques, sismographe,	
2.D.7.a.	Reconnaître l'influence et l'impact des technologies liées à la Terre, l'atmosphère et l'espace sur le chemin de vie des gens et l'environnement (par exemple le matériel de prospection, instruments météorologiques, sismographe,	
	des gens et l'environnement (par exemple le matériel de prospection, instruments météorologiques, sismographe,	
QC.2.		
	Terre et Espace	
2.E.	Techniques et instrumentation	
2.E.3.	Conception et fabrication d'instruments de mesure et de prototypes	
2.E.3.a.	Conçoit et fabrique des instruments de mesure et de prototypes	
QC.3.	Les êtres vivants	
3.A.	Importance	
3.A.1.	Caractéristiques des êtres vivants	
3.A.1.a.	Expliquer les besoins essentiels du métabolisme des êtres vivants (par exemple la nutrition, la respiration)	
QC.3.	Les êtres vivants	
3.A.	Importance	
3.A.3.	Transformations des êtres vivants	
3.A.3.a.	Noms des besoins de base pour la croissance des plantes (eau, air, lumière, sels minéraux)	
QC.3.	Les êtres vivants	
3.B.	Énergie	
3.B.1.	Sources d'énergie pour les êtres vivants	
3.B.1.f.	Explique comment l'eau, la lumière, sels minéraux et de dioxyde de carbone sont essentiels pour les plantes	
3.B.1.g.	Décrit les technologies agricoles et alimentaires (ex.: croisement des plantes et leur propagation par bouturage, la sélection et l'élevage d'animaux, la production alimentaire, la pasteurisation)	
QC.3.	Les êtres vivants	
3 3 3 3 3 3 3	2.E.3.a. 2.C.3. 3.A. 3.A.1. 3.A.1. 3.A.3. 3.A.3. 3.A.3. 3.B.3. 3.B.1. 3.B.1. 3.B.1.	

STANDARD	3.D.	Systèmes et interaction
SUBSTRAND	3.D.2.	Utilisez des êtres vivants pour la consommation
COMPETENCY	3.D.2.a.	Fournit des exemples de la façon dont les êtres vivants sont utilisés (par exemple la viande, légumes, bois, cuir)
STRAND	QC.3.	Les êtres vivants
STANDARD	3.D.	Systèmes et interaction
SUBSTRAND	3.D.3.	L'interaction entre les humains et leur environnement
COMPETENCY	3.D.3.a.	Décrit l'impact de l'activité humaine sur l'environnement (par exemple l'utilisation des ressources, pollution, gestion des déchets, l'utilisation des terres, l'urbanisation, l'agriculture)
STRAND	QC.3.	Les êtres vivants
STANDARD	3.F.	Un langage appropri
SUBSTRAND	3.F.1.	Terminologie liée à la compréhension des êtres vivants
COMPETENCY	3.F.1.a.	Utiliser adéquatement la terminologie liée à la compréhension des êtres vivants
COMPETENCY	3.F.1.b.	Distinguer le sens d'un terme utilisé dans un contexte scientifique ou technologique et de sa signification dans le langage courant (par exemple l'habitat, la métamorphose)
STRAND	QC.3.	Les êtres vivants
STRAND STANDARD	QC.3.	Les êtres vivants Un langage appropri
STANDARD	3.F.	Un langage appropri
STANDARD SUBSTRAND	3.F. 3.F.2.	Un langage appropri  Conventions et modes de représentation propres aux concepts étudiés  Communiquer à l'aide des types appropriés de représentations qui reflètent les règles et les conventions de la
STANDARD SUBSTRAND	3.F. 3.F.2.	Un langage appropri  Conventions et modes de représentation propres aux concepts étudiés  Communiquer à l'aide des types appropriés de représentations qui reflètent les règles et les conventions de la science et la technologie (symboles, graphiques, tableaux, dessins, croquis)  Programme de formation de l'école québécoise - Progression des apprentissages Science
STANDARD SUBSTRAND COMPETENCY	3.F.2. 3.F.2.a.	Un langage appropri  Conventions et modes de représentation propres aux concepts étudiés  Communiquer à l'aide des types appropriés de représentations qui reflètent les règles et les conventions de la science et la technologie (symboles, graphiques, tableaux, dessins, croquis)  Programme de formation de l'école québécoise - Progression des apprentissages  Science  Grade 6 - Adopted: 2009
STANDARD SUBSTRAND COMPETENCY STRAND	3.F.2. 3.F.2.a. QC.1.	Un langage appropri  Conventions et modes de représentation propres aux concepts étudiés  Communiquer à l'aide des types appropriés de représentations qui reflètent les règles et les conventions de la science et la technologie (symboles, graphiques, tableaux, dessins, croquis)  Programme de formation de l'école québécoise - Progression des apprentissages Science Grade 6 - Adopted: 2009  Material World
STANDARD SUBSTRAND COMPETENCY STRAND STANDARD	3.F.2. 3.F.2.a. QC.1.	Un langage appropri  Conventions et modes de représentation propres aux concepts étudiés  Communiquer à l'aide des types appropriés de représentations qui reflètent les règles et les conventions de la science et la technologie (symboles, graphiques, tableaux, dessins, croquis)  Programme de formation de l'école québécoise - Progression des apprentissages Science Grade 6 - Adopted: 2009  Material World  Systèmes et interaction
STANDARD SUBSTRAND COMPETENCY STRAND STANDARD SUBSTRAND	3.F.2. 3.F.2.a. QC.1. 1.D. 1.D.1.	Un langage appropri  Conventions et modes de représentation propres aux concepts étudiés  Communiquer à l'aide des types appropriés de représentations qui reflètent les règles et les conventions de la science et la technologie (symboles, graphiques, tableaux, dessins, croquis)  Programme de formation de l'école québécoise - Progression des apprentissages Science Grade 6 - Adopted: 2009  Material World  Systèmes et interaction  Tous les jours des objets techniques
STANDARD SUBSTRAND COMPETENCY STRAND STANDARD SUBSTRAND COMPETENCY	3.F.2. 3.F.2.a.  QC.1. 1.D. 1.D.1.	Un langage appropri  Conventions et modes de représentation propres aux concepts étudiés  Communiquer à l'aide des types appropriés de représentations qui reflètent les règles et les conventions de la science et la technologie (symboles, graphiques, tableaux, dessins, croquis)  Programme de formation de l'école québécoise - Progression des apprentissages Science Grade 6 - Adopted: 2009  Material World  Systèmes et interaction  Tous les jours des objets techniques  Décrit les pièces et des mécanismes qui composent un objet

STRAND QC.1. Material World
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Identifier la fonction principale de quelques machines complexes (par exemple chariot, roue hydraulique, éolienne)

STANDARD

SUBSTRAND

COMPETENCY

1.D.

1.D.3.

1.D.3.a.

Systèmes et interaction

**Autres machines** 

STANDARD	1.D.	Systèmes et interaction	
SUBSTRAND	1.D.4.	Fonctionnement d'objets fabriqués	
COMPETENCY	1.D.4.a.	Identifier des pièces mécaniques (engrenages, cames, ressorts, machines simples, bielles)	
STRAND	QC.1.	Material World	
STANDARD	1.D.	Systèmes et interaction	
SUBSTRAND	1.D.7.	Electron technologie	
COMPETENCY	1.D.7.a.	Reconnaître l'influence et l'impact des appareils électriques sur le mode de vie des gens et l'environnement (ex.: téléphone, radio, télévision, ordinateur)	
STRAND	QC.1.	Material World	
STANDARD	1.E.	Techniques et instrumentation	
SUBSTRAND	1.E.3.	Utilisation d'outils	
COMPETENCY	1.E.3.a.	Adéquatement et de façon sécuritaire des outils (pince, tournevis, marteau, clé, gabarit simple)	
STRAND	QC.1.	Material World	
STANDARD	1.E.	Techniques et instrumentation	
SUBSTRAND	1.E.4.	Conception et fabrication d'instruments, outils, machines, des structures (ponts, par exemple, les tours), des dispositifs (dispositif de filtration de l'eau), des modèles (ex.: planeur) et des circuits simples	
COMPETENCY	1.E.4.d.	Dessine et découpe des pièces à partir de matériaux divers en utilisant des outils appropriés	
COMPETENCY	1.E.4.e.	Utilise des méthodes appropriées d'assemblage (p.ex. vis, colle, clous, punaises, noix)	
COMPETENCY	1.E.4.f.	Utiliser les outils appropriés pour les travaux de finition correcte	
COMPETENCY	1.E.4.g.	Utilise des machines simples, des mécanismes ou des composants électriques pour concevoir ou fabriquer un objet	
STRAND	QC.2.	Terre et Espace	
STANDARD	2.D.	Systèmes et interaction	
SUBSTRAND	2.D.7.	Technologies liées à la Terre, l'atmosphère et l'espace	
COMPETENCY	2.D.7.a.	Reconnaître l'influence et l'impact des technologies liées à la Terre, l'atmosphère et l'espace sur le chemin de vie des gens et l'environnement (par exemple le matériel de prospection, instruments météorologiques, sismographe, télescope, satellite, une station spatiale)	
STRAND	QC.2.	Terre et Espace	
STANDARD	2.E.	Techniques et instrumentation	
SUBSTRAND	2.E.3.	Conception et fabrication d'instruments de mesure et de prototypes	
COMPETENCY	2.E.3.a.	Conçoit et fabrique des instruments de mesure et de prototypes	

STRAND	QC.3.	Les êtres vivants
STANDARD	3.A.	Importance
SUBSTRAND	3.A.1.	Caractéristiques des êtres vivants
COMPETENCY	3.A.1.a.	Expliquer les besoins essentiels du métabolisme des êtres vivants (par exemple la nutrition, la respiration)
STRAND	QC.3.	Les êtres vivants
STANDARD	3.A.	Importance
SUBSTRAND	3.A.3.	Transformations des êtres vivants
COMPETENCY	3.A.3.a.	Noms des besoins de base pour la croissance des plantes (eau, air, lumière, sels minéraux)
STRAND	QC.3.	Les êtres vivants
STANDARD	3.B.	Énergie
SUBSTRAND	3.B.1.	Sources d'énergie pour les êtres vivants
COMPETENCY	3.B.1.f.	Explique comment l'eau, la lumière, sels minéraux et de dioxyde de carbone sont essentiels pour les plantes
COMPETENCY	3.B.1.g.	Décrit les technologies agricoles et alimentaires (ex.: croisement des plantes et leur propagation par bouturage, la sélection et l'élevage d'animaux, la production alimentaire, la pasteurisation)
STRAND	QC.3.	Les êtres vivants
STANDARD	3.D.	Systèmes et interaction
SUBSTRAND	3.D.2.	Utilisez des êtres vivants pour la consommation
COMPETENCY	3.D.2.a.	Fournit des exemples de la façon dont les êtres vivants sont utilisés (par exemple la viande, légumes, bois, cuir)
STRAND	QC.3.	Les êtres vivants
STANDARD	3.D.	Systèmes et interaction
SUBSTRAND	3.D.3.	L'interaction entre les humains et leur environnement
COMPETENCY	3.D.3.a.	Décrit l'impact de l'activité humaine sur l'environnement (par exemple l'utilisation des ressources, pollution, gestion des déchets, l'utilisation des terres, l'urbanisation, l'agriculture)
STRAND	QC.3.	Les êtres vivants
STANDARD	3.F.	Un langage appropri
SUBSTRAND	3.F.1.	Terminologie liée à la compréhension des êtres vivants
COMPETENCY	3.F.1.a.	Utiliser adéquatement la terminologie liée à la compréhension des êtres vivants
COMPETENCY	3.F.1.b.	Distinguer le sens d'un terme utilisé dans un contexte scientifique ou technologique et de sa signification dans le langage courant (par exemple l'habitat, la métamorphose)
STRAND	QC.3.	Les êtres vivants
STANDARD	3.F.	Un langage appropri

	3.F.2.	Conventions et modes de représentation propres aux concepts étudiés
COMPETENCY	3.F.2.a.	Communiquer à l'aide des types appropriés de représentations qui reflètent les règles et les conventions de la science et la technologie (symboles, graphiques, tableaux, dessins, croquis)
		Québec Education Program Progression of Learning
		Science Grade 5 - Adopted: 2009
STRAND	QC.1.	Material World
STANDARD	1.D.	Systems and interaction
SUBSTRAND	1.D.1.	Everyday technical objects
COMPETENCY	1.D.1.a.	Describes the parts and mechanisms that make up an object
COMPETENCY	1.D.1.b.	Identifies the needs that an object was originally designed to meet
STRAND	QC.1.	Material World
STANDARD	1.D.	Systems and interaction
SUBSTRAND	1.D.3.	Other machines
COMPETENCY	1.D.3.a.	Identifies the main function of some complex machines (e.g. cart, waterwheel, wind turbine)
STRAND	QC.1.	Material World
STANDARD	1.D.	Systems and interaction
SUBSTRAND	1.D.4.	How manufactured objects work
COMPETENCY	1.D.4.a.	Identifies the mechanical parts (e.g. gears, cams, springs, simple machines, connecting rods)
STRAND	QC.1.	Material World
STANDARD	1.D.	Systems and interaction
SUBSTRAND	1.D.7.	Electron technology
COMPETENCY	1.D.7.a.	Recognizes the influence and the impact of electric appliances on people's way of life and surroundings (e.g. telephone, radio, television, computer)
STRAND	QC.1.	Material World
STANDARD	1.E.	Techniques and instrumentation
SUBSTRAND	1.E.3.	Use of tools
COMPETENCY	1.E.3.a.	Appropriately and safely uses tools (e.g. pliers, screwdriver, hammer, wrench, simple template)
STRAND	QC.1.	Material World
STANDARD	1.E.	Techniques and instrumentation

COMPETENCY	1.E.4.d.	Draws and cuts parts out of various materials using appropriate tools
COMPETENCY	1.E.4.e.	Uses appropriate assembling methods (e.g. screws, glue, nails, tacks, nuts)
COMPETENCY	1.E.4.f.	Uses appropriate tools for proper finishing work
COMPETENCY	1.E.4.g.	Uses simple machines, mechanisms or electrical components to design or make an object
STRAND	QC.2.	Earth and Space
STANDARD	2.D.	Systems and interaction
SUBSTRAND	2.D.7.	Technologies related to the Earth, the atmosphere and outer space
COMPETENCY	2.D.7.a.	Recognizes the influence and the impact of technologies related to the Earth, the atmosphere and outer space on people's way of life and surroundings (e.g. prospecting equipment, meteorological instruments, seismograph, telescope, satellite, space station)
STRAND	QC.2.	Earth and Space
STANDARD	2.E.	Techniques and instrumentation
SUBSTRAND	2.E.3.	Design and manufacture of measuring instruments and prototypes
COMPETENCY	2.E.3.a.	Designs and manufactures measuring instruments and prototypes
STRAND	QC.3.	Living Things
STANDARD	3.A.	Matter
SUBSTRAND	3.A.1.	Characteristics of living things
COMPETENCY	3.A.1.a.	Explains the basic needs of the metabolism of living things (e.g. nutrition, respiration)
STRAND	QC.3.	Living Things
STANDARD	3.A.	Matter
SUBSTRAND	3.A.3.	Transformations of living things
COMPETENCY	3.A.3.a.	Names the basic needs for plant growth (water, air, light, mineral salts)
STRAND	QC.3.	Living Things
STANDARD	3.B.	Energy
SUBSTRAND	3.B.1.	Sources of energy for living things
	0.5.5.	
COMPETENCY	3.B.1.f.	Explains how water, light, mineral salts and carbon dioxide are essential to plants
		Explains how water, light, mineral salts and carbon dioxide are essential to plants  Describes agricultural and food technologies (e.g. crossbreeding of plants and their propagation by cuttings, selection and breeding of animals, food production, pasteurization)
COMPETENCY	3.B.1.f.	Describes agricultural and food technologies (e.g. crossbreeding of plants and their propagation by cuttings,

SUBSTRAND	3.D.2.	Use of living things for consumption
COMPETENCY	3.D.2.a.	Provides examples of how living things are used (e.g. meat, vegetable, wood, leather)
STRAND	QC.3.	Living Things
STANDARD	3.D.	Systems and interaction
SUBSTRAND	3.D.3.	Interaction between humans and their environment
COMPETENCY	3.D.3.a.	Describes the impact of human activity on the environment (e.g. use of resources, pollution, waste management, land use, urbanization, agriculture)
STRAND	QC.3.	Living Things
STANDARD	3.F.	Appropriate language
SUBSTRAND	3.F.1.	Terminology related to an understanding of living things
COMPETENCY	3.F.1.a.	Appropriately uses terminology related to an understanding of living things
COMPETENCY	3.F.1.b.	Distinguishes between the meaning of a term used in a scientific or technological context and its meaning in everyday language (e.g. habitat, metamorphosis)
STRAND	QC.3.	Living Things
STANDARD	3.F.	Appropriate language
SUBSTRAND	3.F.2.	Conventions and types of representations specific to the concepts studied
COMPETENCY	3.F.2.a.	Communicates using appropriate types of representations that reflect the rules and conventions of science and technology (e.g. symbols, graphs, tables, drawings, sketches)

### Québec Education Program Progression of Learning Science

STRAND	QC.1.	Material World
STANDARD	1.D.	Systems and interaction
SUBSTRAND	1.D.1.	Everyday technical objects
COMPETENCY	1.D.1.a.	Describes the parts and mechanisms that make up an object
COMPETENCY	1.D.1.b.	Identifies the needs that an object was originally designed to meet
STRAND	QC.1.	Material World
STANDARD	1.D.	Systems and interaction
SUBSTRAND	1.D.3.	Other machines
COMPETENCY	1.D.3.a.	Identifies the main function of some complex machines (e.g. cart, waterwheel, wind turbine)
STRAND	QC.1.	Material World

SUBSTRAND	1.D.4.	How manufactured objects work
COMPETENCY	1.D.4.a.	Identifies the mechanical parts (e.g. gears, cams, springs, simple machines, connecting rods)
STRAND	QC.1.	Material World
STANDARD	1.D.	Systems and interaction
SUBSTRAND	1.D.7.	Electron technology
COMPETENCY	1.D.7.a.	Recognizes the influence and the impact of electric appliances on people's way of life and surroundings (e.g. telephone, radio, television, computer)
STRAND	QC.1.	Material World
STANDARD	1.E.	Techniques and instrumentation
SUBSTRAND	1.E.3.	Use of tools
COMPETENCY	1.E.3.a.	Appropriately and safely uses tools (e.g. pliers, screwdriver, hammer, wrench, simple template)
STRAND	QC.1.	Material World
STANDARD	1.E.	Techniques and instrumentation
SUBSTRAND	1.E.4.	Design and manufacture of instruments, tools, machines, structures (e.g. bridges, towers), devices (e.g. water filtration device), models (e.g. glider) and simple circuits
COMPETENCY	1.E.4.d.	Draws and cuts parts out of various materials using appropriate tools
COMPETENCY	1.E.4.e.	Uses appropriate assembling methods (e.g. screws, glue, nails, tacks, nuts)
COMPETENCY	1.E.4.f.	Uses appropriate tools for proper finishing work
COMPETENCY	1.E.4.g.	Uses simple machines, mechanisms or electrical components to design or make an object
STRAND	QC.2.	Earth and Space
STANDARD	2.D.	Systems and interaction
SUBSTRAND	2.D.7.	Technologies related to the Earth, the atmosphere and outer space
COMPETENCY	2.D.7.a.	Recognizes the influence and the impact of technologies related to the Earth, the atmosphere and outer space on people's way of life and surroundings (e.g. prospecting equipment, meteorological instruments, seismograph, telescope, satellite, space station)
STRAND	QC.2.	Earth and Space
STANDARD	2.E.	Techniques and instrumentation
SUBSTRAND	2.E.3.	Design and manufacture of measuring instruments and prototypes
COMPETENCY	2.E.3.a.	Designs and manufactures measuring instruments and prototypes
STRAND	QC.3.	Living Things
STANDARD	3.A.	Matter

SUBSTRAND	3.A.1.	Characteristics of living things
COMPETENCY	3.A.1.a.	Explains the basic needs of the metabolism of living things (e.g. nutrition, respiration)
STRAND	QC.3.	Living Things
STANDARD	3.A.	Matter
SUBSTRAND	3.A.3.	Transformations of living things
COMPETENCY	3.A.3.a.	Names the basic needs for plant growth (water, air, light, mineral salts)
STRAND	QC.3.	Living Things
STANDARD	3.B.	Energy
SUBSTRAND	3.B.1.	Sources of energy for living things
COMPETENCY	3.B.1.f.	Explains how water, light, mineral salts and carbon dioxide are essential to plants
COMPETENCY	3.B.1.g.	Describes agricultural and food technologies (e.g. crossbreeding of plants and their propagation by cuttings, selection and breeding of animals, food production, pasteurization)
STRAND	QC.3.	Living Things
STANDARD	3.D.	Systems and interaction
SUBSTRAND	3.D.2.	Use of living things for consumption
COMPETENCY	3.D.2.a.	Provides examples of how living things are used (e.g. meat, vegetable, wood, leather)
STRAND	QC.3.	Living Things
STANDARD	3.D.	Systems and interaction
SUBSTRAND	3.D.3.	Interaction between humans and their environment
COMPETENCY	3.D.3.a.	Describes the impact of human activity on the environment (e.g. use of resources, pollution, waste management, land use, urbanization, agriculture)
STRAND	QC.3.	Living Things
STANDARD	3.F.	Appropriate language
SUBSTRAND	3.F.1.	Terminology related to an understanding of living things
COMPETENCY	3.F.1.a.	Appropriately uses terminology related to an understanding of living things
COMPETENCY	3.F.1.b.	Distinguishes between the meaning of a term used in a scientific or technological context and its meaning in everyday language (e.g. habitat, metamorphosis)
STRAND	QC.3.	Living Things
STANDARD	3.F.	Appropriate language
SUBSTRAND	3.F.2.	Conventions and types of representations specific to the concepts studied

COMPETENCY 3.F.2.a. Communicates using appropriate types of representations that reflect the rules and conventions of science and technology (e.g. symbols, graphs, tables, drawings, sketches)

### Saskatchewan Curriculum Mathematics

Grade 6 - Adopted: 2009

OUTCOME / COURSE	SK.P6.	Patterns and Relationships
FOCUS	P6.2.	Extend understanding of preservation of equality concretely, pictorially, physically, and symbolically. [C, CN, R]

### 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.l.	Pose new questions about local weather conditions based on what was learned.

### Saskat chewan 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.

## The Ontario Curriculum Mathematics

	Grade 5 - Adopted: 2020		
STRAND / COURSE		Ontario Mathematics Curriculum Expectations – Grade 5	
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 whole numbers up to 100 in various contexts, and verify solutions	
STRAND / COURSE		Ontario Mathematics Curriculum Expectations – Grade 5	
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 data, using appropriate sampling techniques as needed, to answer questions of interest about a population, and organize the data in relative-frequency tables

STRAND / COURSE		Ontario Mathematics Curriculum Expectations – Grade 5
STRAND / OVERALL EXPECTATION	D.	DATA
ST AGE I 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

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

# The Ontario Curriculum Mathematics Grade 6 - Adopted: 2020

**EXPECTATION** 

STRAND / COURSE		Ontario Mathematics Curriculum Expectations – Grade 6
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 and whole numbers in various contexts, and verify solutions

# The Ontario Curriculum Science Grade 5 - Adopted: 2022

STRAND / COURSE

STRAND / OVERALL EXPECTATION

STRAND / STEM Skills and Connections - Throughout Grade 5, 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

A1. STEM Investigation and Communication Skills: use a scientific research process, a scientific experimentation process, and an engineering design process to conduct investigations, following appropriate health and safety procedures

SUB- ORGANIZER / SPECIFIC EXPECTATION	A1.3.	use an engineering design process and associated skills to design, build, and test devices, models, structures, and/or systems
SUB- ORGANIZER / SPECIFIC EXPECTATION	A1.5.	communicate their findings, using science and technology vocabulary and formats that are appropriate for specific audiences and purposes
STRAND / COURSE		Science and Technology Grade 5
STRAND / OVERALL EXPECTATION	STRAND A:	STEM Skills and Connections - Throughout Grade 5, 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	A2.1.	write and execute code in investigations and when modelling concepts, with a focus on using different methods to store and process data for a variety of purposes
SUB- ORGANIZER /	A2.2.	identify and describe impacts of coding and of emerging technologies on everyday life, including skilled trades
SPECIFIC EXPECTATION		
SPECIFIC		Science and Technology Grade 5
SPECIFIC EXPECTATION  STRAND /	STRAND A:	Science and Technology Grade 5  STEM Skills and Connections - Throughout Grade 5, in connection with the learning in the Life Systems, Matter and Energy, Structures and Mechanisms, and Earth and Space Systems strands, students will:
STRAND / COURSE STRAND / OVERALL		STEM Skills and Connections - Throughout Grade 5, in connection with the learning in the Life Systems, Matter and Energy, Structures and Mechanisms, and Earth and Space Systems strands,
STRAND / COURSE  STRAND / OVERALL EXPECTATION	A:	STEM Skills and Connections - Throughout Grade 5, in connection with the learning in the Life Systems, Matter and Energy, Structures and Mechanisms, and Earth and Space Systems strands, students will:  Applications, Connections, and Contributions: demonstrate an understanding of the practical applications of science and technology, and of contributions to science and technology from people
SPECIFIC EXPECTATION  STRAND / COURSE  STRAND / OVERALL EXPECTATION  STAGE / SKILLS  SUB- ORGANIZER / SPECIFIC	A: A3.	STEM Skills and Connections - Throughout Grade 5, in connection with the learning in the Life Systems, Matter and Energy, Structures and Mechanisms, and Earth and Space Systems strands, students will:  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
SPECIFIC EXPECTATION  STRAND / COURSE  STRAND / OVERALL EXPECTATION  STAGE / SKILLS  SUB-ORGANIZER / SPECIFIC EXPECTATION	A: A3.	STEM Skills and Connections - Throughout Grade 5, in connection with the learning in the Life Systems, Matter and Energy, Structures and Mechanisms, and Earth and Space Systems strands, students will:  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  investigate how science and technology can be used with other subject areas to address real-world problems  Science and Technology Grade 5
SPECIFIC EXPECTATION  STRAND / COURSE  STRAND / OVERALL EXPECTATION  STAGE / SKILLS  SUB- ORGANIZER / SPECIFIC EXPECTATION  STRAND / COURSE  STRAND / OVERALL	A3. A3.2. STRAND	STEM Skills and Connections - Throughout Grade 5, in connection with the learning in the Life Systems, Matter and Energy, Structures and Mechanisms, and Earth and Space Systems strands, students will:  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  investigate how science and technology can be used with other subject areas to address real-world problems  Science and Technology Grade 5
SPECIFIC EXPECTATION  STRAND / COURSE  STRAND / OVERALL EXPECTATION  STAGE / SKILLS  SUB- ORGANIZER / SPECIFIC EXPECTATION  STRAND / COURSE  STRAND / OVERALL EXPECTATION  STAGE /	A3. A3.2. STRAND C:	STEM Skills and Connections - Throughout Grade 5, in connection with the learning in the Life Systems, Matter and Energy, Structures and Mechanisms, and Earth and Space Systems strands, students will:  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  investigate how science and technology can be used with other subject areas to address real-world problems  Science and Technology Grade 5  Matter and Energy - Properties of and Changes in Matter By the end of Grade 5, students will:  Relating Science and Technology to Our Changing World: assess the impacts on society and the environment of various processes and materials used in the manufacture of common products, and

STRAND / OVERALL EXPECTATION	STRAND E:	Earth and Space Systems Conservation of Energy and Resources By the end of Grade 5, students will:
STAGE / SKILLS	E1.	Relating Science and Technology to Our Changing World: assess effects of energy and resource use on society and the environment, and suggest options for conserving energy and resources
SUB- ORGANIZER / SPECIFIC EXPECTATION	E1.1.	analyse long-term impacts of human uses of energy and natural resources, on society and the environment, including climate change, and suggest ways to mitigate these impacts
SUB- ORGANIZER / SPECIFIC EXPECTATION	E1.3.	analyse how First Nations, Métis, and Inuit communities use their knowledges and ways of knowing to conserve energy and resources

## The Ontario Curriculum Science

Grade 6 - Adopted: 2022

STRAND / COURSE		Science and Technology Grade 6
STRAND / OVERALL EXPECTATION	STRAND A:	STEM Skills and Connections - Throughout Grade 6, 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	A1.	STEM Investigation and Communication Skills: use a scientific research process, a scientific experimentation process, and an engineering design process to conduct investigations, following appropriate health and safety procedures
SUB- ORGANIZER / SPECIFIC EXPECTATION	A1.3.	use an engineering design process and associated skills to design, build, and test devices, models, structures, and/or systems
SUB- ORGANIZER / SPECIFIC EXPECTATION	A1.5.	communicate their findings, using science and technology vocabulary and formats that are appropriate for specific audiences and purposes
STRAND / COURSE		Science and Technology Grade 6
STRAND / OVERALL EXPECTATION	STRAND A:	STEM Skills and Connections - Throughout Grade 6, in connection with the learning in the Life Systems, Matter and Energy, Structures and Mechanisms, and Earth and Space Systems strands, students will:
OVERALL		Systems, Matter and Energy, Structures and Mechanisms, and Earth and Space Systems strands,
OVERALL EXPECTATION STAGE /	A:	Systems, Matter and Energy, Structures and Mechanisms, and Earth and Space Systems strands, students will:  Coding and Emerging Technologies: use coding in investigations and to model concepts, and assess
OVERALL EXPECTATION  STAGE / SKILLS  SUB- ORGANIZER / SPECIFIC	A: A2.	Systems, Matter and Energy, Structures and Mechanisms, and Earth and Space Systems strands, students will:  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  write and execute code in investigations and when modelling concepts, with a focus on obtaining input in different

STRAND / OVERALL EXPECTATION	A:	STEM Skills and Connections - Throughout Grade 6, 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		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 investigate how science and technology can be used with other subject areas to address realworld problems

STRAND / COURSE		Science and Technology Grade 6
STRAND / OVERALL EXPECTATION	STRAND B:	Life Systems - Biodiversity By the end of Grade 6, students will:
ST AGE / SKILLS	B1.	Relating Science and Technology to Our Changing World: assess the importance of biodiversity, and describe ways of protecting biodiversity

SUB-ORGANIZER / SPECIFIC EXPECTATION B1.2.

A3.2.

analyse a local issue related to biodiversity while considering different perspectives; plan a course of action in response to the issue; and act on their plan

STRAND / COURSE		Science and Technology Grade 6
STRAND / OVERALL EXPECTATION	STRAND B:	Life Systems - Biodiversity By the end of Grade 6, students will:
STAGE / SKILLS	B2.	Exploring and Understanding Concepts: demonstrate an understanding of biodiversity, its contributions to the stability of natural systems, and its benefits to humans

SUB-ORGANIZER / SPECIFIC EXPECTATION B2.8.

describe the importance of biodiversity in supporting agriculture, including Indigenous agriculture around the world