

Curriculum	Content	Elaboration	Garden-Based Learning
Science - K	Plants and animals have observable features.	<p><i>Sample questions to support inquiry with students:</i></p> <ul style="list-style-type: none"> • How different features of plants and animals help them meet their basic needs? • What basic needs do plants and animals have in common? • What are your basic needs? 	The parts of a plant. Plant morphology: shoot system and function, root system and function.
	Humans interact with matter every day through familiar materials.	<p><i>Sample questions to support inquiry with students:</i></p> <ul style="list-style-type: none"> • What is matter? • How do you interact with matter? • What qualities do different forms of matter have? 	Matter is any substance that has mass and takes up space by having volume. In the garden we interact with plants, soils, and water.
	The motion of objects depends on their properties.	<p><i>Sample questions to support inquiry with students:</i></p> <ul style="list-style-type: none"> • How can you make objects move? • How does the shape or size of an object affect the object's movement? • How does the material the object is made of affect the object's movement? 	
	Daily and seasonal changes affect all living things.	<p><i>Sample questions to support inquiry with students:</i></p> <ul style="list-style-type: none"> • What is matter? What daily and seasonal changes can you see or feel? • How are plants and animals affected by daily and seasonal changes? 	School landscape changes with seasons. E.g., at the garden fungus grow in fall/winter.
Social Studies - K	Our communities are diverse and made of individuals who have a lot in common.		
	Stories and traditions about ourselves and our families reflect who we are and where we are from.		
	Rights, roles, and responsibilities shape our identity and help us build healthy relationships with others.		

K-7 BC CURRICULUM MAP BY BIG IDEAS

Curriculum	Content	Elaboration	Garden-Based Learning
Applied Design, Skills and Technologies - K	Designs grow out of natural curiosity.		
	Skills can be developed through play.		
	Technologies are tools that extend human capabilities.		
Science - 1	Living things have features and behaviors that help them survive in their environment.	<p><i>Sample questions to support inquiry with students:</i></p> <ul style="list-style-type: none"> • How do local plants and animals depend on their environment? • How do plants and animals use their features to respond to stimuli in their environments? • How do plants and animals adapt when their basic needs are not being met? 	Everybody needs a home - "Habitat". All living things needs food, water, shelter and space to be available in a way that is suitable to the living things needs.
	Matter is useful because of its properties.	<p><i>Sample questions to support inquiry with students:</i></p> <ul style="list-style-type: none"> • What makes the properties of matter useful? • How do the properties of materials help connect to the function of materials? 	
	Light and sound can be produced and their properties can be changed.	<p><i>Sample questions to support inquiry with students:</i></p> <ul style="list-style-type: none"> • How can you explore the properties of light and sound? • What discoveries did you make? 	
	Observable patterns and cycles occur in the local sky and landscape.	<p><i>Sample questions to support inquiry with students:</i></p> <ul style="list-style-type: none"> • What kinds of patterns in the sky and landscape are you aware of? • How do patterns and cycles in the sky and landscape affect living things? 	
Social Studies - 1	Healthy communities recognize and respect the diversity of individuals and care for the local environment.		Environmental stewardship.

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Applied Design, Skills and Technologies - 1	Designs grow out of natural curiosity.		
	Skills can be developed through play.		
	Technologies are tools that extend human capabilities.		
Science - 2	Living things have life cycles adapted to their environment.	<p><i>Sample questions to support inquiry with students:</i></p> <ul style="list-style-type: none"> • Why are life cycles important? • How are the life cycles of local plants and animals similar and different? • How do offspring compared to their parents? 	<p>The life cycles of plants: annual, biennial, perennial. The life cycles of insects: butterfly, aphids, lady bug.</p>
	Materials can be changed through physical and chemical processes.	<p><i>Sample questions to support inquiry with students:</i></p> <ul style="list-style-type: none"> • Why would we want to change the physical properties of an object? • What are some natural processes that involve chemical and physical changes? 	<p>Soil formation (weathering, biotic). Plant material decomposition (humus).</p>
	Forces influence the motion of an object.	<p><i>Sample questions to support inquiry with students:</i></p> <ul style="list-style-type: none"> • What are different ways that objects can be moved? • How do different materials influence the motion of an object? 	
	Water is essential to all living things, and it cycles through the environment.	<p><i>Sample questions to support inquiry with students:</i></p> <ul style="list-style-type: none"> • Why is water important for all living things? • How can you conserve water in your home and school? • How does water cycle through the environment? 	<p>The water cycle Water movement through plants. Water movement through soil (run-off, infiltration). Evaporation & Transpiration. Water conservation - irrigation methods.</p>

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Social Studies - 2	Local actions have global consequences, and global actions have local consequences.		Global change Natural resources exploitation (forestry and mining) affects land-cover and wildlife.
	Canada is made up of many diverse regions and communities.		Canadian rockies, prairies, tundra
	Individuals have rights and responsibilities as global citizens.		
Applied Design, Skills and Technologies - 2	Design grow out of natural curiosity.		
	Skills can be developed through play.		
	Technologies are tools that extend human capabilities.		
Science - 3	Living things are diverse, can be grouped, and interact in their ecosystems.	<i>Sample questions to support inquiry with students:</i> <ul style="list-style-type: none"> • Why is biodiversity? • Why is biodiversity important in an ecosystem? • Interconnectedness means that all things are related to and interact with each other in the environment. How does local First Peoples knowledge of living things demonstrate interconnectedness? 	Biodiversity (genes, species, ecosystem) Terrestrial Ecosystems.
	All matter is made of particles.	<i>Sample questions to support inquiry with students:</i> <ul style="list-style-type: none"> • Why is matter know as the material of the universe? • How are matter and energy related? 	Dead animal and plant decomposition.
	Thermal energy can be produced and transferred.	<i>Sample questions to support inquiry with students:</i> <ul style="list-style-type: none"> • What can be a source of thermal energy? • How is thermal energy transferred between objects? 	

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Science - 3	Wind, water, and ice change the shape of the land.	<p><i>Sample questions to support inquiry with students:</i></p> <ul style="list-style-type: none"> • How is the shape of the land changed by environmental factors? • What are landforms? • What landforms do you have in your local area? 	Local landforms (quaternary geomorphology) developed by erosion, sedimentation, glaciation, and human activity. Hoodoos
Social Studies - 3	Learning about indigenous peoples nurtures multicultural awareness and respect for diversity.		
	People from diverse cultures and societies share some common experiences and aspects of life.		Food as cultural expression. Three sisters, corn and potato.
	Indigenous knowledge is passed down through oral history, traditions, and collective memory.		
	Indigenous societies throughout the world value the well-being of the self, the land, spirits, and ancestors.		First people cosmology and rituals. Pachamama (inca cosmology) and rituals.
Applied Design, Skills and Technologies - 3	Design grows out of natural curiosity.		Design and build a watershed.
	Skills can be developed through play.		
	Technologies are tools that extend human capabilities.		
Science - 4	All living things sense and respond to their environment.	<p><i>Sample questions to support inquiry with students:</i></p> <ul style="list-style-type: none"> • How do living things sense, respond, and adapt to stimuli in their environment? • How is sensing and responding related to interdependence within ecosystem? 	Effects of soil physical and chemical properties on plant development. Soil amendment. Sunlight (full sun, shade) and photosynthesis.

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Science - 4	Matter has mass, takes up space, and can change phase.	<i>Sample questions to support inquiry with students:</i> <ul style="list-style-type: none"> • How can you explore the phases of matter? • How does matter change phases? • How does heating and cooling affect phase changes? 	Plant material decomposition: composting, vermi compost, leaf mulch.
	Energy can be transformed.	<i>Sample questions to support inquiry with students:</i> <ul style="list-style-type: none"> • What is energy input and energy output? • What is energy conservation? • What is the relationship between energy input, output, and conservation? 	Hoop houses and the greenhouse effect. Radiant energy to heat energy.
	The motions of Earth and the moon cause observable patterns that affect living and non-living systems.	<i>Sample questions to support inquiry with students:</i> <ul style="list-style-type: none"> • How do seasons and tides affect living and non-living things? • land changed by environmental factors? • What changes are caused by the movement of Earth and the moon? 	Gardening by the seasons (cool-crops, cold-crops and summer crops). Gardening by the Moon.
Social Studies - 4	The pursuit of valuable natural resources has played a key role in changing the land; people, and communities of Canada.		Natural resources exploitation (forestry and mining) affects land-cover and wildlife.
	Interactions between First Peoples and Europeans lead to conflict and cooperation, which continues to shape Canada's identity.		
	Demographic changes in North America created shifts in economic and political power.		
	British Columbia followed a unique path in becoming a part of Canada.		

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Applied Design, Skills and Technologies - 4	Designs can be improved with prototyping and testing.		Build a hoop house, a vermi compost.
	Skills are developed through practice, effort, and action.		
	The choice of technology and tools depend on the task.		
Science - 5	Multicellular organisms have organ systems that enable them to survive and interact within their environment.	<i>Sample questions to support inquiry with students:</i> <ul style="list-style-type: none"> • Why do organ system interact with one another? • How do organ systems interact with their environment to meet basic needs? 	Plant anatomy (plant parts, plant organs, plant tissues).
	Solutions are homogeneous.	<i>Sample questions to support inquiry with students:</i> <ul style="list-style-type: none"> • How are solutions homogeneous? • What are their uses? 	
	Machines are devices that transfer force and energy.	<i>Sample questions to support inquiry with students:</i> <ul style="list-style-type: none"> • How do machines (natural and human made) transfer force and energy? • What natural machines can you identify in your local environment? 	
	Earth materials change as they move through the rock cycle and can be used as natural resources.	<i>Sample questions to support inquiry with students:</i> <ul style="list-style-type: none"> • How do we interact with water, rocks, minerals, soils, and plants? • How can Earth be considered a closed material system? • How can we act as stewards of our environment? 	Soil fertilizer and amendments (potash, lime)

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Social Studies - 5	Canada's policies and treatment of minority peoples have negative and positive legacies.		
	Natural resources continue to shape the economy and identity of different regions of Canada.		Forestry, mining, farming and their effects on land-cover and land-use.
	Immigration and multiculturalism continue to shape Canadian society and identity.		
	Canada institutions and government reflect the challenge of our regional diversity.		
Applied Design, Skills and Technologies - 5	Designs can be improved with prototyping and testing.		DIY plant microscope slides: roots, stems, leaves, flowers, seeds.
	Skills are developed through practice, effort, and action.		
	The choice of technology and tools depend on the task.		
Science - 6	Multicellular organisms rely on internal systems to survive, reproduce, and interact with their environment.	<p><i>Sample questions to support inquiry with students:</i></p> <ul style="list-style-type: none"> • How are internal systems necessary for survival? • What do your body systems require for survival? • How do your body systems interact with one another? 	<p>Flower structure: pollination (types and agents) and fertilization.</p> <p>Leaf structure: photosynthesis and transpiration (stomata). Transpiration as a component of water cycle.</p> <p>Plant transport system: phloem and xylem.</p>
	Everyday materials are often mixtures.	<p><i>Sample questions to support inquiry with students:</i></p> <ul style="list-style-type: none"> • What is a heterogeneous mixture? • How can mixtures be separated? 	

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Science - 6	Newton's three laws of motion described the relationship between force and motion.	<i>Sample questions to support inquiry with students:</i> <ul style="list-style-type: none"> • What is the difference between motion caused by balanced forces and motion caused by unbalanced forces? • How are balanced and unbalanced forces evident in your life and activities? 	Plants and capillary force (forces of adhesion, cohesion, and surface tension)
	The solar system system is part of the Milky Way, which is one of billions of galaxies.	<i>Sample questions to support inquiry with students:</i> <ul style="list-style-type: none"> • What are the relationships between Earth and the rest of the universe? • What is an extreme environment? • What extreme environment exist on Earth or in our galaxy? 	Plants are adapted to live on extreme environments: tundra and desert (xerophytes). Permafrost.
Social Studies - 6	Economic self-interest can be a significant cause of conflict among peoples and governments.		
	Complex global problems require international cooperation to make difficult choices for the future.		
	Systems of government vary in their respect for human rights and freedoms.		
	Media sources can both positively and negatively affect our understanding of important events and issues.		
	Design can be responsive to identified needs.		
	Complex tasks require the acquisition of additional skills.		
	Complex tasks may require multiple tools and technologies.		

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Applied Design, Skills and Technologies - 6	Design can be responsive to identified needs.		Build a hoop house, a vermi compost.
	Complex tasks require the acquisition of additional skills.		DIY plant microscope slides: roots, stems, leaves, flowers, seeds.
	Complex tasks may require multiple tools and technologies.		
Science - 7	Evolution by natural selection provides an explanation for the diversity and survival of living things.	<i>Sample questions to support inquiry with students:</i> <ul style="list-style-type: none"> • Why do living things change over time? • How do these changes affect biodiversity? 	Origin and evolutionary development of plants (domestication). Crop improvement (plant selection and plant breeding), green revolution. GMO.
	Elements consist of one type of atom, and compounds consist of atoms of different elements chemically combined.	<i>Sample questions to support inquiry with students:</i> <ul style="list-style-type: none"> • What are the similarities and differences between elements and compounds? • How can you investigate the properties of elements and compounds? 	
	The electromagnetic force produces both electricity and magnetism.	<i>Sample questions to support inquiry with students:</i> <ul style="list-style-type: none"> • How is electricity generated? • What is the relationship between electricity and magnetism? 	
	Earth and its climate have changed over geological time.	<i>Sample questions to support inquiry with students:</i> <ul style="list-style-type: none"> • How and why have Earth and its climate changed over time? • How do people and their practices impact Earth and its climate? 	
Social Studies - 7	Geographic conditions shaped the emergence of civilizations.		
	Religious and cultural practices that emerged during this period have endured and continue to influence people.		

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Social Studies - 7	Increasingly complex societies required new systems of laws and government.		
	Economic specializations and trade network can lead to conflict and cooperation between societies.		
Applied Design, Skills and Technologies - 7	Design can be responsive to identified needs.		Build a hoop house, a vermi compost.
	Complex tasks require the acquisition of additional skills.		
	Complex tasks may require multiple tools and technologies.		