















# Long Range Model 1 - Grade 1

STRAND A: STEM Skills and Connections	 <b>A1.1 Scientific Research</b>	 <b>A1.2 Scientific Experimentation</b>	 <b>A1.3 Engineering Design</b>	 <b>A1.4 Safety</b>	 <b>A1.5 Communication</b>	 <b>A2. Coding and Emerging Technologies</b>	 <b>A3. Applications Connections and Contributions</b>	
	<p><b>A1. STEM Investigation and Communication Skills:</b> use a scientific research process, a scientific experimentation process, and an engineering design process to conduct investigations, following appropriate health and safety procedures</p> <p> A1.1 use a scientific research process and associated skills to conduct investigations</p> <p> A1.2 use a scientific experimentation process and associated skills to conduct investigations</p> <p> A1.3 use an engineering design process and associated skills to design, build, and test devices, models, structures, and/or systems</p> <p> A1.4 follow established health and safety procedures during science and technology investigations, including wearing appropriate protective equipment and clothing and safely using tools, instruments, and materials</p> <p> A1.5 communicate their findings, using science and technology vocabulary and formats that are appropriate for specific audiences and purposes</p> <p> <b>A2. Coding and Emerging Technologies:</b> use coding in investigations and to model concepts, and assess the impact of coding and of emerging technologies on everyday life</p> <p>A2.1 write and execute code in investigations and when modelling concepts, with a focus on creating clear and precise instructions for simple algorithms</p> <p>A2.2 identify and describe impacts of coding and of emerging technologies on everyday life</p> <p> <b>A3. Applications, Connections, and Contributions:</b> demonstrate an understanding of the practical applications of science and technology, and of contributions to science and technology from people with diverse lived experiences</p> <p>A3.1 describe practical applications of science and technology concepts in their home and community, and how these applications address real-world problems</p> <p>A3.2 investigate how science and technology can be used with other subject areas to address real-world problems</p> <p>A3.3 analyse contributions to science and technology from various communities</p>							



**Term 1 - Overview, Guidelines, Assessment ideas**



In term one, students will assess the importance of a healthy environment for living and non-living things and consider the impact of everyday objects and daily and seasonal changes on all living things and the environment. Planned learning experiences in the community early on in the term, such as field trips and outdoor education, may provide opportunities for students to see the relevance of their classroom learning and its connection to the broader world.





When planning for assessment, consider peer and self-assessment for learning activities in the field. Strand A focuses on the STEM skills and connections that frame learning in the other four strands: Life Systems, Matter and Energy, Structures and Mechanisms, and Earth and Space Systems, and assessment of STEM skills will be ongoing throughout Term 1 and Term 2.





**Assessment: Learning Skills, Content, Performance Standards**



- I can *demonstrate* an understanding of living things, seasonal changes, what I can do to keep my environment healthy, energy, and objects and structures.
- I can *identify* problems related to the needs of living things, adaptations due to seasonal changes, the environment, and building structures.
- I can *solve* problems related to the needs of living things and seasonal changes, impacts of humans on the environment, my use of energy, and objects and structures.
- I can *transfer* skills and solutions that include Indigenous ways of knowing, to new contexts such as food literacy.

Month/ Suggested Timelines	Big Ideas and Guiding Questions for an Inquiry Stance	STEM Skills and Connections (Strand A)	Strands and Expectations	Cross-Curricular Integrations	Resources
<p><b>September</b></p>	<p><b>Big Ideas:</b></p> <p>All living things need different things to survive and are impacted by daily and seasonal changes.</p> <p><b>Guiding Questions:</b></p> <p>What is a living vs. a nonliving thing?</p> <p>What do living things need to survive?</p> <p>What characteristics do living things have and what</p>	<p> <b>A1.1</b> Determine what materials would be the best for a birdhouse for a particular type of bird. (see 'Building a Birdhouse' sample lesson in the resource section)</p> <p> <b>A1.2</b> Students keep observation journals (digital or hard copy) to record (verbally or in writing/pictures depending on a student's educational accommodations or modifications) different</p>	<p><b>Life Systems:</b></p> <p><b>B2.1</b> demonstrate an understanding of the natural environment as a place where living and non-living things are interconnected</p> <p><b>B2.2</b> identify the basic needs of living things, including the need for air, water, food, heat, shelter, and space</p> <p><b>B2.3</b> identify the physical characteristics of various plants and animals, including humans, and explain how these characteristics help the plants and</p>	<p><b>Number Sense</b> Students will be counting on a grid when completing the unplugged coding activity.</p> <p><b>Patterns and Relationships</b> Students will be identifying and describing the regularities in a variety of patterns when discussing repeating events in daily and seasonal changes.</p> <p><b>Coding</b> Students will solve problems and create computational representations of mathematical situations by writing and executing</p>	<p><a href="#">STAO Safety in Elementary Science and Technology</a></p> <p><b>Suggested Read-Alouds to Support this Topic:</b></p> <p>Access fiction and nonfiction books that showcase pictures and words about different living things and what they need to survive in addition to books about seasonal changes.</p> <ul style="list-style-type: none"> <li>● In Like a Lion, Out Like a Lamb by Marion Dane</li> </ul>





	<p>are the purposes of those characteristics?</p> <p>What do we do differently in our homes, and when we are outside, as the seasons change?</p> <p>What might animals do during seasonal changes?</p>	<p>characteristics of living things/seasonal changes in and around the school and the local environment.</p> <p> <b>A1.3</b> Utilize the engineering design process to construct a birdhouse. Students will select materials based on what is provided. They will then discuss (verbally or in writing/pictures depending on a student’s educational accommodations/modifications) why they selected this particular material and make adaptations/modifications as needed. (see the Scientific and Engineering Design Processes link in the resources section)</p> <p> <b>A1.4</b> Review safety rules when visiting and observing nature. Respecting nature, not disturbing ecosystems, washing hands, following instructions from the teacher when outdoors, etc. (see ‘Learning Outside’ document in the resource column)</p>	<p>animals meet their basic needs</p> <p><b>B2.5</b> describe the characteristics of a healthy environment, including clean air and water and nutritious food, and how a healthy environment enables living things to meet their needs</p> <p><b>B2.6</b> describe ways in which living things provide for the needs of other living things</p> <p><b>Structures and Mechanism:</b></p> <p><b>D1.1</b> identify the kinds of waste materials produced by humans, and plan and carry out a course of action for minimizing waste in the classroom or at home, explaining why each action is important</p> <p><b>D1.2</b> assess everyday objects, including structures, that have similar purposes, in terms of the materials they are made from, the source of these materials, and what happens to these objects when they are worn out or no longer needed</p> <p><b>D2.1</b> describe objects as things that are made of one or more materials</p> <p><b>D2.3</b> identify materials that are used to make various everyday objects, including structures</p>	<p>code, including code that involves sequential events</p> <p><b>Measurement</b> Students will identify measurable attributes of two-dimensional shapes and three-dimensional objects, including length, area, mass, capacity, and angle when constructing a birdhouse.</p> <p><b>Oral Communication</b> Listen in order to understand classmates when sharing observation journals. Use speaking skills and strategies appropriately to communicate when in the field and in the classroom.</p> <p><b>Writing</b> Generate, gather, and organize ideas and information to write for the intended purpose and audience.</p> <p><b>Health and Physical Education</b> Students will participate actively in outdoor investigations as related to the discussion, and gather data for seasonal changes and needs of living things.</p> <p>Students will demonstrate responsibility for their own safety and the safety of others as they</p>	<ul style="list-style-type: none"> <li>• My Friend Earth by Patricia MacLachlan</li> <li>• A Tree For All Seasons by Robin Bernard</li> <li>• Green on Green by Dianne White</li> <li>• Memoirs of a Hamster, Parrot, Goldfish by Devin Scillian</li> <li>• What do Living Things Need? by Elizabeth Austin</li> </ul> <p><b>Lesson Ideas:</b></p> <p><b>Unplugged Coding: Coding on a Grid</b> Students will use a floor grid to learn basic coding language. Adaptations to this lesson can be made to have students ‘code’ different animals to appropriate shelters/food choices. For example, if a student is a bird, they would code themselves to the nest.</p> <p><a href="#">Coding on a grid example</a></p> <p><b>Building a Birdhouse</b> In this lesson, students will design, build and test a birdhouse and learn that</p>
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		<p>  <b>A1.5</b> Communicate findings orally and in written or picture format in journals/digital formats.</p> <p> <b>A2</b> Complete an unplugged coding activity that will teach students basic coding language. This activity can be extended to have students code themselves on a floor grid as different animals with different food and shelter needs. (See the resources column for an example)</p> <p> <b>A3</b> Students will describe (verbally or in writing/pictures depending on a student's accommodations or educational modifications) adaptations they make in their homes and communities as the seasons change. This could be extended to include adaptations in other communities, as well as adaptations animals, need to</p>		<p>participate in physical activities both in the classroom and in the field.</p> <p><b>Grade 2: Life Systems:</b>B.1.1, B1.2, B2.1, B2.5</p>	<p>animals need air, food, water, and shelter to survive. <a href="#">Science North Grade 1</a> (scroll to "Needs of Living Things")</p> <p><b>Supporting Resources:</b></p> <p><b>Scientific and Engineering Design Processes</b></p> <p>This <a href="#">Government of Ontario</a> resource provides a summary of the Scientific and Engineering Design Processes in the Science Curriculum.</p> <p><b>Learning Outside: Working with Challenging Behaviors</b></p> <p>This document provides a step-by-step process for managing challenging behaviors when students are working in the field. <a href="#">Working with Challenging Behaviors</a></p>
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		make as the seasons change. There could be a focus on birds and what humans can do to ensure our lifestyle and adaptations don't impact animals and the local community. (see the building a birdhouse lesson in resources).			
<b>October</b>	<p><b>Big Idea:</b></p> <p>A healthy world is important for living and non-living things. Humans make choices that have a direct effect on the environment.</p> <p><b>Guiding Questions:</b></p> <p>Why are all living things important and what are my responsibilities toward them?</p> <p>What can I do to keep our environment healthy?</p> <p>How does your family use energy?</p> <p>What changes would your family need to make if electrical energy was not available?</p>	<p> <b>A1.1</b> Conduct Investigations to determine what materials would be best for cleaning up an oil spill. (See a <i>sample lesson in the resources column</i>)</p> <p> <b>A1.2</b> Investigate, compare and contrast different materials used to soak up oil.</p> <p> <b>A1.4</b> Review safety rules when handling and disposing of different oil spill liquids.</p> <p> <b>A1.5</b> Communicate with partners/classmates the results from the Oil Spill Challenge/unplugged coding activity (verbally or in</p>	<p><b>Life Systems:</b></p> <p><b>B1.1:</b> describe changes or problems that could result from the loss of living and non-living things that are part of everyday life, while taking different perspectives into consideration</p> <p><b>B1.2:</b> identify actions that can be taken to contribute to a healthy environment</p> <p><b>B2.5:</b> describe the characteristics of a healthy environment, including clean air and water and nutritious food, and how a healthy environment enables living things to meet their needs</p> <p><b>Structures and Mechanism:</b></p> <p><b>D1.1:</b> identify the kinds of waste materials produced by humans, and plan and carry out a course of action for minimizing waste in the classroom or at home, explaining why each action is important</p>	<p><b>Number Sense</b></p> <p>Students will be counting the number of cotton balls or other absorbent materials in the Oil Spill Challenge lesson. Students will use if/then statements when recycling household waste. Students will read and alter existing code, including code that involves sequential events, and describe how changes to the code affect the outcomes when recycling household waste.</p> <p><b>Oral Communication.</b></p> <p>Students will listen in order to understand classmates when sharing observation journals. Students will use speaking skills and strategies appropriately to communicate when in the field and in the classroom</p>	<p><b>Suggested Read-Alouds to Support this Topic:</b></p> <p>Access fiction and nonfiction books that showcase pictures and words about keeping the environment healthy and the impact of humans on the environment.</p> <ul style="list-style-type: none"> <li>• A Turtle's View of the Ocean Blue by Catherine Barr</li> <li>• The Watcher by Jane Goodall</li> <li>• Bee &amp; Me by Alison Jay</li> <li>• 10 Things I Can Do to Help My World by Melanie Walsh</li> <li>• The Mess that we Made by Michelle Lord</li> <li>• Don't Throw That Away!: A Lift-the-Flap Book about Recycling and Reusing by Lara Bergen</li> </ul>





	<p>What can you and your family do to conserve energy to keep our environment healthy?</p> <p>How do my choices of materials impact the environment? Example: Can I be involved in helping to prepare a litterless lunch?</p> <p>What about my school tools?</p> <p>Can I make better choices for the environment when selecting what I use in school every day?</p> <p>What types of waste do humans produce? Is there a way to reduce some of that waste?</p>	<p>writing/pictures depending on a student's accommodations or educational modifications)</p> <p> <b>A2</b> Coding - Write and execute code when investigating how to recycle common household materials. (See the resources column for an example of an unplugged coding lesson)</p> <p> <b>A3</b> Investigate how science and technology can be used to address the real-world problem of environmental waste and its impact on the environment. Local waste community partners could be invited into the classroom to talk with students about the process of managing waste. Students share (verbally or in writing/pictures depending on a student's accommodations or modifications) their ideas about how they might reduce the waste in their classroom. Local Indigenous elders could also be invited into the classroom (virtually or in person) to talk about the water crisis in Canada.</p>	<p><b>D1.2:</b> assess everyday objects, including structures, that have similar purposes, in terms of the materials they are made from, the source of these materials, and what happens to these objects when they are worn out or no longer needed</p> <p><b>Matter and Energy:</b> <b>C1.1:</b> describe everyday uses of energy at school and at home, and suggest ways to use energy responsibly</p> <p><b>C1.2:</b> describe how the lives of people and other living things would be affected if electrical energy were no longer available</p>	<p><b>Writing</b> Students will generate, gather, and organize ideas and information to write for an intended purpose and audience when communicating their findings from the Oil Spill Challenge.</p> <p><b>Media Literacy</b> Students will create a variety of media texts for different purposes and audiences, using appropriate forms, conventions, and techniques when communicating their findings from the Oil Spill Challenge.</p> <p><b>Healthy Living</b> Demonstrate an understanding of factors that contribute to healthy development when discussing characteristics of a healthy environment and the types of waste humans produce.</p> <p><b>Grade 2:</b> <b>Life Systems:</b> B2.1 B2.5 <b>Matter and Energy:</b> C1.1</p>	<p><b>Lesson Ideas:</b></p> <p><b>Oil Spill Challenge:</b> Students conduct investigations on what material would be best for cleaning up an oil spill. Lesson adaptations will need to be made for the classroom.</p> <p><a href="#">Oil Spill Lesson Example</a></p> <p><b>Unplugged Coding:</b> Recycling sorting activity to get students thinking about reducing waste. Using a variety of common household items, students will use if/then statements to recycle household waste. For example, if my item is plastic, then it goes into the plastic recycling bin. If my item is glass then it goes into the glass recycling bin. Extensions can be made to include if/then/else statements.</p>
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<p><b>November</b></p>	<p><b>Big Idea:</b></p> <p>The sun is our principal source of energy, and impacts our daily and seasonal changes, making it possible for living things to meet their basic needs.</p> <p><b>Guiding Questions:</b></p> <p>What are the different characteristics of living things? What are the purposes of those characteristics?</p> <p>What physical characteristics describe humans?</p> <p>Explore the human body characteristics including the 5 senses.</p> <p>How do humans explore the world around them using their unique characteristics?</p> <p>What do living things provide for other living things?</p> <p>How does the sun affect the</p>	<p> <b>A1.2</b> Use a scientific experimentation process to determine what design will use the least amount of energy in an unplugged coding activity. (See unplugged coding lesson in resources column and resource section in September for Scientific and Engineering Design process overview)</p> <p> <b>A1.3</b> Utilize the engineering design process to design, build and test a device to perform a task. (See sample unplugged coding lesson in the resources column and also the Scientific and Engineering Design Processes resource)</p> <p> <b>A1.4</b> Follow established health and safety procedures.</p> <p> <b>A1.5</b> Communicate with partners/classmates the</p>	<p><b>Life Systems:</b></p> <p>B2.3 identify the physical characteristics of various plants and animals, including humans, and explain how these characteristics help the plants and animals meet their basic needs</p> <p>B2.6 describe ways in which living things provide for the needs of other living things</p> <p><b>Matter and Energy:</b></p> <p>C1.1 describe everyday uses of energy at school and at home, and suggest ways to use energy responsibly</p> <p>C1.2 describe how the lives of people and other living things would be affected if electrical energy were no longer available</p> <p><b>Earth and Space Systems:</b></p> <p>E2.1 demonstrate an understanding of Earth’s relationship to the Sun and that this relationship results in daily and seasonal changes on Earth</p> <p>E2.2 demonstrate an understanding that a cycle is a series of repeating events and that cycles can be observed in</p>	<p><b>Coding</b></p> <p>Students solve problems and create computational representations of mathematical situations by writing and executing code, including code that involves sequential events when drawing using ‘limited energy’.</p> <p>Students read and represent whole numbers up to and including 50 when counting shapes to use in the unplugged coding lesson.,</p> <p>Use the properties of addition and subtraction, and the relationship between addition and subtraction, to solve problems and check calculations when adding up the ‘energy value’ of shapes in the Unplugged coding activity.</p> <p><b>Oral Communication</b></p> <p>Listen in order to understand classmates when sharing observation journals.</p> <p>Use speaking skills and strategies appropriately to communicate when in the field and in the classroom.</p> <p><b>Writing</b></p> <p>Generate, gather, and organize ideas and information to communicate an understanding of</p>	<p><b>Suggested Read-Alouds to Support this Topic:</b></p> <p>Access fiction and nonfiction books that showcase pictures and words about the sun.</p> <ul style="list-style-type: none"> <li>• The Sun Is My Favorite Star by Frank Asch</li> <li>• What Makes a Shadow? Clyde Robert Bulla</li> <li>• The Sun: Our Nearest Star Franklyn M. Branley</li> <li>• What Makes Day and Night Franklyn M. Branley</li> <li>• Sun Up, Sun Down by Gail Gibbons</li> <li>• Energy from the Sun by Allan Fowler</li> <li>• Sun Up, Sun Down: The Story of Day and Night by Jacqui Bailey</li> </ul> <p><b>Lesson Ideas:</b></p> <p><b>Unplugged Coding - Design and Construct a Device</b></p> <p>This <a href="#">Science North Grade 1</a> unplugged coding exercise</p>

	<p>air, land, and/or water?</p> <p>Design a device that uses energy to perform a task. (i.e. design a kite that uses wind, design an instrument, etc)</p> <p>Investigate and compare seasonal differences in the way we use energy and the types of energy we use.</p> <p>How does the sun’s energy allow humans to meet their basic needs?</p>	<p>details of their design orally, digitally, or in written format.</p> <p> <b>A2.</b> Students will play a drawing game, where they use limited “energy” to draw/code houses with specific criteria using shapes. (See ‘The Sun as Energy’ in the resource column)</p>	<p>daily and seasonal changes</p> <p><b>E2.3</b> describe the changes in the amount of light and heat from the Sun that occur throughout the day and in the four seasons</p> <p><b>E2.4</b> describe and compare the four seasons in terms of the weather, including precipitation and temperature, in their local area</p> <p><b>E2.5</b> describe changes in the appearance or behaviour of living things that are adaptations to seasonal changes</p> <p><b>E2.6</b> describe how humans prepare for, and respond to, daily and seasonal changes</p>	<p>videos viewed.</p> <p><b>Media Literacy</b> Create a variety of media texts (digitally or hard copy) to demonstrate understanding of videos viewed that describe the Sun as Energy.</p> <p><b>Grade 2:</b> Life Systems: B.1.1. B1.2 B2.5 Earth and Space Systems: E2.1 E2.2 E.2.4</p>	<p>will have students play a drawing game, where they use limited “energy” to draw houses with specific criteria using shapes.</p> <p><b>Scientific and Engineering Design Processes</b></p> <p>This <a href="#">Government of Ontario</a> resource provides a summary of the Scientific and Engineering Design Processes in the Science Curriculum.</p>
<p><b>December</b></p>	<p><b>Big Idea:</b></p> <p>Everything that happens is a result of using some form of energy and seasonal differences impact all living things and how they use energy.</p> <p><b>Guiding Questions:</b></p> <p>How does your family use energy? What are some ways you can reduce your</p>	<p> <b>A1.2</b> Use a Scientific Experimentation process to investigate how seeds grow in varying light and moisture conditions. This activity could be repeated in the spring to show the difference in sunlight in the late fall/early winter versus spring. (See <i>sample lesson in resources column</i>)</p>	<p><b>Matter and Energy:</b></p> <p><b>C1.1</b> describe everyday uses of energy at school and at home, and suggest ways to use energy responsibly</p> <p><b>C1.2</b> describe how the lives of people and other living things would be affected if electrical energy were no longer available</p> <p><b>C2.6</b> describe seasonal differences in how we use energy and in the forms of energy we use</p>	<p><b>Measurement</b> Identify measurable attributes of plants that are grown. Compare several everyday objects - different sized plants- and order them according to length, area, mass, and capacity</p> <p><b>Data Visualization</b> Display sets of data, to make comparative bar graphs that they analyse to draw conclusions about plant needs.</p>	<p>Access fiction and nonfiction books that showcase pictures and words about energy and seasonal changes.</p> <ul style="list-style-type: none"> <li>• Sunshine Makes the Seasons by Franklyn M. Branley</li> <li>• The Boy Who Harnessed the Wind by Bryan Mealer and William Kamkwamba</li> <li>• Energy Island: How One Community</li> </ul>



	<p>energy use?</p> <p>Investigate the four seasons and their characteristics.</p> <p>How do the changing seasons where I live affect my outdoor activities?</p> <p>How is it possible for humans to stay outside in extreme weather (e.g. very hot or very cold temperatures)? Why?</p> <p>How do living things change or adapt throughout the seasons and the changing weather? When plants are grown indoors, do they grow differently when exposed to sunlight in the spring or winter?</p> <p>How do varying seasonal changes affect plant growth?</p>	<p> <b>A1.3</b> Utilize the engineering design process to determine the optimal environments for growing crops and other plants as related to agricultural engineering.</p> <p> <b>A1.5</b> Communicate with partners/classmates the details of their plant growth orally, digitally, or in written format. <i>(See sample lesson in resources column)</i></p> <p> <b>A2</b> Students will use a block-based coding platform to learn about seasons and how they can represent them with a mathematical model. <i>(See sample lesson in resources column)</i></p> <p> <b>A3</b> Analyse First Nations' contributions to science and technology by inviting a local First Nations Elder into the classroom to discuss their traditional knowledge with regards to the changing</p>	<p><b>Earth and Space Systems:</b> <b>E1.1</b> assess the impact of daily and seasonal changes on human outdoor activities, and identify innovations that enable people to engage in various activities year-round</p> <p><b>E1.2</b> assess ways in which daily and seasonal changes have an impact on society, the environment, and living things in the natural environment</p> <p><b>E2.1</b> demonstrate an understanding of Earth's relationship to the Sun and that this relationship results in daily and seasonal changes on Earth</p> <p><b>E2.2</b> demonstrate an understanding that a cycle is a series of repeating events, and that cycles can be observed in daily and seasonal changes</p>	<p><b>Coding</b> Identify, describe, extend, create and make predictions about a variety of patterns including those found in real-life contexts Solve problems and create computational representations of mathematical situations using coding concepts and skills.</p> <p><b>Language:</b> Oral Communication - 1. Listen in order to understand classmates when sharing observation journals; Oral Communication - 2. Use speaking skills and strategies appropriately to communicate when in the field and in the classroom. Writing - 1. generate, gather, and organize ideas and information to write for an intended purpose and audience. Media Literacy - 3. Create a variety of media texts for different purposes and audiences, using appropriate forms, conventions, and techniques.</p> <p><b>Grade 2:</b> Earth and Space Systems: E2.1 E2.2 E.2.4</p>	<p>Harnessed the Wind and Changed Their World by Allan Drummond</p> <ul style="list-style-type: none"> <li>• Sophie's Squash by Pat Zietlow Miller</li> <li>• Leif and the Fall by Adam Grant and Allison Sweet Grant</li> <li>• Some Snow is. . . by Ellen Yeomans</li> <li>• The Seedling That Didn't Want to Grow by Britta Teckentrup</li> </ul> <p><b>Plant Growth:</b> Students will investigate how plants grow in varying conditions. View the resources linked below and then have students plant a seed - sunflower, bean, tomato etc - and chart the growth. This lesson can be repeated in the spring to allow for a comparison of growth based on sunlight.</p> <p>Let's Talk Science, <a href="#">Plants: Growth</a></p> <p><b>Plant Growth:</b> Students will plant two groups of seeds and compare the number of</p>
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		<p>seasons and how living things adapt. Since the winter months are a time for storytelling in Indigenous cultures, Elders may even share stories that will help students develop a connection to the earth through experienced and trusted knowledge keepers. The focus on the protection of biodiversity and sustainable development is important for students of all ages.</p>			<p>seeds that germinate from each. One set of seeds has been sent to the International Space Station, or treated in space like conditions, and the other set, the “control” seeds, have not.  <a href="#">Tomatosphere™</a></p> <p><b>Block-Based Coding:</b>  In this <a href="#">Patterns in Nature by Science North lesson plan</a>, students will talk about the seasons and how they can represent them with a mathematical model because they follow a pattern. Students will learn about conditional statements and then use them to illustrate seasonal changes.</p>
<p><b>January</b></p>	<p><b>Big Idea:</b></p> <p>Objects and structures have observable characteristics that impact people and the environment.</p> <p><b>Guiding Questions:</b></p> <p>What types of waste materials are produced in your home? How can</p>	<p> <b>A1.1</b></p> <p>Research different types of materials for different purposes. (See sample lesson Materials Matter, Catch a Bubble, and Can paper hold weight? In the resources column)</p> <p> <b>A1.2</b></p>	<p><b>Structures and Mechanism:</b></p> <p><b>D1.1</b> identify the kinds of waste materials produced by humans, and plan and carry out a course of action for minimizing waste in the classroom or at home, explaining why each action is important</p> <p><b>D1.2</b> assess everyday objects, including structures, that have similar purposes, in terms of the materials they are made from, the</p>	<p><b>Patterns and Relationships</b></p> <p>Identify and describe the regularities in a variety of patterns, including patterns found in real-life contexts</p> <p><b>Coding</b></p> <p>Identify, describe, extend, create and make predictions about a variety of patterns, including those found in real-life contexts</p> <p>Solve problems and create</p>	<p><b>Suggested Read-Alouds to Support this Topic:</b></p> <p>Access fiction and nonfiction books that showcase pictures and words about structures and their impact on the environment.</p> <ul style="list-style-type: none"> <li>• My Friend Earth by Patricia MacLachlan</li> </ul>

	<p>people minimize that waste?</p> <p>What is an object? What is a material? What is a structure?</p> <p>Use your five senses to describe materials, objects, and structures.</p> <p>What things are made from nature (i.e., trees, animals) vs. humans (plastic, electronics)?</p> <p>What happens to materials and objects when we have no further use for them?</p> <p>How can we create a classroom plan to minimize the waste we produce?</p>	<p>Use a scientific experimentation process to investigate different types of materials for different purposes.</p> <p> <b>A1.4</b> Follow established health and safety procedures when handling different materials and testing the load of a structure. (Safety glasses, pinch/crush fingers, etc)</p> <p> <b>A1.5</b> Communicate findings of materials orally, in written format, or digitally.</p> <p> <b>A2</b> Students will write and execute code with a focus on creating clear and precise instructions for simple algorithms with floor robots. (See sample floor robot idea in resources column)</p>	<p>source of these materials, and what happens to these objects when they are worn out or no longer needed.</p> <p><b>D2.1</b> describe objects as things that are made of one or more materials</p> <p><b>D2.2</b> identify structures that are objects designed to support a load, including those acting as supporting frameworks for objects</p> <p><b>D2.3</b> identify materials that are used to make various everyday objects, including structures</p> <p><b>D2.4</b> describe observable characteristics of various everyday objects, including structures, using qualitative information gathered through their senses</p> <p><b>D2.5</b> describe the purposes of everyday objects, including structures</p> <p><b>D2.6</b> identify properties of materials that enable the objects made from them to perform their intended function</p> <p><b>D2.7</b> identify different kinds of fasteners and describe uses for</p>	<p>computational representations of mathematical situations using coding concepts and skills. Collect data through observations, experiments, and interviews to answer questions of interest that focus on a single piece of information; record the data using methods of their choice, and organize the data in tally tables</p> <p><b>Oral Communication</b> Listen in order to understand classmates when sharing observation journals. Use speaking skills and strategies appropriately to communicate when in the field and in the classroom.</p> <p><b>Writing</b> Generate, gather, and organize ideas and information to write for an intended purpose and audience.</p> <p><b>Media Literacy</b> Create a variety of media texts for different purposes and audiences, using appropriate forms, conventions, and techniques.</p> <p><b>Grade 2:</b> Structures and Mechanisms D1.1 D1.2</p>	<ul style="list-style-type: none"> <li>• 10 Things I Can Do to Help My World by Melanie Walsh</li> <li>• The Environment: Explore, create and investigate! by J. Litton</li> <li>• Greta and the Giants by Zoë Tucker</li> <li>• The Curious Garden by Peter Brown</li> <li>• The Lorax by Dr. Suess</li> </ul> <p><b>Lesson Ideas:</b></p> <p><b>Coding: Floor Robots</b></p> <p>Students will code floor robots (for example Bee Bots) to move through mazes made from different materials in the classroom. Begin the lesson by reviewing the different material options and having students use their five senses to describe them.</p>
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			each  <b>D2.8</b> identify sources in nature of some common materials that are used to make various objects, including structures	D2.1 D2.2 D2.5	
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**Term 2 - Guidelines, Assessment Ideas**






In Term 2, students will explore the function and form of various materials, objects, and structures. They will also consider how to appropriately use and dispose of materials and objects in order to protect our communities, our environment, and our planet. Additionally, students will examine the differences among living things, and how humans can nurture and support all forms of life. Planned learning experiences, such as hands-on experiments and investigations, with a focus on inquiry-based learning, will provide greater opportunities for students to see the relevance of their classroom learning and its connection to the broader world.



When planning for assessment, consider peer- and self-assessment learning activities. Strand A focuses on the STEM skills and connections that frame the learning outcomes of the other four science strands: Life Systems; Matter and Energy; Structures and Mechanisms; and Earth and Space Systems. The implementation and assessment of STEM skills is ongoing throughout Terms 1 and 2.

**Assessment: Learning Skills, Content, Performance Standards**






- I can demonstrate an understanding of living things, seasonal changes, what I can do to keep my environment healthy, energy, and objects and structures.
- I can identify problems related to the needs of living things, adaptations due to seasonal changes, the environment, and building structures.
- I can solve problems related to the needs of living things and seasonal changes, impacts of humans on the environment, and my use of energy and objects and structures.
- I can transfer skills and solutions that include Indigenous ways of knowing, to new contexts such as food literacy.




Month/ Suggested Timelines	Big Ideas and Guiding Questions for an Inquiry Stance	STEM Skills and Connections (Strand A)	Strands and Expectations	Cross-Curricular Integrations	Resources
February	<p><b>Big Idea:</b> Objects have a specific purpose, based on their materials and structure</p> <p><b>Guiding Questions:</b>  Choose an object in the classroom and compare it to another object. How are the objects the same/different?</p>	<p>🔍 <b>A1.1</b> Research different objects within the classroom and home to determine what materials these objects are made of</p> <p>🧪 <b>A1.2</b> Use the five senses to explore and test the strength</p>	<p><b>Structures and Mechanisms:</b> <b>D2.1</b> describe objects as things that are made of one or more materials</p> <p><b>D2.2</b> identify structures that are objects designed to support a load, including those acting as supporting frameworks for objects</p> <p><b>D2.3</b> identify materials that are</p>	<p><b>Geometric and Spatial Reasoning</b> Construct three-dimensional objects, and identify two-dimensional shapes contained within structures and objects</p> <p><b>Data Literacy</b> Sort sets of data about people or things according to one attribute, and describe rules used for</p>	<p><b>Suggested Read-Alouds to Support this Topic:</b> Access fiction and nonfiction books that showcase pictures and words of materials used to build objects and structures</p> <ul style="list-style-type: none"> <li>• Franz’s Phantasmagorical Machine (by Beth Anderson)</li> </ul>






	<p>What is your object used for? What materials is your object made of?</p> <p>Where might someone get the materials used to make objects and structures?</p> <p>What is the job of certain structures? What can specific structures hold or carry?</p>	<p>and form of different materials (e.g., wood, paper, plastic, metal).</p> <p> <b>A1.3</b> Design a structure that uses materials found within the home and the classroom that will serve a function and support a load</p> <p> <b>A1.4</b> Follow safety rules when investigating with and using different materials to build structures.</p> <p> <b>A1.5</b> Communicate findings orally and in written or picture format in journals</p> <p> <b>A2</b> Use a Code and Go Mouse to travel along a path featuring different types of materials and/or structures</p> <p> <b>A3</b> Connect to the real-world environment by having</p>	<p>used to make various everyday objects, including structures</p> <p><b>D2.4</b> describe observable characteristics of various everyday objects, including structures, using qualitative information gathered through their senses</p> <p><b>D2.5</b> describe purposes of everyday objects, including structures</p> <p><b>D2.6</b> identify properties of materials that enable the objects made from them to perform their intended function</p> <p><b>D2.7</b> identify different kinds of fasteners and describe uses for each</p> <p><b>D2.8</b> identify sources in nature of some common materials that are used to make various objects, including structures</p>	<p>sorting</p> <p><b>Language Arts:</b> Choose appropriate words to communicate their meaning.</p> <p>Gather information to support ideas for writing in a variety of ways and/or from a variety of sources</p> <p>Write short texts using a few simple forms</p> <p>Write simple but complete sentences that make sense</p> <p><b>Social Studies:</b> Identify some natural and built features of your community</p> <p><b>Visual Arts:</b> Create 2D and 3D works of art</p> <p>Demonstrate an awareness of works of art from various communities, times, and places</p>	<ul style="list-style-type: none"> <li>• Rosie Revere Engineer (by Andrea Beaty)</li> <li>• What is it Made of?: Noticing Types of Materials (by Martha E. H. Rustad)</li> </ul> <p><b>Lesson Ideas:</b></p> <p><b>Material Matters:</b></p> <p>In this <a href="#">Material Matters by Science North</a> lesson plan, students discuss images of objects and structures made from different materials. Students sort and organize these objects based on their characteristics</p>
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		<p>students explore objects they use on a daily basis and recording observations in their science journals</p> <p>-share images and information with students about female engineers who made significant contributions to the field of science and technology (e.g., Emily Roebling (Brooklyn Bridge); Elsie MacGill (aircraft)) and have students draw, orally share and/or write about these engineers</p>			
<b>March</b>	<p><b>Big Idea:</b></p> <p>All living things play an important role on our planet, and should be treated with care and respect.</p> <p><b>Guiding Questions:</b></p> <p>What happens to plants, animals, and humans when the place they live is not healthy?</p> <p>How would life be different for us if there were fewer plants or animals?</p> <p>What are some ways that humans can help other</p>	<p> <b>A1.1</b></p> <p>Students make a list of plants and animals that we see in our community and surrounding environment. Students brainstorm ideas for how we can keep these plants and animals safe and healthy. (See the resources column for an example).</p> <p> <b>A1.2</b></p> <p>Observe a compost bin over several weeks and discuss how the compost supports healthy soil for plants and animals.</p>	<p><b>Life Systems:</b></p> <p><b>B1.1</b> describe changes or problems that could result from the loss of living and non-living things that are part of everyday life, while taking different perspectives into consideration</p> <p><b>B1.2</b> identify actions that can be taken to contribute to a healthy environment</p> <p><b>Structures and Mechanisms:</b></p> <p><b>D1.1</b> identify the kinds of waste materials produced by humans, and plan and carry out a course of action for minimizing waste in the classroom or at home, explaining why each action is important</p>	<p><b>Mathematics:</b></p> <p>Use mathematical language, including the terms “impossible”, “possible”, and “certain”, to describe the likelihood of events happening, and use that likelihood to make predictions and informed decisions</p> <p>Make and test predictions about the likelihood that the categories in a data set from one population will have the same frequencies in data collected from a different population of the same size</p> <p><b>Language Arts:</b></p> <p>Demonstrate an understanding of the information and ideas in oral texts by retelling the story or</p>	<p><b>Suggested Read-Alouds to Support this Topic:</b></p> <p>Access fiction and nonfiction books that showcase pictures and words on the importance and care of all living things</p> <ul style="list-style-type: none"> <li>• The Lorax (by Dr Seuss)</li> <li>• The Water Princess (by Susan Verde)</li> <li>• Compost Stew: An A-Z Recipe for Earth (by Mary McKenna Siddals)</li> <li>• Kenya’s Art (by Linda Trice)</li> <li>• Saving Earth’s Land (by Brienna Rossiter)-(Epic Books)</li> </ul>










	<p>living things, like plants and animals?</p> <p>What can we do at home, at school, and in our community to help the environment?</p> <p>What materials and objects do we use at home or in our classroom that we need to dispose of afterward? How do we dispose of these materials and objects when we are finished with them?</p> <p>How can we create less waste in our homes and our classroom?</p>	<p> <b>A1.3</b> Design a planter or flowerpot that can be used for planting seeds, caring for the soil, and observing plant growth.</p> <p> <b>A1.4</b> Follow safety rules when observing decomposing matter in a compost pile (gloves, goggles, magnifying glasses).</p> <p> <b>A1.5</b> Communicate findings orally and in written or picture format in journals</p> <p> <b>A2</b> Create a haiku poem on environmental awareness and use Scratch Jr to create images and recordings of the haiku poem. (See 'What does it mean to be green' lesson in resources column)</p> <p> <b>A3</b> Connect to the real-world environment by having</p>	<p><b>D1.2</b> assess everyday objects, including structures, that have similar purposes, in terms of the materials they are made from, the source of these materials, and what happens to these objects when they are worn out or no longer needed</p>	<p>restating the information, including the main idea (e.g., use time-order words, such as first, then, next, finally, to retell a story they have heard; restate information from a movie about community workers, including a topic statement and several supporting details)</p> <p>Demonstrate an understanding of appropriate speaking behaviour in a few different situations, including paired sharing and small and large group discussions (e.g., give other group members an opportunity to speak; respond positively to the contributions of others; stay on topic and speak to the point)</p> <p><b>Heritage and Identity: Our Changing Roles and Responsibilities</b> Understand the importance of treating people and the environment with respect</p> <p><b>People and Environments: The Local Community</b> Create a plan of ways we responsibly interact with the environment surrounding our local community</p> <p><b>Visual Arts</b> Demonstrate an awareness of</p>	<p><b>Lesson Ideas:</b></p> <p><b>Building a Shelter</b></p> <p>In this <a href="#">Building A Shelter by Science North</a> lesson plan, students will use a variety of materials to build a structure that will house a “toy” animal, in order to explore materials in our natural and human-made environment.</p> <p><b>Environmental Awareness Coding Lesson Using Scratch Jr</b></p> <p>In this <a href="#">What Does It Mean to Be Green by Canada Learning Code</a> lesson plan, students will brainstorm what it means to “be green” and protect the environment. Students will create a haiku poem as a class. Using Scratch Jr they will create a background and images to represent the poem and will record their voices reciting the poem in Scratch Jr.</p>
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		students record items they recycle and reuse at home and in the classroom daily Discuss the role of a sanitation engineer with students, and how this community member helps to control our waste and promote the well-being of our planet		signs and symbols seen in our daily lives, particularly as they relate to the environment (e.g. recycling symbols, deer crossing sign).	
<b>April</b>	<p><b>Big Ideas:</b></p> <p>Energy comes from many sources and is used every day in different forms and different ways.</p> <p><b>Guiding Questions:</b></p> <p>Where do humans get the food that gives us energy?</p> <p>Where do we see energy being used in our homes and our communities?</p> <p>How do we change the way we use energy during the different seasons? Do we use energy differently in the winter than in the summer?</p> <p>What do we do in our homes and our communities to stay warm in the winter</p>	<p> <b>A1.1</b> Access students' prior knowledge of the term energy and where we see energy being used in our homes and classrooms. Create a KWL or RAN chart of student ideas</p> <p> <b>A1.2</b> Provide hands-on experiences using different types of toys that move in different ways (e.g., push toys, pull toys, wind-up toys).</p> <p> <b>A1.3</b> Design a fan using found materials that will create various levels of wind energy</p>	<p><b>Matter and Energy:</b></p> <p><b>C2.3</b> identify food as a source of energy for living things</p> <p><b>C2.4</b> identify everyday uses of various sources of energy</p> <p><b>C2.5</b> demonstrate an understanding that humans get the energy resources they need from the world around them and that the supply of many of these resources is limited</p> <p><b>C2.6</b> describe seasonal differences in how we use energy and in the forms of energy we use</p> <p><b>Earth and Space Systems:</b></p> <p><b>E2.4</b> describe and compare the four seasons in terms of the weather, including precipitation and temperature, in their local</p>	<p><b>Patterns and Relationships</b> Identify and describe patterns, including those in real-life contexts (e.g. patterns that occur in our use of energy and food consumption)</p> <p><b>Oral Communication</b> Use one or more appropriate visual aids to support or enhance oral presentations</p> <p>1.1 Reading-read a few different types of literary and informational texts</p> <p>2.5 Writing-begin to identify, with support, point of view about a possible topic</p> <p><b>Social Studies:</b> B1.1-describe some of the ways in which people make use of natural and built features of, and human services in, the local community to meet their needs, and what might</p>	<p><b>Suggested Read-Alouds to Support this Topic:</b> Access fiction and nonfiction books that showcase pictures and words about energy forms and sources of energy in our homes and our lives</p> <ul style="list-style-type: none"> <li>• Energy Makes Things Happen (by Kinberly Brubaker Bradley)</li> <li>• Energy Island (by Allan Drummond)</li> <li>• Why Should I Save Energy? (by Jen Green)</li> <li>• Eat for Energy (by Gina Bellisario)</li> </ul> <p><b>Lesson Ideas:</b></p> <p><b>Seasonal Changes: Trees</b></p> <p>In this <a href="#">Seasonal Changes -</a></p>





	<p>months and cool in the summer months?</p> <p>Where does the energy come from that helps us to adapt to the changing seasons?</p>	<p> <b>A1.4</b> Follow safety rules when investigating with and using different toys, vehicles, and structures that utilize energy.</p> <p>  <b>A1.5</b> Communicate findings orally and in written or picture format in journals</p> <p> <b>A2</b> Use a coding robot to explore the impact of daily and seasonal changes on living things</p> <p> <b>A3</b> Connect to the real-world environment by having students log the energy sources they use at home and in the classroom daily. Examine the role of a farmer as a community member who helps to support food growth as a source of energy for living things (e.g., which foods/animals would you find on a farm? How are these helpful in providing humans and other living things with</p>	<p>area</p> <p><b>E2.5</b> describe changes in the appearance or behaviour of living things that are adaptations to seasonal changes</p> <p><b>E2.6</b> describe how humans prepare for, and respond to, daily and seasonal changes</p>	<p>happen if these features/services did not exist</p> <p>B1.2-identify some services and service-related occupations in their community (e.g., occupations such as sanitation worker, store clerk, restaurant server, repair person; services provided by the post office, the band office, the water treatment plant, grocery stores, gas stations), and describe how they meet people’s needs, including their own needs</p>	<p><a href="#">Trees by Ontario Science Centre</a> lesson plan, students will explore how the changes in the seasons can be observed through our natural environment (e.g., trees). This lesson can be extended to examine how trees are also sources of food and energy.</p> <p><b>The Path of Sunlight</b></p> <p>In this <a href="#">Path of Sunlight by Science North</a> lesson plan students will investigate how the sun’s energy allows all living things to meet their basic needs</p> <p><b>Ozobots and the Four Seasons</b></p> <p>In this <a href="#">Ozobots and the Four Seasons by Science North</a> lesson plan, students will create “code” using various colours and images to show a progression through the four seasons, using a coding robot to transition from one “season” to another</p>
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		the energy we need to survive?)			<p><b>Food Literacy Memory Game</b></p> <p>Teachers can print and cut out the food cards to play a memory/concentration game with students. Afterwards, teachers can use the accompanying guiding questions as discussion points</p> <p><a href="#">Where Does Our Food Come From Memory Game</a></p> <p><b>Ontario-Grown Food Facts</b></p> <p>Students can brainstorm a list of fruits, vegetables, dairy products, meats, and other products that are grown or sourced in Ontario. They can then click on the images to learn more about the benefits of each food, and how/when/where these are grown or sourced</p> <p><a href="#">Fun Facts About Ontario Grown Foods</a></p>
<b>May</b>	<p><b>Big Ideas:</b></p> <p>All living things have the same basic needs (air, food, water, shelter), but grow and</p>	<p>⓪ <b>A1.1</b></p> <p>Use images, books, videos, and real-life opportunities to compare and contrast</p>	<p><b>Life Systems:</b></p> <p><b>B2.2</b> identify the basic needs of living things, including the need for air, water, food, heat, shelter, and space</p>	<p><b>Measurement</b></p> <p>Compare several everyday objects (i.e. plants/animals) and order them according to length and/or mass</p>	<p><b>Suggested Read-Alouds to Support this Topic:</b></p> <p>Access fiction and nonfiction books that showcase the needs of</p>

	<p>change in different ways.</p> <p><b>Guiding Questions:</b></p> <p>What are some things that plants and animals need to survive?</p> <p>How is the life cycle of a plant different from the life cycle of an animal?</p> <p>Compare different plants and animals, and how they grow and change.</p>	<p>different types of plants and different animal classes (e.g., mammal, reptile, bird)</p> <p> <b>A1.2</b> Observe and compare the growth of different plants based on the amount of water and sunlight they receive.</p> <p> <b>A1.3</b> Use recyclable and found materials to create any animal, insect, or plant; then describe what your living thing needs to survive</p> <p> <b>A1.4</b> Follow safety rules to handle plants and other living things with care.</p> <p> <b>A1.5</b> Communicate findings orally and in written or picture format in journals.</p> <p> <b>A2</b> Students will use directions to orally communicate code (unplugged coding) to a partner on how to navigate</p>	<p><b>B2.3</b> identify the physical characteristics of various plants and animals, including humans, and explain how these characteristics help the plants and animals meet their basic needs</p> <p><b>B2.5</b> describe the characteristics of a healthy environment, including clean air and water and nutritious food, and how a healthy environment enables living things to meet their needs</p> <p><b>Earth and Space Systems:</b> <b>E2.2</b> demonstrate an understanding that a cycle is a series of repeating events, and that cycles can be observed in daily and seasonal changes</p>	<p><b>Data</b> Collect data through observations, experiments, and interviews to answer questions of interest that focus on a single piece of information; record the data using methods of their choice; and organize the data in tally tables</p> <p>Display sets of data, using one-to-one correspondence, in concrete graphs and pictographs with proper sources, titles, and labels</p> <p><b>Language Arts</b> Identify a few reading comprehension strategies and use them before, during, and after reading to understand texts, initially with support and direction.</p> <p>Identify some text features (e.g., illustrations, symbols, photographs, title, page number, table of contents) and explain how they help readers understand texts</p> <p>Gather information to support ideas for writing in a variety of ways and/or from a variety of sources</p> <p>Sort ideas and information for their writing in a variety of ways,</p>	<p>living things and specific animal life cycles that coincide with these needs</p> <ul style="list-style-type: none"> <li>• Each Living Thing (by Joanne Ryder)</li> <li>• Do You Know Which Ones Will Grow? (by Susan A. Shea)</li> <li>• What is a Living Thing? (by Bobbie Kalman)</li> <li>• Living Things (by Patricia Armentrout)- (Epic Books)</li> </ul> <p><b>Lesson Ideas:</b></p> <p><b>Build an Animal, Insect, or Plant Lesson</b></p> <p>In this <a href="#">Design a Plant by Science North</a> lesson plan, students will collect and/or be provided with recycled or craft materials to create an animal, insect, or plant of their choice Students should select a living thing based on a) their interest level and b) their knowledge and understanding of the basic needs of living things</p> <p><b>Video About the Role of a Biologist</b></p>
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		<p>through a space (e.g., classroom, schoolyard) collecting cards outlining the needs of living things</p> <p> <b>A3</b></p> <p>Watch the video in the resources column about the role of a biologist. Discuss famous Canadian biologists (e.g., David Suzuki; Severn Culiis-Suzuki; Alice Eastwood) and explain how these biologists help make discoveries and share their learning to help life on our planet.</p>		<p>with support and direction</p> <p>Determine, after consultation with the teacher and peers, whether the ideas and information they have gathered are suitable for the purpose</p> <p><b>Social Studies:</b> Compare some of the significant events in their own lives and/or the lives of their family members with those in the lives of their peers</p> <p>Demonstrate an understanding of simple chronology by identifying and organizing chronologically some significant events related to their personal experience</p> <p><b>Health and Physical Education</b> Explain why people need food to have healthy bodies and minds</p> <p><b>Visual Arts</b> Use a variety of materials, tools, and techniques to respond to design challenges</p>	<p>Share a video with students about the role of a biologist and discuss examples of animals, insects and/or plants that biologists might study</p> <p>Discuss why the role of a biologist is important</p>
<p><b>June</b></p>	<p><b>Big Ideas:</b></p> <p>All living things interact differently with their outdoor environment depending on the season</p>	<p> <b>A1.1</b></p> <p>Show what you know about the sports and activities we play, and the way we dress in the summer vs the winter (i.e.</p>	<p><b>Earth and Space Systems</b></p> <p><b>E1.1</b> assess the impact of daily and seasonal changes on human outdoor activities, and identify innovations that enable people to engage in various activities year-</p>	<p><b>Mathematics:</b></p> <p>Describe ways that numbers are used in everyday life.</p> <p>Sort sets of data about people and things according to one attribute, and describe sorting rules.</p>	<p><b>Suggested Read-Alouds to Support this Topic:</b></p> <ul style="list-style-type: none"> <li>• Good Morning World (by Paul Windsor)</li> <li>• My Heart Fills with</li> </ul>



	<p><b>Guiding Questions:</b></p> <p>What are some different activities we do depending upon the season or weather?</p> <p>How do we dress differently during the four seasons of the year?</p> <p>How does the community we live in affect how we engage in different seasonal activities?</p>	<p>use a class Venn diagram to compare and contrast).</p> <p> <b>A1.2</b> Conduct a sun print science experiment to demonstrate the effects of light and heat during the warmer months.</p> <p> <b>A1.3</b> Design a game that can be played outside in warmer weather using physical education equipment within the school (e.g., balls, bean bags, cones, scoops).</p> <p> <b>A1.4</b> Follow safety rules when using physical education equipment.</p> <p> <b>A1.5</b> Orally communicate ideas on the success of the games and determine through dialogue whether the same game could be played during the winter months</p>	<p>round</p> <p><b>E1.2</b> assess ways in which daily and seasonal changes have an impact on society, the environment, and living things in the natural environment</p>	<p>Read the date on a calendar and use the calendar to identify seasons</p> <p><b>Language Arts:</b> Show an understanding of information in oral texts by retelling the story. Identify the main idea and a few elements of text Sort ideas for writing with support and direction</p> <p><b>Drama:</b> Engage in dramatic play and role-play exploring various communities, times, and places</p> <p><b>Physical Education:</b> Actively participate in a wide variety of activities; understand factors that contribute to the enjoyment of being active</p>	<p>Happiness (by Monique Gray Smith) (Epic Books)</p> <ul style="list-style-type: none"> <li>• The Seasons Colors: How They Change (by Joyce Markovics) (Epic Books)</li> <li>• Summer Solstice (by Maddie Spalding) (Epic Books)</li> </ul> <p><b>Lesson Ideas:</b></p> <p><b>National Indigenous Day Background</b> <a href="#">National Indigenous Peoples Day!</a></p> <p><b>Indigenous Story: The Great Festival of Light</b> <a href="#">The Great Festival Of Light</a></p> <p><b>The Great Festival of Light/Summer Solstice Activity</b> <a href="#">Summer Solstice Sequel</a></p> <p><b>The History of Lacrosse</b></p> <p>View a video about the roots and history of Lacrosse. Educators are encouraged to pause the video at various points and discuss what has been viewed, as well as student connections that can be</p>
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		<p> <b>A2</b> Use a coding application program as a whole class lesson to create various scenes that depict the changing seasons.</p> <p> <b>A3</b> Connect to the real-world environment by having students bring in clothing items that could be worn at different times of the year (e.g., t-shirt, sweater, winter coat). Students can then sort and organize these items based on the season each clothing item would be worn</p>			<p>made throughout</p> <p><b>Seasonal Changes Using Scratch Jr</b> Watch the video as a tutorial and have students work collaboratively to create their own seasonal scene using the Scratch Jr online coding program <a href="#">Use Scratch Jr to show how one season changes to the next</a></p>
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