

**Correlation of Manitoba Grade 4 Science Curriculum to
Pearson Science 4: Saskatchewan Edition**

Unit 1: Habitats and Communities	
4-1-01 Use appropriate vocabulary related to their investigations of habitats and communities. <i>Include: habitat, physical adaptation, behavioural adaptation, traditional knowledge, technological development, population, community, food chain, food web, organism, producer, consumer, herbivore, omnivore, carnivore, predator, prey, scavenger, endangerment, extinction, conservation</i>	Throughout Unit 1
4-1-02 Recognize that each plant and animal depends on a specific habitat to meet its needs.	Lesson 1 Show What You Know
4-1-03 Identify the components of an animal habitat. <i>Include: food, water, living space, cover/shelter</i>	Lesson 1
4-1-04 Identify physical and behavioural adaptations of animals and plants, and infer how these adaptations help them to survive in a specific habitat. <i>Examples: ducks' webbed feet and waterproof feathers help them dive for food in the marsh</i>	Lesson 6 Show What You Know
4-1-05 Investigate alternate explanations of plant or animal adaptations based on traditional knowledge from a variety of cultures.	Lesson 3 Lesson 6 Lesson 7 Lesson 9 Show What You Know
4-1-06 Investigate how technological developments often mirror physical adaptations. <i>Examples: fishnet - spider web, diving fins - webbed feet</i>	
4-1-07 Investigate and describe a variety of local and regional habitats and their associated populations of plants and animals.	Launch Lesson 1 Lesson 2 Lesson 7 Show What You Know
4-1-08 Predict and test to determine an appropriate method for measuring a plant population within a given habitat.	
4-1-09 Recognize that plant and animal populations interact within a community.	Lesson 3 Lesson 4 Show What You Know
4-1-10 Recognize that the food chain is a system in which some of the energy from the Sun is transferred eventually to animals.	Lesson 4 Show What You Know

<p>4-1-11 Construct food chains and food webs, and classify organisms according to their roles. <i>Include: producer, consumer, herbivore, omnivore, carnivore, predator, prey, scavenger</i></p>	<p>Lesson 4 Lesson 5 Show What You Know</p>
<p>4-1-12 Use the design process to construct a model of a local or regional habitat and its associated populations of plants and animals.</p>	<p>Lesson 7</p>
<p>4-1-13 Predict, based on their investigations, how the removal of a plant or animal population may affect the rest of the community. <i>Examples: if the wolves were removed from a community, the deer population may increase rapidly</i></p>	<p>Lesson 4 Lesson 12</p>
<p>4-1-14 Investigate natural and human-caused changes to habitats, and identify resulting effects on plant and animal populations. <i>Include: endangerment, extinction</i></p>	<p>Lesson 9 Lesson 10 Lesson 11 Lesson 12 Design Project Show What You Know</p>
<p>4-1-15 Describe how their actions can help conserve plant and animal populations and their habitats. <i>Examples: clean up a local stream to improve fish and bird habitat</i></p>	<p>Lesson 10 Lesson 11 Lesson 12 Design Project</p>
<p>4-1-16 Describe how specific technological developments have enabled humans to increase their knowledge about plant and animal populations. <i>Examples: radio collar tracking, timelapse photography</i></p>	<p>Lesson 12</p>
<p>4-1-17 Recognize and appreciate how traditional knowledge contributes to our understanding of plant and animal populations and interactions.</p>	<p>Lesson 1 Lesson 3 Lesson 4 Lesson 7 Lesson 9 Ask ... Show What You Know</p>

Unit 2: Light	
4-2-01 Use appropriate vocabulary related to their investigations of light. <i>Include: energy, reflect, absorb, transmit, artificial, light beam, transparent, translucent, opaque, technological development, science, brightness</i>	Throughout Unit 2
4-2-02 Give examples of various forms of energy. <i>Include: light, heat, food, sound</i>	Lesson 12 (a bit)
4-2-03 Recognize that energy is an integral part of daily life.	Lesson 13 (implied)
4-2-04 Demonstrate that white light can be separated into colours.	Lesson 10 Design Project Show What You Know
4-2-05 Distinguish between objects that produce their own light and those that reflect light from another source. <i>Examples: the Sun emits its own light, the Moon reflects light from the Sun</i>	Lesson 3 Lesson 4 Lesson 5
4-2-06 Identify a variety of natural and artificial light sources. <i>Examples: Sun, candle, light bulb, firefly, lightning, aurora borealis, lasers</i>	Lesson 1 Lesson 3
4-2-07 Observe and describe properties of light. <i>Include: travels in a straight path, bends as it passes from one medium to another, can be reflected, can be different colours</i>	Lesson 2 Lesson 8 Lesson 11 Design Project Show What You Know
4-2-08 Explore to determine effects different materials and objects have on a light beam. <i>Examples: prisms and water bend light; some lenses intensify light, whereas others disperse light</i>	Lesson 4 Lesson 6 Lesson 7 Lesson 8 Lesson 9 Lesson 10 Lesson 11
4-2-09 Recognize that most objects that produce light also give off heat, and identify objects that produce light but give off little or no heat.	Lesson 12 Lesson 13
4-2-10 Classify materials as transparent, translucent, or opaque.	Lesson 6
4-2-11 Evaluate the usefulness of a material for a particular task based on its ability to transmit, reflect, or absorb light. <i>Examples: usefulness of coloured glass to preserve food and drink by protecting them from light</i>	Lesson 6

4-2-12 Predict the location, shape, and size of a shadow based on the position of a light source relative to an object.	Lesson 7
4-2-13 Identify technological developments that extend our ability to see, and recognize their impact on science. <i>Examples: the telescope allows astronomers to obtain new information</i>	Lesson 5 Lesson 9 Ask ...
4-2-14 Use the design process to construct a device that transmits and reflects light. <i>Examples: periscope, kaleidoscope</i>	Lesson 5 Lesson 9 Design Project
4-2-15 Describe practices that help ensure protection of eyes and sight. <i>Examples: direct mirrors away from the eyes when reflecting intense light sources</i>	Lesson 9 Show What You Know.
4-2-16 Identify different uses of light at home, at school, and in the community, and explain how the brightness and colour of the light are appropriate for each use. <i>Examples: vivid neon lights for advertising, blue lights for snow removal vehicles</i>	Launch Ask ... Lesson 11 Lesson 13

Unit 3: Sound	
4-3-01 Use appropriate vocabulary related to their investigations of sound. <i>Include: energy, sound, vibration, vocal cords, pitch, loudness, sound waves, outer ear, middle ear, inner ear, brain, transmit, absorb, reflect, detect</i>	Throughout Unit 3
4-3-02 Recognize that sound is a form of energy.	
4-3-03 Recognize that energy makes things happen and can be found all around us.	
4-3-04 Identify and classify various sounds using student-generated criteria.	Lesson 1 Lesson 2 Show What You Know
4-3-05 Recognize that sounds are caused by vibrations. <i>Include: the human voice relies on the vibrations of vocal cords</i>	Lesson 3 Lesson 4 Show What You Know
4-3-06 Use the design process to create a musical instrument.	Lesson 4 Lesson 6 Lesson 7 Lesson 8 Lesson 9 Design Project
4-3-07 Demonstrate how the pitch and loudness of sounds can be modified. <i>Examples: differences in sound when plucking a loose rubber band vs. a stretched rubber band</i>	Lesson 2 Lesson 4 Lesson 6 Lesson 7 Lesson 8 Lesson 9 Lesson 12 Design Project
4-3-08 Observe and describe properties of sound. <i>Include: travels in waves in all directions</i>	Lesson 3 Lesson 4 Lesson 5 Show What You Know
4-3-09 Describe how the human ear is designed to detect sound vibrations. <i>Include: sound is transmitted from the outer ear to the middle ear and the inner ear, which relays messages to the brain</i>	Lesson 5 Show What You Know
4-3-10 Recognize that there is a range of sounds that humans can and cannot hear.	Lesson 5 Lesson 13

<p>4-3-11 Describe practices that help ensure protection of the ears and hearing. <i>Examples: use of ear plugs in situations involving excessive noise</i></p>	<p>Lesson 14 Show What You Know</p>
<p>4-3-12 Describe harmful effects of high or sustained sound levels and identify potential sound hazards at home or in the community. <i>Examples: leaf blowing machines, snowblower, stereo, drone of machinery</i></p>	<p>Lesson 13 Lesson 14 Show What You Know .</p>
<p>4-3-13 Investigate to compare how vibrations travel differently through solids, liquids, and gases.</p>	<p>Lesson 3 Lesson 10 Show What You Know</p>
<p>4-3-14 Explore to determine the ability of materials to transmit or absorb sound.</p>	<p>Lesson 9 Lesson 10</p>
<p>4-3-15 Describe how materials that absorb or reflect sound are used in different situations. <i>Examples: concrete sound barriers are placed beside highways to absorb sound</i></p>	<p>Lesson 9 Lesson 10</p>
<p>4-3-16 Describe devices that extend our ability to produce, transmit, and detect sound. <i>Examples: amplifier, hearing aids, megaphone, ear trumpet</i></p>	<p>Lesson 10 Lesson 11 Lesson 12 Show What You Know</p>
<p>4-3-17 Investigate to identify inventions related to sound, and describe their impacts on society. <i>Examples: radio, telephone, microphone</i></p>	<p>Lesson 1 Lesson 11</p>
<p>4-3-18 Describe the role of sound in different jobs and hobbies. <i>Examples: physicians listen to a patient's heartbeat during a check-up, birders identify birds by their calls</i></p>	<p>Lesson 1 Lesson 2 Ask ...</p>

Unit 4: Rocks, Minerals, and Erosion	
4-4-01 Use appropriate vocabulary related to their investigations of rocks, minerals, and erosion. <i>Include: rock, mineral, characteristic, property, scratch test, streak test, igneous, sedimentary, metamorphic, fossil, organism, extinct, soil formation, erosion, natural phenomena</i>	Throughout Unit 4
4-4-02 Classify rocks and minerals according to student-generated criteria.	Lesson 1 Lesson 2
4-4-03 Test to determine characteristics of rocks and properties of minerals, and classify accordingly. <i>Include: scratch test for hardness, streak test for colour</i>	Lesson 3 Lesson 5
4-4-04 Differentiate between minerals and rocks. <i>Include: minerals are composed of the same substance throughout, rocks are composed of two or more minerals.</i>	Lesson 2 Lesson 3 Show What You Know
4-4-05 Compare rocks and minerals from the local environment with each other and with those from other geological areas.	Lesson 3
4-4-06 Give examples of products derived from rocks and minerals. <i>Examples: china, chalk, jewellery, pumice stone, drywall, talcum powder</i>	Lesson 4 Lesson 6 Show What You Know
4-4-07 Describe how characteristics of rocks and properties of minerals determine their uses. <i>Examples: soft soapstone is used for carving</i>	Lesson 5 Lesson 6 Show What You Know
4-4-08 Recognize that there are three types of rock, and describe how each is formed. <i>Include: igneous, sedimentary, metamorphic</i>	Lesson 4
4-4-09 Explain how fossils are formed.	Lesson 7 Show What You Know
4-4-10 Describe how fossils help humans gain a better understanding of Earth's history, including identifying organisms that are now extinct.	Lesson 7 Lesson 8 Show What You Know
4-4-11 Investigate and describe ways in which rock contributes to soil formation.	Lesson 10 Show What You Know
4-4-12 Investigate and describe ways in which soil erosion is controlled or minimized in their community and in communities around the world. <i>Examples: windbreaks, retaining walls, terracing, cover crops, reforestation</i>	Lesson 11 Design Project Show What You Know
4-4-13 Use the design process to determine an appropriate system for controlling soil erosion in a given situation.	Design Project

<p>4-4-14 Describe effects of wind, water, and ice on the landscape. <i>Examples: ice breaking rocks into soil, wind shaping sand dunes, waves polishing rocks on the shoreline</i></p>	<p>Lesson 9 Lesson 10 Show What You Know</p>
<p>4-4-15 Identify natural phenomena and human activities that cause significant changes in the landscape. <i>Examples: floods, avalanches, mud slides, hydroelectric dams, clearing land for agriculture, clear-cut forestry, forest fires</i></p>	<p>Lesson 9 Lesson 11 Lesson 13 Show What You Know</p>