

Grade: Kindergarten

Earth and Space Science

Surroundings

- demonstrate the ability to observe their surroundings
- describe features of their immediate environment

Life Science

Characteristics of Living Things

- describe features of local plants and animals (e.g., colour, shape, size, texture)
- compare local plants
- compare common animals

Physical Science

Properties of Objects and Materials

- describe properties of materials, including colour, shape, texture, size, and weight
- identify materials that make up familiar objects
- describe ways to rethink, refuse, reduce, reuse, and recycle

Processes and Skills of Science

- use the five senses to make observations
- share with others information obtained by observing

Grade: 1

Earth and Space Science

Daily and Seasonal Changes

- describe changes that occur in daily and seasonal cycles and their effects on living things
- describe activities of Aboriginal peoples in BC in each seasonal cycle

Life Science

Needs of Living Things

- classify living and non-living things
- describe the basic needs of local plants and animals (e.g., food, water, light)
- describe how the basic needs of plants and animals are met in their environment

Physical Science

Force and Motion

- demonstrate how force can be applied to move an object
- compare the effect of friction on the movement of an object over a variety of surfaces
- demonstrate the effects of magnets on different materials

Processes and Skills of Science

- communicate their observations, experiences, and thinking in a variety of ways (e.g., verbally, pictorially, graphically)
- classify objects, events, and organisms

Grade: 2

Earth and Space Science

Air, Water, and Soil

- *describe physical properties of air, water, and soil*
- *distinguish ways in which air, water, and soil interact*
- *explain why air, water, and soil are important for living things*

Life Science

Animal Growth and Changes

- *classify familiar animals according to similarities and differences in appearance, behaviour, and life cycles*
- *describe some changes that affect animals (e.g., hibernation, migration, decline in population)*
- *describe how animals are important in the lives of Aboriginal peoples in BC*
- *describe ways in which animals are important to other living things and the environment*

Physical Science

Properties of Matter

- *identify the properties of solids, liquids, and gases*
- *investigate changes to the properties of matter when it is heated or cooled*
- *investigate the interactions of liquids and solids*

Processes and Skills of Science

- *use their senses to interpret observations*
- *infer the probable outcome of an event or behaviour based on observations*

Grade: 3

Earth and Space Science

Stars and Planets

- *describe characteristics and movements of objects in our solar system*
- *compare familiar constellations in seasonal skies*
- *demonstrate awareness of the special significance of celestial objects for Aboriginal peoples*

Life Science

Plant Growth and Change

- *compare familiar plants according to similarities and differences in appearance and life cycles*
- *describe ways in which plants are important to other living things and the environment*
- *describe how plants are harvested and used throughout the seasons*

Physical Science

Materials and Structures

- *describe shapes that are part of natural and human-built structures (e.g., domes, arches, pyramids)*
- *compare the effects of different materials, shapes, and forces on the strength and stability of different structures*
- *conduct investigations into ways to improve the strength and stability of structures*

Processes and Skills of Science

- *ask questions that foster investigations and explorations relevant to the content*
- *measure objects and events*

Grade: 4

Earth and Space Science

Weather

- *measure weather in terms of temperature, precipitation, cloud cover, wind speed and direction*
- *analyse impacts of weather conditions on living and non-living things*

Life Science

Habitats and Communities

- *compare the structures and behaviours of local animals and plants in different habitats and communities*
- *analyse simple food chains*
- *demonstrate awareness of the Aboriginal concept of respect for the environment*
- *determine how personal choices and actions have environmental consequences*

Physical Science

Sound and Light

- *identify sources of light and sound*
- *explain properties of light (e.g., travels in a straight path, can be reflected)*
- *explain properties of sound (e.g., travels in waves, travels in all directions)*

Processes and Skills of Science

- *make predictions, supported by reasons and relevant to the content*
- *use data from investigations to recognize patterns and relationships and reach conclusions*

Grade: 5

Earth and Space Science

Renewable and Non-Renewable Resources

- *analyse how BC's living and non-living resources are used*
- *identify methods of extracting or harvesting and processing BC's resources*
- *analyse how the Aboriginal concept of interconnectedness of the environment is reflected in responsibility for and caretaking of resources*
- *describe potential environmental impacts of using BC's living and non-living resources*

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Life Science

Human Body

- *describe the basic structure and functions of the human respiratory, digestive, circulatory, skeletal, muscular, and nervous systems*
- *explain how the different body systems are interconnected*

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Physical Science

Forces and Simple Machines

- *demonstrate how various forces can affect the movement of objects*
- *demonstrate mechanical advantage of simple machines, including lever, wedge, pulley, ramp, screw, and wheel*
- *design a compound machine*
- *describe applications of simple and compound machines used in daily life in BC communities*

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Processes and Skills of Science

- *identify variables that can be changed in an experiment*
- *evaluate the fairness of a given experiment*
- *describe the steps in designing an experiment*

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Grade: 6

Earth and Space Science

Exploration of Extreme Environments

- *explain obstacles unique to exploration of a specific extreme environment*
- *assess technologies used for extreme environments*
- *describe contributions of Canadians to exploration technologies*

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Life Science

Diversity of Life

- *demonstrate the appropriate use of tools to examine living things that cannot be seen with the naked eye*
- *analyse how different organisms adapt to their environments*
- *distinguish between life forms as single or multi-celled organisms and belonging to one of five kingdoms: Plantae, Animalia, Monera, Protista, Fungi*

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Physical Science

Electricity

- *evaluate various methods for producing small electric charges*
- *test a variety of electrical pathways using direct current circuits*
- *demonstrate that electricity can be transformed into light, heat, sound, motion, and magnetic effects*
- *differentiate between renewable and non-renewable methods of producing electrical energy*

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Processes and Skills of Science

- *manipulate and control a number of variables in an experiment*
- *apply solutions to a technical problem (e.g., malfunctioning electrical circuit)*

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Grade: 7

Earth and Space Science

Earth's Crust

- *compare the characteristics of the Earth's core, mantle, and crust, and describe the formation of rocks*
- *analyse the dynamics of tectonic plate movement and landmass formation*
- *explain how the Earth's surface changes over time*

Life Science

Ecosystems

- *analyse the roles of organisms as part of interconnected food webs, populations, communities, and ecosystems*
- *assess survival needs and interactions between organisms and the environment*
- *assess the requirements for sustaining healthy local ecosystems*
- *evaluate human impacts on local ecosystems*

Physical Science

Chemistry

- *conduct investigations into properties of matter*
- *classify substances as elements, compounds, and mixtures*
- *measure substances and solutions according to pH, solubility, and concentration*

Processes and Skills of Science

- *test a hypothesis by planning and conducting an experiment that controls for two or more variables*
- *create models that help to explain scientific concepts and hypotheses*