

Science – NAD and BC Standards

Key for “Province”:

Bold type – Big Ideas

Regular type – BC curricular competencies

Italicized type: Content

Topics	Gr	North American Division	Province:
Life Sciences	K-2	<p><i>Molecules to Organisms: Structures and Processes:</i> S.K-2.LS.1 Use observations to describe patterns (e.g., animals need to take in food but plants do not, different kinds of food needed by different types of animals, requirement of plants to have light, all living things need water) of what plants and animals (including humans) need to survive. (K-LS1-1)</p>	<p>(K) Plants and animals have observable features: <i>basic needs and adaptations</i> (1) Living things have features and behaviours that help them survive in their environment: <i>structural features and behavioural adaptations</i> (2) Water is essential to all living things, and it cycles through the environment: <i>water sources</i></p> <ul style="list-style-type: none"> observe objects and events in familiar contexts, make exploratory observations using their senses, demonstrate curiosity and a sense of wonder about the world <p><i>(basic needs of plants and animals)</i></p>
		<p><i>Molecules to Organisms, cont:</i> S.K-2.LS.2 Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs (e.g., designing clothing or equipment to protect bicyclists by mimicking turtle shells, acorn shells, and animal scales; stabilizing structures by mimicking animal tails and roots on plants; keeping out intruders by mimicking thorns on branches and animal quills). (1-LS1-1)</p>	<p>(K) Plants and animals have observable features: <i>basic needs and adaptations</i> (1) Living things have features and behaviours that help them survive in their environment: <i>structural features and behavioural adaptations</i> (2) Living Things have life cycles adapted to their environment: <i>metamorphic and non-metamorphic life cycles</i></p> <ul style="list-style-type: none"> ask simple questions about familiar objects and events, safely manipulate materials, discuss observations, generate and introduce new or refined ideas when problem solving, share observations and ideas orally
		<p><i>Molecules to Organisms, cont:</i> S.K-2.LS.3 Make observations to determine patterns in behavior of parents and offspring that help offspring survive (e.g., signals that offspring make such as crying, cheeping and the responses of parents such as feeding, comforting, protecting). (1-LS1-2)</p>	<p>(K) Plants and animals have observable features: <i>basic needs and adaptations</i> (1) Living things have features and behaviours that help them survive in their environment: <i>classification and behavioural adaptations</i> (2) Living Things have life cycles adapted to their environment: <i>offspring and parent, and First Peoples use of their knowledge</i></p> <ul style="list-style-type: none"> observe objects and events in familiar contexts, ask simple questions about familiar objects and events, safely manipulate materials, discuss observations
		<p><i>Ecosystems: Interactions, Energy, and Dynamics:</i> S.K-2.LS.4 Plan and conduct an investigation to determine if plants need sunlight and water to grow, ensuring that only one variable is tested at a time. (2-LS2-1)</p>	<p>(K) Plants and animals have observable features: <i>basic needs</i> (1) Living things have features and behaviours that help them survive in their environment: <i>structural features and behavioural adaptations</i></p>

		<p>(2) Water is essential to all living things, and it cycles through the environment: <i>water sources</i></p> <ul style="list-style-type: none"> • make exploratory observations using their senses, • make simple measurements using non-standard units, • transfer and apply learning to new situations
	<p><i>Ecosystems, cont:</i> S.K-2.LS.5 Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants. (2-LS2-2)</p>	<p>(K) Plants and animals have observable features: <i>basic needs and adaptations</i></p> <p>(1) Living things have features and behaviours that help them survive in their environment: <i>structural features and behavioural adaptations</i></p> <p>(2) Living Things have life cycles adapted to their environment: <i>metamorphic and non-metamorphic life cycles, and offspring and parent</i></p> <ul style="list-style-type: none"> • make exploratory observations using their senses, • represent observations and ideas by drawing charts and simple pictographs, • experience and interpret the local environment • observe objects and events in familiar contexts
	<p><i>Heredity: Inheritance and Variation of Traits:</i> S.K-2.LS.6 Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents (e.g., leaves from same kind of plant are the same shape but can differ in size, young animals look similar to their parents but are not exactly the same). (1-LS3-1)</p>	<p>(K) Plants and animals have observable features: <i>basic needs</i></p> <p>(1) Living things have features and behaviours that help them survive: <i>structural features</i></p> <p>(2) Living Things have life cycles adapted to their environment: <i>offspring and parent, and First Peoples use of their knowledge</i></p> <ul style="list-style-type: none"> • make exploratory observations using their senses, • make simple measurements using non-standard units, • share observations and ideas orally, • represent observations and ideas by drawing charts and simple pictographs
	<p><i>Life: Origins, Unity, and Diversity:</i> S.K-2.LS.7 Make observations of plants and animals to compare the diversity of life in different habitats. (2-LS4-1)</p>	<p>(K) Plants and animals have observable features: <i>basic needs and adaptations</i></p> <p>(1) Living things have features and behaviours that help them survive: <i>names and behavioural adaptations</i></p> <p>(2) Living Things have life cycles adapted to their environment: <i>offspring and parent, and First Peoples use of their knowledge</i></p> <ul style="list-style-type: none"> • make exploratory observations using their senses, • transfer and apply learning to new situations, • take part in caring for self, family, classroom and school through personal approaches

			<ul style="list-style-type: none"> recognize First Peoples stories (including oral and written narratives), songs and art, as ways to share knowledge
		<p><i>Life: Origins, Unity, and Diversity, cont:</i> S.K-2.LS.8 Apply scientific principles to begin to construct a personal model that explains how life began on earth and acknowledges God as the Creator.</p>	<p>(K) Plants and animals have observable features: basic needs and adaptations (1) Living things have features and behaviours that help them survive: classification and structural features (2) Living Things have life cycles adapted to their environment: metamorphic and non-metamorphic life cycles; offspring and parent; and First Peoples use of their knowledge</p> <ul style="list-style-type: none"> make exploratory observations using their senses, express and reflect on personal experiences of place share observations and ideas orally, recognize First Peoples stories (including oral and written narratives), songs and art, as ways to share knowledge
Health Sciences	K-2	<p><i>Health Promotion and Disease Prevention:</i> S.K-2.HS.1 Read texts and use media to determine the dimensions of health (e.g., nutrition, exercise) and patterns of behavior (e.g., eating healthy foods, daily exercise) that impact personal health.</p>	<p>(K-1) Knowing about our bodies and making healthy choices helps us look after ourselves. (2) Adopting healthy personal practices and safety strategies protects ourselves and others.</p> <ul style="list-style-type: none"> Identify opportunities to be physically active at school, at home, and in the community. Identify and explore a variety of foods and describe how they contribute to health. Identify opportunities to make choices that contribute to health and well-being. Identify sources of health information. <p><i>(practices that promote health and well-being, relationships between food, hydration, and health)</i></p>
		<p><i>Health Promotion and Disease Prevention, cont:</i> S.K-2.HS.2 Demonstrate ways to prevent communicable diseases and reduce accidental injuries.</p>	<p>(K-1) Knowing about our bodies and making healthy choices helps us look after ourselves. (2) Adopting healthy personal practices and safety strategies protects ourselves and others.</p> <ul style="list-style-type: none"> Identify opportunities to make choices that contribute to health and well-being. Identify sources of health information. Identify and describe a variety of unsafe and/or uncomfortable situations. <p><i>(reliable sources of health information, hazards and potentially unsafe situations, practices that promote health and well-being)</i></p>
		<p><i>Health Promotion and Disease Prevention, cont:</i> S.K-2.HS.3 Role play how to tell a trusted adult if threatened or harmed.</p>	<p>(K-1) Learning about ourselves and others helps us develop a positive attitude and caring behaviours, which helps us build healthy relationships. (2) Having good communication skills and managing our emotions enables us to develop and maintain healthy relationships.</p> <ul style="list-style-type: none"> Identify and describe a variety of unsafe and/or uncomfortable situations.

			<ul style="list-style-type: none"> Identify caring behaviours among classmates and within families. Identify and describe feelings and worries, and strategies for dealing with them. <p><i>(hazards and potentially unsafe situations, appropriate and inappropriate ways of being touched)</i></p>
		<p><i>Health Resources:</i> S.K-2.HS.4 Conduct an investigation to identify health professionals and other adults who can help to promote health.</p>	<p>(K-1) Learning about ourselves and others helps us develop a positive attitude and caring behaviours, which helps us build healthy relationships. (2) Adopting healthy personal practices and safety strategies protects ourselves and others.</p> <ul style="list-style-type: none"> Recognize basic health information from a variety of sources <p><i>(reliable sources of health information)</i></p>
		<p><i>Healthy Lifestyle Choices:</i> S.K-2.HS.5 Construct an argument that media influences personal decisions relating to healthy choices.</p>	<p>(K-1) Learning about ourselves and others helps us develop a positive attitude and caring behaviours, which helps us build healthy relationships. (2) Adopting healthy personal practices and safety strategies protects ourselves and others.</p> <ul style="list-style-type: none"> Identify opportunities to make choices that contribute to health and well-being. Recognize basic health information from a variety of sources. <p><i>(practices that promote health and well being, including those relating to physical activity, nutrition, and illness prevention, strategies for accessing health information)</i></p>
		<p><i>Healthy Lifestyle Choices, cont:</i> S.K-2.HS.6 Use a model to differentiate between situations when a health-related decision can be made individually or when assistance is needed.</p>	<p>(K-1) Learning about ourselves and others helps us develop a positive attitude and caring behaviours, which helps us build healthy relationships. (2) Adopting healthy personal practices and safety strategies protects ourselves and others.</p> <ul style="list-style-type: none"> Identify opportunities to make choices that contribute to health and well-being. Identify caring behaviours among classmates and within families. <p><i>(caring behaviours in groups and families)</i></p>
		<p><i>Healthy Lifestyle Choices, cont:</i> S.K-2.HS.7 Identify a short-term personal health goal and implement a plan to attain that goal.</p>	<p>(K-1) Good health comprises physical, mental and emotional well-being. (2) Our physical, emotional, and mental health are interconnected.</p> <ul style="list-style-type: none"> Identify opportunities to make choices that contribute to health and well-being. Identify and apply strategies that promote mental well-being. <p><i>(practices that promote health and well-being, managing and expressing emotions)</i></p>
		<p><i>Healthy Lifestyle Choices, cont:</i> S.K-2.HS.8 Ask questions and obtain information about God’s plan for healthy living.</p>	<p>(K-1) Good health comprises physical, mental and emotional well-being. (2) Our physical, emotional, and mental health are interconnected.</p> <ul style="list-style-type: none"> Describe ways to access information on and support services for a variety of health topics.

			<ul style="list-style-type: none"> Explore and describe components of healthy living. <i>(strategies for accessing health information, practices that promote health and well-being)</i>
Earth and Space Sciences	K-2	<i>Earth's Systems:</i> S.K-2.ES.1 Use and share observations of local weather conditions to describe patterns over time. (K-ESS2-1)	(K) Daily and seasonal changes affect all living things: weather changes (1) Observable patterns and cycles occur in the local sky and landscape: knowledge of First Peoples and local patterns <ul style="list-style-type: none"> Observe objects and events in familiar contexts Make simple measurements using non-standard units Discuss observations
		<i>Earth's Systems, cont:</i> S.K-2.ES.2 Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs. (K-ESS2-2)	(K) Plants and animals have observable features: adaptations (1) Living things have features and behaviours that help them survive in their environment: behavioural adaptations (2) Water is essential to all living things, and it cycles through the environment: water sources and water conservation <ul style="list-style-type: none"> Ask simple questions about familiar objects and events Make exploratory observations using their senses Safely manipulate materials Share observations and ideas orally
		<i>Earth's Systems, cont:</i> S.K-2.ES.3 Compare multiple solutions designed to slow or prevent wind or water from changing the shape of the land. (2-ESS2-1)	(2) Water is essential to all living things, and it cycles through the environment: water sources and water conservation <ul style="list-style-type: none"> Ask questions about familiar objects and events Make and record observations Experience and interpret the local environment Consider some environmental consequences of their actions Transfer and apply learning to new situations Generate and introduce new or refined ideas when problem solving
		<i>Earth's Systems, cont:</i> S.K-2.ES.4 Develop a model to represent the shapes and kinds of land and bodies of water in an area. (2-ESS2-2)	(2) Water is essential to all living things, and it cycles through the environment: water sources and local First People's knowledge of water <ul style="list-style-type: none"> Make and record observations Experience and interpret the local environment Communicate observations and ideas
		<i>Earth's Systems, cont:</i> S.K-2.ES.5 Obtain information to identify where water is found on Earth and that it can be solid or liquid. (2-ESS2-3)	(2) Water is essential to all living things, and it cycles through the environment: water sources and water cycle <ul style="list-style-type: none"> Ask questions about familiar objects and events

			<ul style="list-style-type: none"> Sort and classify data and information using drawings, pictographs and provided tables
		<p><i>Earth and Human Activity:</i> S.K-2.ES.6 Use a model to represent the relationship between the needs of different plants and animals (including humans) and the places they live. (K-ESS3-2)</p>	<p>(K) Plants and animals have observable features: <i>basic needs and adaptations</i> (1) Living things have features and behaviours that help them survive in their environment: <i>behavioural adaptations: names and structural features</i></p> <ul style="list-style-type: none"> Demonstrate curiosity and a sense of wonder about the world Experience and interpret the local environment Identify simple patterns and connections
		<p><i>Earth and Human Activity, cont:</i> S.K-2.ES.7 Ask questions to obtain information about the purpose of weather forecasting to prepare for, and respond to, severe weather. (K-ESS3-2)</p>	<p>(K) Daily and seasonal changes affect all living things: <i>weather changes, living things make changes, First Peoples knowledge of seasonal changes</i></p> <ul style="list-style-type: none"> Ask questions about familiar objects and events Make and record observations Recognize First Peoples stories, songs, and art, as ways to share knowledge Express and reflect on personal experiences
		<p><i>Earth and Human Activity, cont:</i> S.K-2.ES.8 Communicate solutions that will reduce the impact of humans on the land, water, air, and/or other living things in the local environment. (K-ESS3-3)</p>	<p>(2) Water is essential to all living things, and it cycles through the environment: <i>water conservation</i></p> <ul style="list-style-type: none"> Ask questions about familiar objects and events Recognize First Peoples stories, songs, and art Consider some environmental consequences of their actions Take part in caring for self, family, classroom and school through personal approaches
		<p><i>Earth's Place in the Universe:</i> S.K-2.ES.9 Use observations of the sun, moon, and stars to describe patterns (e.g., sun and moon appear to track across the sky, stars visible at night) that can be predicted. (1-ESS1-1)</p>	<p>(1) Observable patterns and cycles occur in the local sky and landscape: <i>common objects in the sky and local patterns</i></p> <ul style="list-style-type: none"> Observe objects and events in familiar contexts Make and record observations Sort and classify data and information using drawings, pictographs and provided tables Identify simple patterns and connections
		<p><i>Earth's Place in the Universe, cont:</i> S.K-2.ES.10 Make observations at different times of year to relate the amount of daylight to the time of year. (1-ESS1-2)</p>	<p>(1) Observable patterns and cycles occur in the local sky and landscape: <i>common objects in the sky and local patterns</i></p> <ul style="list-style-type: none"> Observe objects and events in familiar contexts Make and record observations Sort and classify data and information using drawings, pictographs and provided tables Identify simple patterns and connections Recognize First Peoples stories, songs, and art, as ways to share knowledge

		<p><i>Earth's Place in the Universe, cont:</i> S.K-2.ES.11 Use information from several sources to provide evidence that Earth events (e.g., volcanic explosions, earthquakes, rock erosion) can occur quickly or slowly. (2-ESS1-1)</p>	<p>(2) Water is essential to all living things, and it cycles through the environment: <i>water sources and water conservation</i></p> <ul style="list-style-type: none"> • Experience and interpret the local environment • Compare observations with predictions through discussion • Sort and classify data and information using drawings, pictographs and provided tables
Physical Sciences	K-2	<p><i>Matter and Its Interactions:</i> S.K-2.PS.1 Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties (e.g., color, texture, hardness, flexibility). (2-PS1-1)</p>	<p>(K) Humans interact with matter every day through familiar materials: properties of familiar materials (1) Matter is useful because of its properties: specific properties</p> <ul style="list-style-type: none"> • Observe objects and events in familiar contexts • Make and record observations • Sort and classify data and information using drawings, pictographs and provided tables • Compare observations with those of others
		<p><i>Matter and Its Interactions, cont:</i> S.K-2.PS.2 Analyze data obtained from testing different materials to determine which materials have the properties (e.g., strength, flexibility, hardness, texture, absorbency) that are best suited for an intended purpose. (2-PS1-2)</p>	<p>(1) Matter is useful because of its properties: specific properties (2) Materials can be changed through physical and chemical processes</p> <ul style="list-style-type: none"> • Observe objects and events in familiar contexts • Make and record observations • Sort and classify data and information using drawings, pictographs and provided tables • Compare observations with those of others
		<p><i>Matter and Its Interactions, cont::</i> S.K-2.PS.3 Make observations to construct an evidence-based account of how an object made of a small set of pieces (e.g., blocks, building bricks, other assorted small objects) can be disassembled and made into a new object. (2-PS1-3)</p>	<p>(1) Matter is useful because of its properties: specific properties (2) Materials can be changed through physical and chemical processes</p> <ul style="list-style-type: none"> • Observe objects and events in familiar contexts • Make and record observations • Sort and classify data and information using drawings, pictographs and provided tables • Compare observations with those of others
		<p><i>Matter and Its Interactions, cont::</i> S.K-2.PS.4 Construct an argument with evidence that some changes caused by heating or cooling can be reversed (e.g., water, butter) and some cannot (e.g., cooking an egg, freezing a plant leaf, heating paper). (2-PS1-4)</p>	<p>(2) Materials can be changed through physical and chemical processes</p> <ul style="list-style-type: none"> • Ask questions about familiar objects and events • Make and record observations • Sort and classify data and information • Communicate observations and ideas
		<p><i>Motion and Stability: Forces and Interactions:</i> S.K-2.PS.5 Plan and conduct an investigation to compare the effects of different strengths or different directions of pushes and pulls (e.g., string attached to an object being pulled, pushing an object, stopping a rolling ball, two objects</p>	<p>(K) The motion of objects depends on their properties: effects of pushes/pulls</p> <ul style="list-style-type: none"> • Ask simple questions about familiar objects and events • Make exploratory observations using their senses • Safely manipulate materials

	colliding and pushing on each other) on the motion of an object. (K-PS2-1)	<ul style="list-style-type: none"> Share observations and ideas orally
	<p><i>Motion and Stability, cont:</i> S.K-2.PS.6 Analyze data to determine if a design solution (e.g., ramp to increase speed of an object, structure that causes an object to turn) works as intended to change the speed or direction of an object with a push or a pull. (K-PS2-2)</p>	<p>(K) The motion of objects depends on their properties: <i>effects of pushes/pulls and effects of size, shape, and materials</i></p> <ul style="list-style-type: none"> Observe objects and events in familiar contexts Safely manipulate materials Make simple measurements using non-standard units Represent observations and ideas by drawing charts and simple pictographs
	<p><i>Energy:</i> S.K-2.PS.7 Make observations to determine the effect of sunlight on Earth’s surface (e.g., sand, soil, rocks, water). (K-PS3-1)</p>	<p>(K) Daily and seasonal changes affect all living things: <i>weather changes and First Peoples knowledge of seasonal changes</i></p> <ul style="list-style-type: none"> Observe objects and events in familiar contexts Represent observations and ideas by drawing charts and simple pictographs Transfer and apply learning to new situations Generate and introduce new or refined ideas when problem solving
	<p><i>Energy, cont:</i> S.K-2.PS.8 Use tools and materials to design and build a structure (e.g., umbrellas, canopies, tents) that will reduce the warming effect of sunlight on an area. (K-PS3-2)</p>	<p>(K) Daily and seasonal changes affect all living things: <i>weather changes and First Peoples knowledge of seasonal changes</i></p> <ul style="list-style-type: none"> Make exploratory observations using their senses Experience and interpret the local environment Safely manipulate materials
	<p><i>Waves and Their Applications in Technologies...:</i> S.K-2.PS.9 Plan and conduct investigations to provide evidence that vibrating materials (e.g., tuning forks, plucking a stretched string) can make sound and that sound can make materials vibrate (e.g., holding a piece of paper near a speaker, holding an object near a vibrating tuning fork). (1-PS4-1)</p>	<p>(1) Light and sound can be produced and their properties can be changed: <i>sources of light and sound, and properties of light and sound</i></p> <ul style="list-style-type: none"> Demonstrate curiosity and a sense of wonder about the world Make simple predictions about familiar objects and events Make and record observations Safely manipulate materials to test ideas and predictions Communicate observations and ideas using oral or written language, drawing, or role-play
	<p><i>Waves and Their Applications, cont:</i> S.K-2.PS.10 Make observations (e.g., those made in a completely dark room, pinhole box, video of a cave explorer) to construct an evidence-based account that objects can be seen only when illuminated (e.g., external light source, object giving off its own light). (1-PS4-2)</p>	<p>(1) Light and sound can be produced and their properties can be changed: <i>sources of light and sound, and properties of light and sound</i></p> <ul style="list-style-type: none"> Demonstrate curiosity and a sense of wonder about the world Make simple predictions about familiar objects and events Make and record observations Safely manipulate materials to test ideas and predictions

			<ul style="list-style-type: none"> Communicate observations and ideas using oral or written language, drawing, or role-play
		<p><i>Waves and Their Applications, cont:</i> S.K-2.PS.11 Plan and conduct an investigation to determine the effect of placing objects made with different materials (e.g., transparent, translucent, opaque, reflective) in the path of a beam of light. (1-PS4-3)</p>	<p>(1) Light and sound can be produced and their properties can be changed: sources of light and sound, and properties of light and sound</p> <ul style="list-style-type: none"> Demonstrate curiosity and a sense of wonder about the world Make simple predictions about familiar objects and events Make and record observations Safely manipulate materials to test ideas and predictions Communicate observations and ideas using oral or written language, drawing, or role-play
		<p><i>Waves and Their Applications, cont:</i> S.K-2.PS.12 Use tools and materials to design and build a device (e.g., light source, paper cup and string “telephones,” drum beats pattern) that uses light or sound to solve the problem of communicating over a distance. (1-PS4-4)</p>	<p>(1) Light and sound can be produced and their properties can be changed: sources of light and sound, and properties of light and sound</p> <ul style="list-style-type: none"> Make simple predictions about familiar objects and events Safely manipulate materials to test ideas and predictions Make and record observations Recognize First Peoples stories, songs, and art, as ways to share knowledge Compare observations with those of others Transfer and apply learning to new situations
Engineering, Technology, and Applications of Science	K-2	<p><i>Engineering Design:</i> 1.DSP.1 Organize, represent, compare, and interpret data with up to three categories (1.MD.4)</p>	<p>(1,2)</p> <ul style="list-style-type: none"> Make and record simple measurements using informal or non-standard methods; sort and classify data and information using drawings, pictographs and provided tables.
		<p><i>Engineering Design, cont:</i> 2.DSP.1 Generate measurement data by measuring lengths of several objects to the nearest whole unit; show the measurements by making a line plot (2.MD.9)</p>	<p>(1,2)</p> <ul style="list-style-type: none"> Make and record simple measurements using informal or non-standard methods; sort and classify data and information using drawings, pictographs and provided tables.
		<p><i>Engineering Design, cont:</i> 2.DSP.2 Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories; solve simple addition, subtraction, and comparison problems using information in a bar graph (2.MD.10)</p>	<p>(1,2)</p> <ul style="list-style-type: none"> Sort and classify data and information using drawings, pictographs and provided tables; Identify simple patterns and connections.

Note: NAD Secondary Science standards are classified by course rather than by grade. Provinces will vary in the grades in which these courses (or similar) are offered. Please make it clear what grade each provincial standard refers to.