

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, 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: 3, 4, Key Stage 1, Key Stage 2

Forward Education

Protecting Pollinators with a Bee Counter

Alberta Programs of Study

Science

Grade 3 - Adopted: 1996

GENERAL OUTCOME / COURSE	AB.3-2.	Science Inquiry: Identify patterns and order in objects and events studied; and, with guidance, record observations, using pictures, words and charts; and make predictions and generalizations, based on observations.
GENERAL OUTCOME / SPECIFIC OUTCOME	3-2.3.	Explore and Investigate: Students will identify, with guidance, procedures to be followed in finding answers to given questions.
GENERAL OUTCOME / SPECIFIC OUTCOME	3-2.10.	Reflect and Interpret: Students will identify applications of what was learned.
GENERAL OUTCOME / COURSE	AB.3-3.	Problem Solving through Technology: Investigate a practical problem, and develop a possible solution.
GENERAL OUTCOME / SPECIFIC OUTCOME	3-3.1.	Focus: Students will identify the purpose of the object to be constructed: What is to be developed? What is it for?
GENERAL OUTCOME / SPECIFIC OUTCOME	3-3.4.	Explore and Investigate: Students will identify materials and how they are used.
GENERAL OUTCOME / SPECIFIC OUTCOME	3-3.7.	Reflect and Interpret: Students will communicate results of construction activities, using written and oral language and pictures.
GENERAL OUTCOME / SPECIFIC OUTCOME	3-3.8.	Reflect and Interpret: Students will evaluate the product and identify possible improvements.
GENERAL OUTCOME / SPECIFIC OUTCOME	3-3.9.	Reflect and Interpret: Students will identify new applications for the design or method of construction.
GENERAL OUTCOME / COURSE	AB.3-4.	Attitudes: Demonstrate positive attitudes for the study of science and for the application of science in responsible ways.

GENERAL OUTCOME / SPECIFIC OUTCOME	3-4.3.	Students will show growth in acquiring and applying inventiveness and willingness to consider new ideas.
GENERAL OUTCOME / SPECIFIC OUTCOME	3-4.9.	Students will show growth in acquiring and applying respect for living things and environments, and commitment for their care.
GENERAL OUTCOME / COURSE	AB.3-6.	Topic B: Building with a Variety of Materials: Use, safely, a variety of tools, techniques and materials in construction activities.
GENERAL OUTCOME / COURSE	AB.3-7.	Topic B: Building with a Variety of Materials: Construct structures, using a variety of materials and designs, and compare the effectiveness of the various materials and designs for their intended purposes.
GENERAL OUTCOME / SPECIFIC OUTCOME	3-7.2.	Select appropriate materials for use in construction tasks, and explain the choice of materials. Students should demonstrate familiarity with a variety of materials, such as papers, woods, plastics, clay and metals.
GENERAL OUTCOME / COURSE	AB.3-8.	Topic C: Testing Materials and Designs: Evaluate the suitability of different materials and designs for their use in a building task.
GENERAL OUTCOME / SPECIFIC OUTCOME	3-8.1.	Recognize that functional structures must be sufficiently strong and stable and that unstable or weak structures are often unsafe to use.
GENERAL OUTCOME / SPECIFIC OUTCOME	3-8.2.	Compare and evaluate the strength and stability of different models or objects constructed.
GENERAL OUTCOME / SPECIFIC OUTCOME	3-8.4.	Apply procedures to test the strength of construction materials, in particular, different stocks of papers, plastics or wood.
GENERAL OUTCOME / SPECIFIC OUTCOME	3-8.5.	Apply procedures to test different designs.
GENERAL OUTCOME / SPECIFIC OUTCOME	3-8.7.	Identify and apply methods for making a structure stronger and more stable; e.g., by adding or joining parts to form triangles.
GENERAL OUTCOME / COURSE	AB.3-11.	Topic E: Animal Life Cycles: Identify requirements for animal care.

GENERAL OUTCOME / SPECIFIC OUTCOME	3-11.9.	Recognize that habitat preservation can help maintain animal populations, and identify ways that student actions can assist habitat preservation.
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Alberta Programs of Study

Science

Grade 4 - Adopted: 1996

GENERAL OUTCOME / COURSE	AB.4-2.	Science Inquiry: Identify patterns and order in objects and events studied; and record observations, using pictures, words and charts, with guidance in the construction of charts; and make predictions and generalizations, based on observations.
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GENERAL OUTCOME / SPECIFIC OUTCOME	4-2.3.	Explore and Investigate: Students will identify, with guidance, ways of finding answers to given questions.
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GENERAL OUTCOME / SPECIFIC OUTCOME	4-2.11.	Reflect and Interpret: Students will identify possible applications of what was learned.
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GENERAL OUTCOME / COURSE	AB.4-3.	Problem Solving through Technology: Investigate a practical problem, and develop a possible solution.
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GENERAL OUTCOME / SPECIFIC OUTCOME	4-3.1.	Focus: Students will identify the purpose of problem-solving and construction activities: What problem do we need to solve? What needs must be met?
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GENERAL OUTCOME / SPECIFIC OUTCOME	4-3.3.	Explore and Investigate: Students will identify materials and how they are used.
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GENERAL OUTCOME / SPECIFIC OUTCOME	4-3.4.	Explore and Investigate: Students will attempt a variety of strategies and modify procedures, as needed (troubleshoot problems) .
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GENERAL OUTCOME / SPECIFIC OUTCOME	4-3.8.	Reflect and Interpret: Students will evaluate a product, based on a given set of questions or criteria. The criteria/questions may be provided by the teacher or developed by the students. .
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GENERAL OUTCOME / SPECIFIC OUTCOME	4-3.9.	Reflect and Interpret: Students will identify possible improvements to the product.
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GENERAL OUTCOME / SPECIFIC OUTCOME	4-3.10.	Reflect and Interpret: Students will identify new applications for the design or method of construction.
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GENERAL OUTCOME / COURSE	AB.4-4.	Attitudes: Demonstrate positive attitudes for the study of science and for the application of science in responsible ways.
GENERAL OUTCOME / SPECIFIC OUTCOME	4-4.3.	Students will show growth in acquiring and applying inventiveness and willingness to consider new ideas.
GENERAL OUTCOME / SPECIFIC OUTCOME	4-4.9.	Students will show growth in acquiring and applying respect for living things and environments, and commitment for their care.
GENERAL OUTCOME / COURSE	AB.4-8.	Topic C: Building Devices and Vehicles that Move: Explore and evaluate variations to the design of a mechanical device, demonstrating that control is an important element in the design and construction of that device.
GENERAL OUTCOME / SPECIFIC OUTCOME	4-8.5.	Compare two designs, identifying the relative strengths and weaknesses of each.
GENERAL OUTCOME / SPECIFIC OUTCOME	4-8.7.	Design and construct several different models of a device and evaluate each model, working cooperatively with other students.
GENERAL OUTCOME / COURSE	AB.4-10.	Topic E: Plant Growth and Changes: Demonstrate knowledge and skills for the study, interpretation, propagation and enhancement of plant growth.
GENERAL OUTCOME / SPECIFIC OUTCOME	4-10.2.	Identify and describe the general purpose of plant roots, stems, leaves and flowers.
GENERAL OUTCOME / SPECIFIC OUTCOME	4-10.3.	Describe common plants, and classify them on the basis of their characteristics and uses.

**British Columbia Curriculum
Mathematics
Grade 3 - Adopted: 2016**

CURRICULUM ORGANIZER / COURSE	BC.MA.3.CC.	Curricular Competencies
PRESCRIBED LEARNING OUTCOME / ORGANIZER		Students are expected to be able to do the following:
EXPECTATION / SUB ORGANIZER	3.CC.1.	Reasoning and analyzing

PRESCRIBED LEARNING OUTCOME	3.CC.1.1.	Use reasoning to explore and make connections
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PRESCRIBED LEARNING OUTCOME	3.CC.1.5.	Model mathematics in contextualized experiences
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CURRICULUM ORGANIZER / COURSE	BC.MA.3.CC.	Curricular Competencies
PRESCRIBED LEARNING OUTCOME / ORGANIZER		Students are expected to be able to do the following:
EXPECTATION / SUB ORGANIZER	3.CC.2.	Understanding and solving

PRESCRIBED LEARNING OUTCOME	3.CC.2.1.	Develop, demonstrate, and apply mathematical understanding through play, inquiry, and problem solving
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PRESCRIBED LEARNING OUTCOME	3.CC.2.3.	Develop and use multiple strategies to engage in problem solving
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PRESCRIBED LEARNING OUTCOME	3.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
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CURRICULUM ORGANIZER / COURSE	BC.MA.3.CC.	Curricular Competencies
PRESCRIBED LEARNING OUTCOME / ORGANIZER		Students are expected to be able to do the following:
EXPECTATION / SUB ORGANIZER	3.CC.3.	Communicating and representing

PRESCRIBED LEARNING OUTCOME	3.CC.3.1.	Communicate mathematical thinking in many ways
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PRESCRIBED LEARNING OUTCOME	3.CC.3.3.	Explain and justify mathematical ideas and decisions
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PRESCRIBED LEARNING OUTCOME	3.CC.3.4.	Represent mathematical ideas in concrete, pictorial, and symbolic forms
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CURRICULUM ORGANIZER / COURSE	BC.MA.3.CC.	Curricular Competencies
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PRESCRIBED LEARNING OUTCOME / ORGANIZER		Students are expected to be able to do the following:
EXPECTATION / SUB ORGANIZER	3.CC.4.	Connecting and reflecting

PRESCRIBED LEARNING OUTCOME 3.CC.4.1. Reflect on mathematical thinking

PRESCRIBED LEARNING OUTCOME 3.CC.4.2. Connect mathematical concepts to each other and to other areas and personal interests

**British Columbia Curriculum
Mathematics
Grade 4 - Adopted: 2016**

CURRICULUM ORGANIZER / COURSE	BC.MA.4.CC.	Curricular Competencies
PRESCRIBED LEARNING OUTCOME / ORGANIZER		Students are expected to be able to do the following:
EXPECTATION / SUB ORGANIZER	4.CC.1.	Reasoning and analyzing

PRESCRIBED LEARNING OUTCOME 4.CC.1.1. Use reasoning to explore and make connections

PRESCRIBED LEARNING OUTCOME 4.CC.1.5. Model mathematics in contextualized experiences

CURRICULUM ORGANIZER / COURSE	BC.MA.4.CC.	Curricular Competencies
PRESCRIBED LEARNING OUTCOME / ORGANIZER		Students are expected to be able to do the following:
EXPECTATION / SUB ORGANIZER	4.CC.2.	Understanding and solving

PRESCRIBED LEARNING OUTCOME 4.CC.2.1. Develop, demonstrate, and apply mathematical understanding through play, inquiry, and problem solving

PRESCRIBED LEARNING OUTCOME 4.CC.2.3. Develop and use multiple strategies to engage in problem solving

PRESCRIBED LEARNING OUTCOME 4.CC.2.4. Engage in problem-solving experiences that are connected to place, story, cultural practices, and perspectives relevant to local First Peoples communities, the local community, and other cultures

CURRICULUM ORGANIZER / COURSE	BC.MA.4.CC.	Curricular Competencies
PRESCRIBED LEARNING OUTCOME / ORGANIZER		Students are expected to be able to do the following:
EXPECTATION / SUB ORGANIZER	4.CC.3.	Communicating and representing

PRESCRIBED LEARNING OUTCOME 4.CC.3.1. Communicate mathematical thinking in many ways

PRESCRIBED LEARNING OUTCOME 4.CC.3.3. Explain and justify mathematical ideas and decisions

PRESCRIBED LEARNING OUTCOME 4.CC.3.4. Represent mathematical ideas in concrete, pictorial, and symbolic forms

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

PRESCRIBED LEARNING OUTCOME 4.CC.4.1. Reflect on mathematical thinking

PRESCRIBED LEARNING OUTCOME 4.CC.4.2. Connect mathematical concepts to each other and to other areas and personal interests

CURRICULUM ORGANIZER / COURSE	BC.MA.4.C.	Content
PRESCRIBED LEARNING OUTCOME / ORGANIZER		Students are expected to know the following:

EXPECTATION / SUB ORGANIZER 4.C.9. Increasing and decreasing patterns, using tables and charts

Science

Grade 3 - Adopted: 2016

CURRICULUM ORGANIZER / COURSE	BC.SC.3. BI.	Big Ideas
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PRESCRIBED LEARNING OUTCOME / ORGANIZER 3.BI.1. Living things are diverse, can be grouped, and interact in their ecosystems.

CURRICULUM ORGANIZER / COURSE	BC.SC.3. CC.	Curricular Competencies
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PRESCRIBED LEARNING OUTCOME / ORGANIZER		Students are expected to be able to do the following
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EXPECTATION / SUB ORGANIZER	3.CC.2.	Planning and conducting
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PRESCRIBED LEARNING OUTCOME 3.CC.2.3. Safely use appropriate tools to make observations and measurements, using formal measurements and digital technology as appropriate

CURRICULUM ORGANIZER / COURSE	BC.SC.3. CC.	Curricular Competencies
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PRESCRIBED LEARNING OUTCOME / ORGANIZER		Students are expected to be able to do the following
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EXPECTATION / SUB ORGANIZER	3.CC.4.	Evaluating
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PRESCRIBED LEARNING OUTCOME 3.CC.4.4. Identify some simple environmental implications of their and others' actions

CURRICULUM ORGANIZER / COURSE	BC.SC.3. CC.	Curricular Competencies
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PRESCRIBED LEARNING OUTCOME / ORGANIZER		Students are expected to be able to do the following
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EXPECTATION / SUB ORGANIZER	3.CC.5.	Applying and innovating
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PRESCRIBED LEARNING OUTCOME 3.CC.5.1. Contribute to care for self, others, school, and neighbourhood through personal or collaborative approaches

PRESCRIBED LEARNING OUTCOME 3.CC.5.2. Co-operatively design projects

PRESCRIBED LEARNING OUTCOME	3.CC.5.3.	Transfer and apply learning to new situations
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PRESCRIBED LEARNING OUTCOME	3.CC.5.4.	Generate and introduce new or refined ideas when problem solving
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CURRICULUM ORGANIZER / COURSE	BC.SC.3.CC.	Curricular Competencies
PRESCRIBED LEARNING OUTCOME / ORGANIZER		Students are expected to be able to do the following
EXPECTATION / SUB ORGANIZER	3.CC.6.	Communicating

PRESCRIBED LEARNING OUTCOME	3.CC.6.1.	Represent and communicate ideas and findings in a variety of ways, such as diagrams and simple reports, using digital technologies as appropriate
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**British Columbia Curriculum
Science
Grade 4 - Adopted: 2016**

CURRICULUM ORGANIZER / COURSE	BC.SC.4.CC.	Curricular Competencies
PRESCRIBED LEARNING OUTCOME / ORGANIZER		Students are expected to be able to do the following
EXPECTATION / SUB ORGANIZER	4.CC.2.	Planning and conducting

PRESCRIBED LEARNING OUTCOME	4.CC.2.3.	Safely use appropriate tools to make observations and measurements, using formal measurements and digital technology as appropriate
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CURRICULUM ORGANIZER / COURSE	BC.SC.4.CC.	Curricular Competencies
PRESCRIBED LEARNING OUTCOME / ORGANIZER		Students are expected to be able to do the following
EXPECTATION / SUB ORGANIZER	4.CC.4.	Evaluating

PRESCRIBED LEARNING OUTCOME	4.CC.4.4.	Identify some simple environmental implications of their and others' actions
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CURRICULUM ORGANIZER / COURSE	BC.SC.4.CC.	Curricular Competencies
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PRESCRIBED LEARNING OUTCOME / ORGANIZER		Students are expected to be able to do the following
EXPECTATION / SUB ORGANIZER	4.CC.5.	Applying and innovating

PRESCRIBED LEARNING OUTCOME 4.CC.5.1. Contribute to care for self, others, school, and neighbourhood through individual or collaborative approaches

PRESCRIBED LEARNING OUTCOME 4.CC.5.2. Co-operatively design projects

PRESCRIBED LEARNING OUTCOME 4.CC.5.3. Transfer and apply learning to new situations

PRESCRIBED LEARNING OUTCOME 4.CC.5.4. Generate and introduce new or refined ideas when problem solving

CURRICULUM ORGANIZER / COURSE	BC.SC.4. CC.	Curricular Competencies
PRESCRIBED LEARNING OUTCOME / ORGANIZER		Students are expected to be able to do the following
EXPECTATION / SUB ORGANIZER	4.CC.6.	Communicating

PRESCRIBED LEARNING OUTCOME 4.CC.6.1. Represent and communicate ideas and findings in a variety of ways, such as diagrams and simple reports, using digital technologies as appropriate

**Manitoba Curriculum Frameworks
Mathematics
Grade 4 - Adopted: 2013**

STRAND / COURSE / GENERAL OUTCOME	MB.4.PR.	Patterns and Relations
STRAND / SPECIFIC OUTCOME		(Patterns) Use patterns to describe the world and solve problems.
GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	4.PR.1.	Identify and describe patterns found in tables and charts, including a multiplication chart. [C, CN, PS, V]

SPECIFIC OUTCOME / ACHIEVEMENT INDICATOR 4.PR.1.2. Determine the missing elements in a table or chart.

SPECIFIC OUTCOME / ACHIEVEMENT INDICATOR	4.PR.1.3.	Identify error(s) in a table or chart.
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SPECIFIC OUTCOME / ACHIEVEMENT INDICATOR	4.PR.1.4.	Describe the pattern found in a table or chart.
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STRAND / COURSE / GENERAL OUTCOME	MB.4.PR.	Patterns and Relations
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STRAND / SPECIFIC OUTCOME		(Patterns) Use patterns to describe the world and solve problems.
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GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	4.PR.3.	Represent and describe patterns and relationships using charts and tables to solve problems. [C, CN, PS, R, V]
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SPECIFIC OUTCOME / ACHIEVEMENT INDICATOR	4.PR.3.1.	Extend patterns found in a table or chart to solve a problem.
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SPECIFIC OUTCOME / ACHIEVEMENT INDICATOR	4.PR.3.2.	Translate the information provided in a problem into a table or chart.
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SPECIFIC OUTCOME / ACHIEVEMENT INDICATOR	4.PR.3.3.	Identify and extend the patterns in a table or chart to solve a problem.
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Manitoba Curriculum Frameworks

Science

Grade 3 - Adopted: 2006

STRAND / COURSE / GENERAL OUTCOME	MB.GLO-A.	Foundation A: Nature of Science and Technology
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STRAND / SPECIFIC OUTCOME	GLO-A3.	Distinguish critically between science and technology in terms of their respective contexts, goals, methods, products, and values
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STRAND / SPECIFIC OUTCOME	GLO-A5.	Recognize that science and technology interact with and advance one another
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STRAND / COURSE / GENERAL OUTCOME	MB.GLO-B.	Foundation B: Science, Technology, Society, and Environment (STSE)
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STRAND / SPECIFIC OUTCOME	GLO-B1.	Describe scientific and technological developments, past and present, and appreciate their impact on individuals, societies and the environment, both locally and globally.
STRAND / SPECIFIC OUTCOME	GLO-B2.	Recognize that scientific and technological endeavors have been and continue to be influenced by human needs and the societal context of the time
STRAND / SPECIFIC OUTCOME	GLO-B5.	Identify and demonstrate actions that promote a sustainable environment, society and economy, both locally and globally

STRAND / COURSE / GENERAL OUTCOME	MB.GLO-C.	Foundation C: Scientific and Technological Skills and Attitudes
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STRAND / SPECIFIC OUTCOME	GLO-C3.	Demonstrate appropriate problem-solving skills while seeking solutions to technological challenges
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 / COURSE / GENERAL OUTCOME	MB.GLO-D.	Foundation D: Essential Science Knowledge
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STRAND / SPECIFIC OUTCOME	GLO-D1.	Understand essential life structures and processes pertaining to a wide variety of organisms, including humans
STRAND / SPECIFIC OUTCOME	GLO-D2.	Understand various biotic and abiotic components of ecosystems, as well as their interaction and interdependence within ecosystems and within the biosphere as a whole

STRAND / COURSE / GENERAL OUTCOME	MB.GLO-E.	Foundation E: Unifying Concepts
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STRAND / SPECIFIC OUTCOME	GLO-E1.	Describe and appreciate the similarity and diversity of forms, functions, and patterns within the natural and constructed world
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STRAND / COURSE / GENERAL OUTCOME	MB.3-0.	Overall Skills and Attitudes - Specific Learning Outcomes
STRAND / SPECIFIC OUTCOME	3-0-4.	Implementing a Plan

GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	3-0-4b.	Construct an object or device to solve a problem or meet a need. (GLO: C3)
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GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	3-0-4c.	Test an object or device with respect to pre-determined criteria. (GLO: C3, C5)
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GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	3-0-4d.	Identify and make improvements to an object or device, and explain the rationale for the changes. (GLO: C3)
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STRAND / COURSE / GENERAL OUTCOME	MB.3-0.	Overall Skills and Attitudes - Specific Learning Outcomes
STRAND / SPECIFIC OUTCOME	3-0-5.	Observing, Measuring, Recording

GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	3-0-5b.	Use tools to observe, measure, and construct. (GLO: C2, C3, C5)
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STRAND / COURSE / GENERAL OUTCOME	MB.3-0.	Overall Skills and Attitudes - Specific Learning Outcomes
STRAND / SPECIFIC OUTCOME	3-0-6.	Analysing and Interpreting

GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	3-0-6c.	Place materials and objects in a sequence or in groups using two or more attributes, and describe the system used. (GLO: C2, C3, C5)
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STRAND / COURSE / GENERAL OUTCOME	MB.3-0.	Overall Skills and Attitudes - Specific Learning Outcomes
STRAND / SPECIFIC OUTCOME	3-0-7.	Concluding and Applying

GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	3-0-7c.	Identify new problems that arise. (GLO: C3)
STRAND / COURSE / GENERAL OUTCOME	MB.3-0.	Overall Skills and Attitudes - Specific Learning Outcomes
STRAND / SPECIFIC OUTCOME	3-0-8.	Reflecting on Science and Technology
GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	3-0-8b.	Recognize that scientists develop explanations from observations and what they already know about the world, and that good explanations are based on evidence. (GLO: A1, A2, C2)
GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	3-0-8c.	Recognize that designing a solution to a simple problem may have considerations, such as cost, materials, time, and space. (GLO: B2, C3)
STRAND / COURSE / GENERAL OUTCOME	MB.3-1.	Growth and Changes in Plants - Specific Learning Outcomes
STRAND / SPECIFIC OUTCOME	3-1-01.	Use appropriate vocabulary related to their investigations of growth and changes in plants. (GLO: C6, D1)
STRAND / SPECIFIC OUTCOME	3-1-02.	Observe, compare, and contrast the structure and appearance of several types of plants. (GLO: C2, D1, E1)
STRAND / SPECIFIC OUTCOME	3-1-07.	Identify the basic parts of plants and describe their functions. (GLO: D1, E2)
STRAND / SPECIFIC OUTCOME	3-1-10.	Care for a flowering plant throughout its life cycle, tracking its growth, and its changes over time. (GLO: B5, C5, D1, E3)
STRAND / SPECIFIC OUTCOME	3-1-11.	Identify characteristics that remain constant and those that change throughout the life cycle of a flowering plant. (GLO: D1, E3)
STRAND / SPECIFIC OUTCOME	3-1-13.	Describe ways that plants and animals depend on each other. (GLO: D2, E2)
STRAND / SPECIFIC OUTCOME	3-1-15.	Identify and describe hobbies and jobs involving plants. (GLO: B4)

STRAND / SPECIFIC OUTCOME	3-1-18.	Explain how humans replenish the plants they use and the consequences if plants are not replenished. (GLO: B1, B5, E3)
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STRAND / COURSE / GENERAL OUTCOME	MB.3-2.	Materials and Structures - Specific Learning Outcomes
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STRAND / SPECIFIC OUTCOME	3-2-06.	Explore to determine ways to improve the strength and stability of a frame structure. (GLO: C2, D4, E2)
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Manitoba Curriculum Frameworks
Science
Grade 4 - Adopted: 2006

STRAND / COURSE / GENERAL OUTCOME	MB.GLO- A.	Foundation A: Nature of Science and Technology
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STRAND / SPECIFIC OUTCOME	GLO-A3.	Distinguish critically between science and technology in terms of their respective contexts, goals, methods, products, and values
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STRAND / SPECIFIC OUTCOME	GLO-A5.	Recognize that science and technology interact with and advance one another
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STRAND / COURSE / GENERAL OUTCOME	MB.GLO- B.	Foundation B: Science, Technology, Society, and Environment (STSE)
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STRAND / SPECIFIC OUTCOME	GLO-B1.	Describe scientific and technological developments, past and present, and appreciate their impact on individuals, societies and the environment, both locally and globally.
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STRAND / SPECIFIC OUTCOME	GLO-B2.	Recognize that scientific and technological endeavors have been and continue to be influenced by human needs and the societal context of the time
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STRAND / SPECIFIC OUTCOME	GLO-B5.	Identify and demonstrate actions that promote a sustainable environment, society and economy, both locally and globally
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STRAND / COURSE / GENERAL OUTCOME	MB.GLO- C.	Foundation C: Scientific and Technological Skills and Attitudes
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STRAND / SPECIFIC OUTCOME	GLO-C3.	Demonstrate appropriate problem-solving skills while seeking solutions to technological challenges
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STRAND / SPECIFIC OUTCOME	GLO-C4.	Demonstrate appropriate critical thinking and decision-making skills when choosing a course of action based on scientific and technological information
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STRAND / SPECIFIC OUTCOME	GLO-C5.	Demonstrate curiosity, scepticism, creativity, open-mindedness, accuracy, precision, honesty, and persistence, and appreciate their importance as scientific and technological habits of mind
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STRAND / SPECIFIC OUTCOME	GLO-C6.	Employ effective communication skills and utilize information technology to gather and share scientific and technological ideas and data
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STRAND / COURSE / GENERAL OUTCOME	MB.GLO-D.	Foundation D: Essential Science Knowledge
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STRAND / SPECIFIC OUTCOME	GLO-D1.	Understand essential life structures and processes pertaining to a wide variety of organisms, including humans
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STRAND / SPECIFIC OUTCOME	GLO-D2.	Understand various biotic and abiotic components of ecosystems, as well as their interaction and interdependence within ecosystems and within the biosphere as a whole
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STRAND / COURSE / GENERAL OUTCOME	MB.GLO-E.	Foundation E: Unifying Concepts
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STRAND / SPECIFIC OUTCOME	GLO-E1.	Describe and appreciate the similarity and diversity of forms, functions, and patterns within the natural and constructed world
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STRAND / COURSE / GENERAL OUTCOME	MB.4-0.	Overall Skills and Attitudes - Specific Learning Outcomes
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STRAND / SPECIFIC OUTCOME	4-0-3.	Planning
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GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	4-0-3f.	Develop criteria to evaluate an object, device, or system based on its function, aesthetics, and other considerations such as materials, and cost. (GLO: C3)
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STRAND / COURSE / GENERAL OUTCOME	MB.4-0.	Overall Skills and Attitudes - Specific Learning Outcomes
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STRAND / SPECIFIC OUTCOME	4-0-4.	Implementing a Plan
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GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	4-0-4b.	Construct an object, device, or system to solve a problem or meet a need. (GLO: C3)
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GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	4-0-4c.	Test an object, device, or system with respect to pre-determined criteria. (GLO: C3, C5)
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GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	4-0-4d.	Identify and make improvements to an object, device, or system, and explain the rationale for the changes. (GLO: C3)
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GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	4-0-4g.	Communicate questions, ideas and intentions, and listen effectively to others during classroom-learning experiences. (GLO: C6)
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STRAND / COURSE / GENERAL OUTCOME	MB.4-0.	Overall Skills and Attitudes - Specific Learning Outcomes
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STRAND / SPECIFIC OUTCOME	4-0-5.	Observing, Measuring, Recording
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GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	4-0-5a.	Select and use tools to observe, measure, and construct. (GLO: C2, C3, C5)
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STRAND / COURSE / GENERAL OUTCOME	MB.4-0.	Overall Skills and Attitudes - Specific Learning Outcomes
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STRAND / SPECIFIC OUTCOME	4-0-7.	Concluding and Applying
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GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	4-0-7c.	Identify new problems that arise. (GLO: C3)
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STRAND / COURSE / GENERAL OUTCOME	MB.4-0.	Overall Skills and Attitudes - Specific Learning Outcomes
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STRAND / SPECIFIC OUTCOME	4-0-8.	Reflecting on Science and Technology
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GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	4-0-8b.	Recognize that scientists must support their explanations using evidence and scientific knowledge. (GLO: A1, A2, C2)
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GENERAL OUTCOME / SPECIFIC OUTCOME / SKILL	4-0-8c.	Recognize that designing a solution to a simple problem may have considerations, such as cost, materials, time, and space. (GLO: B2, C3)
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STRAND / COURSE / GENERAL OUTCOME	MB.4-1.	Habitats and Communities - Specific Learning Outcomes
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STRAND / SPECIFIC OUTCOME	4-1-14.	Investigate natural and human-caused changes to habitats, and identify resulting effects on plant and animal populations. (GLO: B1, B5, D2, E3)
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STRAND / SPECIFIC OUTCOME	4-1-15.	Describe how their actions can help conserve plant and animal populations and their habitats. (GLO: B5)
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**New Brunswick Curriculum
Mathematics
Grade 3 - Adopted: 2010**

DOCUMENT/GENERAL LEARNING OUTCOME		Grade 3
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CATEGORY		MATHEMATICAL PROCESSES
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SECTION/SPECIFIC LEARNING OUTCOME	C.	communicate in order to learn and express their understanding of mathematics (Communications: C)
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SECTION/SPECIFIC LEARNING OUTCOME	PS.	develop and apply new mathematical knowledge through problem solving (Problem Solving: PS)
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SECTION/SPECIFIC LEARNING OUTCOME	R.	develop mathematical reasoning (Reasoning: R)
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SECTION/SPECIFIC LEARNING OUTCOME	T.	select and use technologies as tools for learning and solving problems (Technology: T)
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SECTION/SPECIFIC LEARNING OUTCOME	V.	develop visualization skills to assist in processing information, making connections and solving problems (Visualization: V).
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**New Brunswick Curriculum
Mathematics
Grade 4 - Adopted: 2008**

DOCUMENT/GENERAL LEARNING OUTCOME		Grade 4
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CATEGORY		MATHEMATICAL PROCESSES
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SECTION/SPECIFIC LEARNING OUTCOME	C.	communicate in order to learn and express their understanding of mathematics (Communications: C)
SECTION/SPECIFIC LEARNING OUTCOME	PS.	develop and apply new mathematical knowledge through problem solving (Problem Solving: PS)
SECTION/SPECIFIC LEARNING OUTCOME	R.	develop mathematical reasoning (Reasoning: R)
SECTION/SPECIFIC LEARNING OUTCOME	T.	select and use technologies as tools for learning and solving problems (Technology: T)
SECTION/SPECIFIC LEARNING OUTCOME	V.	develop visualization skills to assist in processing information, making connections and solving problems (Visualization: V).

**New Brunswick Curriculum
Science
Grade 3 - Adopted: 2002**

DOCUMENT/GENERAL LEARNING OUTCOME		Atlantic Canada Science Curriculum (Specific curriculum outcomes)
CATEGORY		Science 3 Curriculum
SECTION/SPECIFIC LEARNING OUTCOME		Unit 1 – Life Science: Plant Growth and Changes
UNIT/SPECIFIC LEARNING OUTCOME		Investigating Germination and Growing Conditions for Plants

SPECIFIC LEARNING OUTCOME identify and describe parts of plants and their general function (100-28, 203-2)

DOCUMENT/GENERAL LEARNING OUTCOME		Atlantic Canada Science Curriculum (Specific curriculum outcomes)
CATEGORY		Science 3 Curriculum
SECTION/SPECIFIC LEARNING OUTCOME		Unit 1 – Life Science: Plant Growth and Changes
UNIT/SPECIFIC LEARNING OUTCOME		Uses for Plants

SPECIFIC LEARNING OUTCOME describe ways in which plants are important to living things and the environment (102-12)

SPECIFIC LEARNING OUTCOME	identify parts of different plants that provide humans with useful products, and describe the preparation that is required to obtain these products and how our supply of useful plants is replenished (102-13)
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SPECIFIC LEARNING OUTCOME	respond to the ideas and actions of others and acknowledge their ideas about the uses and replenishing of plants (203-5)
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**New Brunswick Curriculum
Science
Grade 4 - Adopted: 2002**

DOCUMENT/GENERAL LEARNING OUTCOME	Atlantic Canada Science Curriculum (Specific curriculum outcomes)
CATEGORY	Science 4 Curriculum
SECTION/SPECIFIC LEARNING OUTCOME	Unit 1 – Life Science: Habitats
UNIT/SPECIFIC LEARNING OUTCOME	Habitats and Populations

SPECIFIC LEARNING OUTCOME	identify their own and their families' impact on habitats, and describe how personal actions help conserve habitats (108-6, 108-3)
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DOCUMENT/GENERAL LEARNING OUTCOME	Atlantic Canada Science Curriculum (Specific curriculum outcomes)
CATEGORY	Science 4 Curriculum
SECTION/SPECIFIC LEARNING OUTCOME	Unit 1 – Life Science: Habitats
UNIT/SPECIFIC LEARNING OUTCOME	Structural Features of Plants that Enable them to Survive in their Habitat

SPECIFIC LEARNING OUTCOME	using appropriate terminology to compare the structural features of plants that enable them to thrive in different kinds of places (300-2, 104-6)
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SPECIFIC LEARNING OUTCOME	describe how scientists' knowledge of plant growth has led to agricultural innovations and techniques (106-4)
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DOCUMENT/GENERAL LEARNING OUTCOME	Atlantic Canada Science Curriculum (Specific curriculum outcomes)
CATEGORY	Science 4 Curriculum
SECTION/SPECIFIC LEARNING OUTCOME	Unit 1 – Life Science: Habitats

UNIT/SPECIFIC LEARNING OUTCOME		Food Chains
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SPECIFIC LEARNING OUTCOME

predict how the removal of a plant or animal population affects the rest of the community (301-1)

DOCUMENT/GENERAL LEARNING OUTCOME		Atlantic Canada Science Curriculum (Specific curriculum outcomes)
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CATEGORY		Science 4 Curriculum
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SECTION/SPECIFIC LEARNING OUTCOME		Unit 4 – Earth and Space Science: Rocks, Minerals, and Erosion
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UNIT/SPECIFIC LEARNING OUTCOME		Collecting and Comparing Rocks and Minerals
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SPECIFIC LEARNING OUTCOME

demonstrate respect for the habitats of animals and the local environment when collecting rocks and/or minerals from their local area (108-3)

**Newfoundland and Labrador Curriculum Guides
Mathematics
Grade 4 - Adopted: 2014**

COURSE / STRAND	NL.4PR.	Patterns and Relations
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STRAND / GCO		Patterns: Use patterns to describe the world and to solve problems.
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GCO / SCO	4PR1.	Identify and describe patterns found in tables and charts, including a multiplication chart. [C, CN, PS, V]
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OUTCOME / INDICATOR

4PR1.1. Describe the pattern found in a given table or chart.

OUTCOME / INDICATOR

4PR1.2. Determine the missing element(s) in a given table or chart.

OUTCOME / INDICATOR

4PR1.3. Identify the error(s) in a given table or chart.

COURSE / STRAND	NL.4PR.	Patterns and Relations
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STRAND / GCO		Patterns: Use patterns to describe the world and to solve problems.
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GCO / SCO	4PR3.	Represent, describe and extend patterns and relationships, using charts and tables, to solve problems. [C, CN, PS, R, V]
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OUTCOME / INDICATOR

4PR3.1. Translate the information in a given problem into a table or chart.

COURSE / STRAND	NL.4PR.	Patterns and Relations
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STRAND / GCO		Patterns: Use patterns to describe the world and to solve problems.
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GCO / SCO	4PR4.	Identify and explain mathematical relationships, using charts and diagrams, to solve problems.
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OUTCOME / INDICATOR 4PR4.7. Solve a given problem by using a chart or diagram to identify mathematical relationships.

**Newfoundland and Labrador Curriculum Guides
Science**

Grade 3 - Adopted: 2017

COURSE / STRAND	NL.3.GCO.	General Curriculum Outcomes
STRAND / GCO	3.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 3.GCO.1.1. Investigate objects and events in their immediate environment, and use appropriate language to develop understandings and to communicate results

GCO / SCO 3.GCO.1.2. Demonstrate and describe ways of using materials and tools to help answer science questions and to solve practical problems

GCO / SCO 3.GCO.1.3. Describe how science and technology affect their lives and those of people and other living things in their community

GCO / SCO 3.GCO.1.4. Undertake personal actions to care for the immediate environment and contribute to responsible group decisions

COURSE / STRAND	NL.3.GCO.	General Curriculum Outcomes
STRAND / GCO	3.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 3.GCO.2.3. Identify patterns and order in objects and events studied

COURSE / STRAND	NL.3.GCO.	General Curriculum Outcomes
STRAND / GCO	3.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 3.GCO.3.1. Investigate objects and events in their immediate environment, and use appropriate language to develop understandings and to communicate results

GCO / SCO 3.GCO.3.2. Demonstrate and describe ways of using materials and tools to help answer science questions and to solve practical problems

GCO / SCO 3.GCO.3.3. Describe how science and technology affect their lives and those of people and other living things in their community

GCO / SCO 3.GCO.3.4. Undertake personal actions to care for the immediate environment and contribute to responsible group decisions

COURSE / STRAND	NL.3.GCO.	General Curriculum Outcomes
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STRAND / GCO	3.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	3.GCO.4.2.	Show interest in and curiosity about objects and events within their immediate environment
GCO / SCO	3.GCO.4.6.	Be open-minded while exploring and investigating
GCO / SCO	3.GCO.4.8.	Be sensitive to the needs of other people, other living things, and the local environment

COURSE / STRAND	NL.3.SCO.	Specific Curriculum Outcomes
STRAND / GCO	3.SCO.2.	Unit 2: Materials and Structures
GCO / SCO		How Are Building Materials Joined Together?

OUTCOME / INDICATOR 3.SCO.2.25.0. Investigate ways to join materials and identify the most appropriate methods for the materials to be joined [GCO 1/3]

COURSE / STRAND	NL.3.SCO.	Specific Curriculum Outcomes
STRAND / GCO	3.SCO.4.	Unit 4: Plant Growth and Changes
GCO / SCO		Communicating about Plants

OUTCOME / INDICATOR 3.SCO.4.45.0. Identify and describe parts of plants and their general function [GCO 1/3]

OUTCOME / INDICATOR 3.SCO.4.2.0. Communicate using scientific terminology [GCO 2]

COURSE / STRAND	NL.3.SCO.	Specific Curriculum Outcomes
STRAND / GCO	3.SCO.4.	Unit 4: Plant Growth and Changes
GCO / SCO		Why are Plants Important?

OUTCOME / INDICATOR 3.SCO.4.49.0. Describe ways in which plants are important to living things and the environment [GCO 1/3]

OUTCOME / INDICATOR 3.SCO.4.50.0. Identify parts of different plants that provide humans with useful products, and describe the preparation that is required to obtain these products and how our supply of useful plants is replenished [GCO 1/3]

Newfoundland and Labrador Curriculum Guides
Science
Grade 4 - Adopted: 2016

COURSE / STRAND	NL.4.GCO.	General Curriculum Outcomes
STRAND / GCO	4.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	4.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	4.GCO.1.3.	Describe ways that science and technology work together in investigating questions and problems and in meeting specific needs
GCO / SCO	4.GCO.1.4.	Describe applications of science and technology that have developed in response to human and environmental needs
GCO / SCO	4.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.4.GCO.	General Curriculum Outcomes
STRAND / GCO	4.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	4.GCO.3.2.	Describe and predict causes, effects, and patterns related to change in living and non-living things
GCO / SCO	4.GCO.3.3.	Describe interactions within natural systems and the elements required to maintain these systems

COURSE / STRAND	NL.4.GCO.	General Curriculum Outcomes
STRAND / GCO	4.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	4.GCO.4.1.	Appreciate the role and contribution of science and technology in their understanding of the world
GCO / SCO	4.GCO.4.2.	Realize that the applications of science and technology can have both intended and unintended effects
GCO / SCO	4.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.4.SCO.	Specific Curriculum Outcomes
STRAND / GCO	4.SCO.i.	Unit i: Integrated Skills
GCO / SCO		Initiating and Planning

OUTCOME / INDICATOR	4.SCO.i.5.0.	Devise procedures to carry out a fair test and to solve a practical problem [GCO 2]
OUTCOME / INDICATOR	4.SCO.i.6.0.	Identify appropriate tools, instruments, and materials to complete investigations [GCO 2]

COURSE / STRAND	NL.4.SCO.	Specific Curriculum Outcomes
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STRAND / GCO	4.SCO.i.	Unit i: Integrated Skills
GCO / SCO		Performing and Recording

OUTCOME / INDICATOR 4.SCO.i.8 Select and use tools [GCO 2]
.0.

OUTCOME / INDICATOR 4.SCO.i.9 Follow procedures [GCO 2]
.0.

OUTCOME / INDICATOR 4.SCO.i.1 Select and use tools for measuring [GCO 2]
0.0.

OUTCOME / INDICATOR 4.SCO.i.1 Identify and use a variety of sources and technologies to gather relevant information [GCO 2]
3.0.

OUTCOME / INDICATOR 4.SCO.i.1 Construct and use devices for a specific purpose [GCO 2]
4.0.

COURSE / STRAND	NL.4.SCO	Specific Curriculum Outcomes
STRAND / GCO	4.SCO.i.	Unit i: Integrated Skills
GCO / SCO		Analyzing and Interpreting

OUTCOME / INDICATOR 4.SCO.i.1 Suggest improvements to a design or constructed object [GCO 2]
9.0.

OUTCOME / INDICATOR 4.SCO.i.2 Evaluate personally constructed devices [GCO 2]
0.0.

COURSE / STRAND	NL.4.SCO	Specific Curriculum Outcomes
STRAND / GCO	4.SCO.4	Unit 4: Habitats and Communities
GCO / SCO		Investigating Local Habitats

OUTCOME / INDICATOR 4.SCO.4. Identify various methods for finding answers to questions and solutions to problems, and select one that is appropriate [GCO 2]
4.0.

COURSE / STRAND	NL.4.SCO	Specific Curriculum Outcomes
STRAND / GCO	4.SCO.4	Unit 4: Habitats and Communities
GCO / SCO		How Can We Take Action on Climate Change?

OUTCOME / INDICATOR 4.SCO.4. Describe how personal actions help conserve natural resources and care for living things and their habitats [GCO 1]
38.0.

STRAND / DOMAIN	ACSHE.3.	Science as a Human Endeavour
OUTCOME / INDICATOR	ACSHE. 3.1.	Nature and development of science
INDICATOR	ACSHE. 3.1.1.	Science involves making predictions and describing patterns and relationships (ACSHE050)

INDICATOR ACSHE.3. Making predictions about change and events in our environment
1.1.1.

STRAND / DOMAIN	ACSIS.3.	Science Inquiry Skills
OUTCOME / INDICATOR	ACSIS.3. 2.	Planning and conducting
INDICATOR	ACSIS.3 .2.2.	Consider the elements of fair tests and use formal measurements and digital technologies as appropriate, to make and record observations accurately (ACSIS055)

INDICATOR ACSIS.3. Using a variety of tools to make observations, such as digital cameras, thermometers, rulers and scales
2.2.2.

STRAND / DOMAIN	ACSIS.3.	Science Inquiry Skills
OUTCOME / INDICATOR	ACSIS.3. 5.	Communicating
INDICATOR	ACSIS.3 .5.1.	Represent and communicate observations, ideas and findings using formal and informal representations (ACSIS060)

INDICATOR ACSIS.3. Using simple explanations and arguments, reports or graphical representations to communicate ideas to other students
5.1.3.

**Northern Territory Curriculum
Science
Grade 4 - Adopted: 2016**

STRAND / DOMAIN	ACSHE.4.	Science as a Human Endeavour
OUTCOME / INDICATOR	ACSHE. 4.2.	Use and influence of science
INDICATOR	ACSHE. 4.2.1.	Science knowledge helps people to understand the effect of their actions (ACSHE062)

INDICATOR ACSHE.4 Exploring how science has contributed to a discussion about an issue such as loss of habitat for living things or how human activity has changed the local environment
.2.1.3.

STRAND / DOMAIN	ACSIS.4.	Science Inquiry Skills
OUTCOME / INDICATOR	ACSIS.4. 5.	Communicating
INDICATOR	ACSIS.4 .5.1.	Represent and communicate observations, ideas and findings using formal and informal representations (ACSIS071)

INDICATOR ACSIS.4. Using simple explanations and arguments, reports or graphical representations to communicate ideas to other students
5.1.2.

Technology Education

Grade 3 - Adopted: 2016 (ACARA)

STRAND / DOMAIN		Design and Technologies
OUTCOME / INDICATOR	ACTDEP .3-4.	Design and Technologies Processes and Production Skills
INDICATOR	ACTDE P.3-4.2.	Generate, develop, and communicate design ideas and decisions using appropriate technical terms and graphical representation techniques (ACTDEP015)

INDICATOR ACTDEP. Exploring ways of joining, connecting and assembling components that ensure success
3-4.2.1.

INDICATOR ACTDEP. Generating a range of design ideas for intended products, services, environments
3-4.2.2.

INDICATOR ACTDEP. Identifying the properties of materials needed for the designed solution
3-4.2.3.

INDICATOR ACTDEP. Visualising and exploring innovative design ideas by producing thumbnail drawings, models and labelled drawings
3-4.2.4. to explain features and modifications

INDICATOR ACTDEP. Planning, sharing and documenting creative ideas and processes using digital tools such as a class blog or
3-4.2.5. collaborative document

STRAND / DOMAIN		Digital Technologies
OUTCOME / INDICATOR	ACTDIP. 3-4.	Digital Technologies Processes and Production Skills
INDICATOR	ACTDIP. 3-4.4.	Define simple problems, and describe and follow a sequence of steps and decisions (algorithms) needed to solve them (ACTDIP010)

INDICATOR ACTDIP.3 explaining what the problem is and some features of the problem, such as what need is associated with the
-4.4.1. problem, who has the problem and why

INDICATOR ACTDIP.3 describing, using drawings, pictures and text, the sequence of steps and decisions in a solution, for example to
-4.4.2. show the order of events in a game and the decisions that a player must make

INDICATOR ACTDIP.3 experimenting with different ways of describing a set of instructions, for example writing two versions of the same
-4.4.3. simple set of instructions for a programmable robotic device

Northern Territory Curriculum

Technology Education

Grade 4 - Adopted: 2016 (ACARA)

STRAND / DOMAIN		Design and Technologies
OUTCOME / INDICATOR	ACTDEP .3-4.	Design and Technologies Processes and Production Skills
INDICATOR	ACTDE P.3-4.2.	Generate, develop, and communicate design ideas and decisions using appropriate technical terms and graphical representation techniques (ACTDEP015)

INDICATOR ACTDEP. Exploring ways of joining, connecting and assembling components that ensure success
3-4.2.1.

INDICATOR	ACTDEP. 3-4.2.2.	Generating a range of design ideas for intended products, services, environments
INDICATOR	ACTDEP. 3-4.2.3.	Identifying the properties of materials needed for the designed solution
INDICATOR	ACTDEP. 3-4.2.4.	Visualising and exploring innovative design ideas by producing thumbnail drawings, models and labelled drawings to explain features and modifications
INDICATOR	ACTDEP. 3-4.2.5.	Planning, sharing and documenting creative ideas and processes using digital tools such as a class blog or collaborative document

STRAND / DOMAIN		Digital Technologies
OUTCOME / INDICATOR	ACTDIP. 3-4.	Digital Technologies Processes and Production Skills
INDICATOR	ACTDIP. 3-4.4.	Define simple problems, and describe and follow a sequence of steps and decisions (algorithms) needed to solve them (ACTDIP010)

INDICATOR	ACTDIP.3 -4.4.1.	explaining what the problem is and some features of the problem, such as what need is associated with the problem, who has the problem and why
INDICATOR	ACTDIP.3 -4.4.2.	describing, using drawings, pictures and text, the sequence of steps and decisions in a solution, for example to show the order of events in a game and the decisions that a player must make
INDICATOR	ACTDIP.3 -4.4.3.	experimenting with different ways of describing a set of instructions, for example writing two versions of the same simple set of instructions for a programmable robotic device

**Nova Scotia Curriculum
Mathematics
Grade 4 - Adopted: 2015**

GENERAL LEARNING OUTCOME	NS.4.SCO	Specific Curriculum Outcomes
CURRICULUM OUTCOME	4.SCO.P R.	Patterns and Relations (PR)
GRADE LEVEL EXPECTATION	4.SCO.P R02.	Students will be expected to translate among different representations of a pattern (a table, a chart, or concrete materials). [C, CN, V]

EXPECTATION	4.SCO.P R02.01.	Create a table or chart from a given concrete representation of a pattern
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GENERAL LEARNING OUTCOME	NS.4.SCO	Specific Curriculum Outcomes
CURRICULUM OUTCOME	4.SCO.P R.	Patterns and Relations (PR)
GRADE LEVEL EXPECTATION	4.SCO.P R05.	Students will be expected to express a given problem as an equation in which a symbol is used to represent an unknown number. [CN, PS, R]

EXPECTATION	4.SCO.P R05.02.	Express a given pictorial or concrete representation of an equation in symbolic form
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Science

Grade 3 - Adopted: 2015

GENERAL LEARNING OUTCOME	NS.3.ESS	Earth and Space Science: Exploring Soils
CURRICULUM OUTCOME	3.ESS.1.	Students will investigate the properties of soil and its effect on living things.

GRADE LEVEL EXPECTATION 3.ESS.1.3 Observe and describe how living things affect and are affected by soil (CT, CI, COM, TF)

GRADE LEVEL EXPECTATION 3.ESS.1.4 Describe and respond to ways in which soil is important to living things and the environment (CT, CI, COM, PCD, CZ)

GENERAL LEARNING OUTCOME	NS.3.LS.	Life Science: Plant Growth and Changes
CURRICULUM OUTCOME	3.LS.2.	Students are expected to explore and investigate plant growth and changes in various conditions.

GRADE LEVEL EXPECTATION 3.LS.2.3 Observe and describe how living things affect and are affected by plants (CT, CI, COM, TF)

GRADE LEVEL EXPECTATION 3.LS.2.5 Describe and respond to ways in which plants are important to living things and the environment (CT, CI, COM, PCD, CZ)

Nova Scotia Curriculum

Science

Grade 4 - Adopted: 2015

GENERAL LEARNING OUTCOME	NS.4.GCO.	General Curriculum Outcomes
CURRICULUM OUTCOME	4.GCO.1.	STSE/Knowledge

GRADE LEVEL EXPECTATION 4.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 4.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.4.GCO.	General Curriculum Outcomes
CURRICULUM OUTCOME	4.GCO.2.	Skills

GRADE LEVEL EXPECTATION 4.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.4.SCO.	Specific Curriculum Outcomes
CURRICULUM OUTCOME	4.SCO.LS.	Life Science: Habitats

GRADE LEVEL EXPECTATION	4.SCO.L S.1.	HABITATS AND POPULATIONS
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EXPECTATION 4.SCO.L S.1.3. Identify their own and their families' impact on habitats and describe how personal actions help conserve habitats (108-3, 108-6)

**Prince Edward Island Curriculum
Mathematics
Grade 4 - Adopted: 2012**

STRAND / COURSE	PE.4.PR.	Patterns and Relations (PR): Use patterns to describe the world and solve problems.
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GENERAL LEARNING OUTCOME 4.PR3. Represent and describe patterns and relationships using charts and tables to solve problems.

GENERAL LEARNING OUTCOME 4.PR4. Identify and explain mathematical relationships using charts and diagrams to solve problems.

**Prince Edward Island Curriculum
Science
Grade 3 - Adopted: 2012**

STRAND / COURSE	PE.3.1.	Life Science: Plant Growth and Changes
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GENERAL LEARNING OUTCOME	3.1.1.	Investigating Germination and Growing Conditions for Plants
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CURRICULUM OUTCOME		Students will be expected to
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GRADE LEVEL EXPECTATION 3.1.1.7. Identify and describe parts of plants and their general function (100-28, 203-2).

STRAND / COURSE	PE.3.1.	Life Science: Plant Growth and Changes
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GENERAL LEARNING OUTCOME	3.1.3.	Uses for Plants
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CURRICULUM OUTCOME		Students will be expected to
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GRADE LEVEL EXPECTATION 3.1.3.1. Describe ways in which plants are important to living things and the environment (102-12).

GRADE LEVEL EXPECTATION 3.1.3.2. Identify parts of different plants that provide humans with useful products, and describe the preparation that is required to obtain these products and how our supply of useful plants is replenished (102-13).

GRADE LEVEL EXPECTATION 3.1.3.3. Respond to the ideas and actions of others and acknowledge their ideas about the uses and replenishing of plants (203-5).

**Prince Edward Island Curriculum
Science
Grade 4 - Adopted: 2012**

STRAND / COURSE	PE.4.1.	Life Science: Habitats
GENERAL LEARNING OUTCOME	4.1.1.	Habitats and Populations
CURRICULUM OUTCOME		Students will be expected to

GRADE LEVEL EXPECTATION 4.1.1.5. Identify their own and their families' impact on habitats, and describe how personal actions help conserve habitats (108-6, 108-3).

STRAND / COURSE	PE.4.1.	Life Science: Habitats
GENERAL LEARNING OUTCOME	4.1.4.	Structural Features of Plants that Enable Them to Survive in Their Habitat
CURRICULUM OUTCOME		Students will be expected to

GRADE LEVEL EXPECTATION 4.1.4.1. Using appropriate terminology compare the structural features of plants that enable them to thrive in different kinds of places (300-2, 104-6).

GRADE LEVEL EXPECTATION 4.1.4.2. Describe how scientists' knowledge of plant growth has led to agricultural innovations and techniques (106-4).

STRAND / COURSE	PE.4.4.	Space and Earth Science: Rocks, Minerals, and Erosion
GENERAL LEARNING OUTCOME	4.4.1.	Collecting and Comparing Rocks and Minerals
CURRICULUM OUTCOME		Students will be expected to

GRADE LEVEL EXPECTATION 4.4.1.1. Demonstrate respect for the habitats of animals and the local environment when collecting rocks and/or minerals from their local area (108-3).

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

Grade 3 - Adopted: 2009

STRAND	QC.1.	Material World
STANDARD	1.D.	Systèmes et interaction
SUBSTRAND	1.D.1.	Tous les jours des objets techniques

COMPETENCY 1.D.1.a. Décrit les pièces et des mécanismes qui composent un objet

COMPETENCY 1.D.1.b. Identifie les besoins qu'un objet a été initialement conçus pour répondre aux

STRAND	QC.1.	Material World
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.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.2.	Organisation des êtres vivants

COMPETENCY 3.A.2.e. Décrire l'anatomie des plantes (racines, tiges, feuilles, fleurs, fruits, graines)

COMPETENCY 3.A.2.f. Associer les parties d'une plante avec leurs fonctions générales (racines, tiges, feuilles, fleurs, fruits, graines)

STRAND	QC.3.	Les êtres vivants
STANDARD	3.B.	Énergie

SUBSTRAND	3.B.1.	Sources d'énergie pour les êtres vivants
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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
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STANDARD	3.C.	Forces et mouvements
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SUBSTRAND	3.C.1.	Comment les animaux se déplacent
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COMPETENCY 3.C.1.b. Noms d'autres façons les animaux se déplacent et pourquoi (par exemple la défense, rituel de l'accouplement)

STRAND	QC.3.	Les êtres vivants
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STANDARD	3.D.	Systèmes et interaction
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SUBSTRAND	3.D.1.	Interaction entre les organismes vivants et leur environnement
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COMPETENCY 3.D.1.b. Décrit les comportements des animaux familiers qui leur permettent de s'adapter à leur environnement

COMPETENCY 3.D.1.e. Décrit les relations entre les êtres vivants (parasitisme, prédation)

STRAND	QC.3.	Les êtres vivants
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STANDARD	3.D.	Systèmes et interaction
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SUBSTRAND	3.D.2.	Utilisez des êtres vivants pour la consommation
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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
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STANDARD	3.D.	Systèmes et interaction
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SUBSTRAND	3.D.3.	L'interaction entre les humains et leur environnement
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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
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STANDARD	3.F.	Un langage approprié
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SUBSTRAND	3.F.1.	Terminologie liée à la compréhension des êtres vivants
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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)

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

Science

Grade 4 - Adopted: 2009

STRAND	QC.1.	Material World
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STANDARD	1.D.	Systèmes et interaction
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SUBSTRAND	1.D.1.	Tous les jours des objets techniques
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COMPETENCY 1.D.1.a. Décrit les pièces et des mécanismes qui composent un objet

COMPETENCY 1.D.1.b. Identifie les besoins qu'un objet a été initialement conçus pour répondre aux

STRAND	QC.1.	Material World
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STANDARD	1.D.	Systèmes et interaction
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SUBSTRAND	1.D.4.	Fonctionnement d'objets fabriqués
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COMPETENCY 1.D.4.a. Identifier des pièces mécaniques (engrenages, cames, ressorts, machines simples, bielles)

STRAND	QC.1.	Material World
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STANDARD	1.D.	Systèmes et interaction
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SUBSTRAND	1.D.7.	Electron technologie
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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
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STANDARD	1.E.	Techniques et instrumentation
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SUBSTRAND	1.E.3.	Utilisation d'outils
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COMPETENCY 1.E.3.a. Adéquatement et de façon sécuritaire des outils (pince, tournevis, marteau, clé, gabarit simple)

STRAND	QC.1.	Material World
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STANDARD	1.E.	Techniques et instrumentation
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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
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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
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STANDARD	2.E.	Techniques et instrumentation
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SUBSTRAND	2.E.3.	Conception et fabrication d'instruments de mesure et de prototypes
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COMPETENCY 2.E.3.a. Conçoit et fabrique des instruments de mesure et de prototypes

STRAND	QC.3.	Les êtres vivants
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STANDARD	3.A.	Importance
SUBSTRAND	3.A.2.	Organisation des êtres vivants

COMPETENCY 3.A.2.e. Décrit l'anatomie des plantes (racines, tiges, feuilles, fleurs, fruits, graines)

COMPETENCY 3.A.2.f. Associer les parties d'une plante avec leurs fonctions générales (racines, tiges, feuilles, fleurs, fruits, graines)

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.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.C.	Forces et mouvements
SUBSTRAND	3.C.1.	Comment les animaux se déplacent

COMPETENCY 3.C.1.b. Noms d'autres façons les animaux se déplacent et pourquoi (par exemple la défense, rituel de l'accouplement)

STRAND	QC.3.	Les êtres vivants
STANDARD	3.D.	Systèmes et interaction
SUBSTRAND	3.D.1.	Interaction entre les organismes vivants et leur environnement

COMPETENCY 3.D.1.b. Décrit les comportements des animaux familiers qui leur permettent de s'adapter à leur environnement

COMPETENCY 3.D.1.e. Décrit les relations entre les êtres vivants (parasitisme, prédation)

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 approprié
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)

**Québec Education Program Progression of Learning
Science
Grade 3 - 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.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.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.2.	Organization of living things

COMPETENCY 3.A.2.e. Describes the anatomy of plants (roots, stems, leaves, flowers, fruits, seeds)

COMPETENCY 3.A.2.f. Associates the parts of a plant with their general functions (roots, stems, leaves, flowers, fruits, seeds)

STRAND	QC.3.	Living Things
STANDARD	3.B.	Energy
SUBSTRAND	3.B.1.	Sources of energy for living things

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.C.	Forces and motion
SUBSTRAND	3.C.1.	How animals move

COMPETENCY 3.C.1.b. Names other ways animals move and why (e.g. defence, mating ritual)

STRAND	QC.3.	Living Things
STANDARD	3.D.	Systems and interaction
SUBSTRAND	3.D.1.	Interaction between living organisms and their environment

COMPETENCY 3.D.1.b. Describes the behaviours of familiar animals that enable them to adapt to their environment

COMPETENCY 3.D.1.e. Describes relationships between living things (parasitism, predation)

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
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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)

**Québec Education Program Progression of Learning
Science**

Grade 4 - 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.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
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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
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STANDARD	2.E.	Techniques and instrumentation
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SUBSTRAND	2.E.3.	Design and manufacture of measuring instruments and prototypes
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COMPETENCY 2.E.3.a. Designs and manufactures measuring instruments and prototypes

STRAND	QC.3.	Living Things
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STANDARD	3.A.	Matter
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SUBSTRAND	3.A.2.	Organization of living things
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COMPETENCY 3.A.2.e. Describes the anatomy of plants (roots, stems, leaves, flowers, fruits, seeds)

COMPETENCY 3.A.2.f. Associates the parts of a plant with their general functions (roots, stems, leaves, flowers, fruits, seeds)

STRAND	QC.3.	Living Things
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STANDARD	3.B.	Energy
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SUBSTRAND	3.B.1.	Sources of energy for living things
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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
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STANDARD	3.C.	Forces and motion
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SUBSTRAND	3.C.1.	How animals move
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COMPETENCY 3.C.1.b. Names other ways animals move and why (e.g. defence, mating ritual)

STRAND	QC.3.	Living Things
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STANDARD	3.D.	Systems and interaction
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SUBSTRAND	3.D.1.	Interaction between living organisms and their environment
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COMPETENCY 3.D.1.b. Describes the behaviours of familiar animals that enable them to adapt to their environment

COMPETENCY 3.D.1.e. Describes relationships between living things (parasitism, predation)

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)

**Saskatchewan Curriculum
Mathematics
Grade 4 - Adopted: 2007**

OUTCOME / COURSE	SK.P4.	Patterns and Relations Strand
FOCUS	P4.1.	Demonstrate an understanding of patterns and relations by: identifying and describing patterns and relations in a chart, table or diagram; reproducing patterns and relations in a chart, table, or diagram using manipulatives; creating charts, tables, or diagrams to represent patterns and relations; solving problems involving patterns and relations [C, CN, PS, R]

OUTCOME P4.1.b. Determine the missing element(s) in a table or chart and explain the strategies used.

OUTCOME P4.1.c. Identify and correct error(s) in a table or chart.

OUTCOME P4.1.d. Describe the pattern found in a table or chart.

OUTCOME P4.1.g. Extend patterns found in a table or chart to solve a problem.

OUTCOME P4.1.h. Translate the information provided in a problem into a table or chart.

OUTCOME P4.1.i. Identify and extend the patterns in a table or chart to solve a problem.

**Saskatchewan Curriculum
Science
Grade 3 - Adopted: 2011**

OUTCOME / COURSE	SK.PL.	Life Science: Plant Growth and Changes (PL)
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FOCUS	PL3.1.	Investigate the growth and development of plants, including the conditions necessary for germination. [CP, SI]
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OUTCOME	PL3.1.b.	Observe and explain the function of the major structures (i.e., root, stem, flower, leaf, and fruit or seed) of a variety of plants.
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OUTCOME	PL3.1.l.	Explain the importance of water and light for plant growth and the mechanisms by which plants obtain water and light from the environment.
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OUTCOME / COURSE	SK.PL.	Life Science: Plant Growth and Changes (PL)
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FOCUS	PL3.2.	Analyze the interdependence among plants, individuals, society, and the environment. [CP, DM, SI]
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OUTCOME	PL3.2.a.	Observe, safely and respectfully, plants in local environments (e.g., classroom, flower garden, school yard, community garden, forest, field, park, and nature preserve).
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OUTCOME	PL3.2.b.	Research traditional and contemporary uses of plants or parts of plants, such as food, beverages, medicine, arts, seed banks, shade, wind breaks, erosion protection, cultural celebrations, and products like dyes, shelter, and clothing.
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OUTCOME	PL3.2.g.	Describe ways that plants and animals depend on each other.
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OUTCOME	PL3.2.h.	Assess the impact of natural (e.g., animal migration, fire, competition, and decay) and human activity (e.g., burning land, logging, fertilizing, soil compaction, and picking endangered plants) on the biodiversity of plant species.
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OUTCOME	PL3.2.j.	Explain how and why plants are replenished naturally (e.g., forest fires and pollination) and artificially (e.g., tree farms, planting seedlings, and seed banks).
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OUTCOME	PL3.2.k.	Defend a position related to plant use (e.g., picking plants, harvesting crops, fertilizing, and planting invasive species) and protection (e.g., establishing conservation areas, planting native species, and developing alternatives to plant-based products).
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OUTCOME	PL3.2.m.	Respond to and acknowledge the ideas of others regarding the importance of plants to self and society.
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OUTCOME / COURSE	SK.SM.	Physical Science: Structures and Materials (SM)
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FOCUS	SM3.1.	Investigate properties of materials and methods of joinery used in structures. [CP, TPS]
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OUTCOME	SM3.1.a.	Identify problems to be solved relating to the properties of materials in structures (e.g., What is the purpose of the structure? What materials are appropriate for constructing the structure? What are appropriate methods of joinery?).
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OUTCOME	SM3.1.e.	Analyze how various similar and dissimilar materials can be joined (e.g., gluing, nailing, screwing, stapling, taping, Velcroing and tying) and identify the most appropriate methods for joining specific materials for an identified use.
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OUTCOME	SM3.1.f.	Use appropriate tools (e.g., hammer, nail, glue, and scissors) to cut, shape, make holes, sew, and assemble materials safely.
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OUTCOME / COURSE	SK.SM.	Physical Science: Structures and Materials (SM)
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FOCUS	SM3.2.	Assess the function and characteristics of strong, stable, and balanced natural and human-built structures. [CP, TPS]
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OUTCOME	SM3.2.j.	Estimate measurements to select appropriate quantities of required materials for constructing a structure.
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OUTCOME	SM3.2.m.	Assess the strength, stability, and balance of personally- constructed structures and make changes to improve the structure as deemed necessary.
OUTCOME	SM3.2.n.	Identify materials or parts of a structure that failed and hypothesize why they failed.

**Saskatchewan Curriculum
Science
Grade 4 - Adopted: 2011**

OUTCOME / COURSE	SK.HC.	Life Science: Habitats and Communities (HC)
FOCUS	HC4.1.	Investigate the interdependence of plants and animals, including humans, within habitats and communities. [CP, SI]

OUTCOME	HC4.1.d.	Discuss stories that demonstrate the interdependence of land, water, animals, plants, and the sky in traditional worldviews.
OUTCOME	HC4.1.e.	Draw upon facets of Indigenous worldviews, such as the Medicine Wheel or circle of life, to examine understanding about the interdependence of plants and animals in various habitats and communities.
OUTCOME	HC4.1.j.	Conduct a simulation or role play to demonstrate the interdependence of plants and animals in a habitat or community.
OUTCOME	HC4.1.m.	Show concern and respect for the safety of self, others, plants and animals when maintaining a habitat.

OUTCOME / COURSE	SK.HC.	Life Science: Habitats and Communities (HC)
FOCUS	HC4.2.	Analyze the structures and behaviours of plants and animals that enable them to exist in various habitats. [SI]

OUTCOME	HC4.2.d.	Develop and carry out a plan to investigate safely and respectfully the structures and behaviours of plants and animals within natural (e.g., school yard, meadow, forest, and park) and constructed (e.g., sports field, aquarium, and terrarium) habitats.
OUTCOME	HC4.2.e.	Record observations and information about plant and animal structures and behaviours within natural and constructed habitats using words, diagrams, graphs, photographs, audio and video recordings, and other appropriate technologies.
OUTCOME	HC4.2.g.	Use gathered information to explain how the structures and behaviours of animals and plants enable them to meet their basic needs (e.g., food, water, air, movement, nutrients, reproduction, and light) in their habitat.
OUTCOME	HC4.2.h.	Compare the structural features of plants that enable them to thrive in different kinds of habitats (e.g., bog, forest, grassland, school yard, garden, and sports field).

OUTCOME / COURSE	SK.HC.	Life Science: Habitats and Communities (HC)
FOCUS	HC4.3.	Assess the effects of natural and human activities on habitats and communities, and propose actions to maintain or restore habitats. [CP, DM]

OUTCOME	HC4.3.c.	Categorize human activities by the effects they have or may have on habitats and communities.
OUTCOME	HC4.3.d.	Assess intended and unintended consequences of natural and human-caused changes to specific habitats.

OUTCOME	HC4.3.i.	Collaboratively develop and carry out (if feasible) a plan to preserve or restore one or more components of a local habitat.
OUTCOME	HC4.3.j.	Identify local, provincial, and national organizations that work to preserve, restore, and provide education about habitats and communities.
OUTCOME / COURSE	SK.RM.	Earth and Space Science: Rocks, Minerals, and Erosion (RM)
FOCUS	RM4.1.	Investigate physical properties of rocks and minerals, including those found in the local environment. [CP, SI]

OUTCOME RM4.1.e. Demonstrate respect for all components of their environment when observing and collecting rocks and minerals (e.g., do not remove rocks and minerals from private property without permission).