

**Correlation of Grade 6 Manitoba Science Curriculum to
Pearson Science 6: Saskatchewan Edition**

Unit 1: Diversity of Living Things	
<p>6-1-01 Use appropriate vocabulary related to their investigations of the diversity of living things. <i>Include: classification system, classification key, paleontologist, terms related to names of kingdoms and types of vertebrates and invertebrates.</i></p>	- throughout Unit 1
<p>6-1-02 Describe various kinds of classification systems used in everyday life, and identify related advantages and disadvantages. <i>Examples: organization of phone numbers in a phone book, books in a library, groceries in a supermarket...</i></p>	Lesson 2 Design Project
<p>6-1-03 Develop a system to classify common objects or living things into groups and subgroups, and explain the reasoning used in the system's development.</p>	Lesson 2 Lesson 3 Lesson 5 Lesson 8 Lesson 14 Design Project
<p>6-1-04 Identify living things using an existing classification key, and explain the rationale used. <i>Examples: identification of birds, butterflies, animal tracks, winter twigs...</i></p>	Lesson 4 Lesson 5 Lesson 6 Lesson 8 Design Project
<p>6-1-05 Identify advantages and disadvantages of having a common classification system for living things, and recognize that the system changes as new evidence comes to light.</p>	Page 39
<p>6-1-06 Identify the five kingdoms commonly used for the classification of living things, and provide examples of organisms from each to illustrate the diversity of living things. <i>Include: monerans, protists, fungi, plants, animals.</i></p>	Lesson 1 Lesson 3
<p>6-1-07 Recognize that many living things are difficult to see with the unaided eye, and observe and describe some examples.</p>	Lesson 15
<p>6-1-08 Observe and describe the diversity of living things within the local environment. <i>Include: fungi, plants, animals.</i></p>	Launch Lesson 1 Design Project
<p>6-1-09 Recognize that the animal kingdom is divided into two groups, vertebrates and invertebrates, and differentiate between the two. <i>Include: vertebrates have backbones, invertebrates do not.</i></p>	Lesson 5 Lesson 8
<p>6-1-10 Provide examples of a variety of invertebrates to illustrate their diversity. <i>Include: sponges, worms, molluscs, arthropods.</i></p>	Lesson 5 Lesson 6
<p>6-1-11 Compare and contrast adaptations of common arthropods, and describe how these adaptations enable them to live in particular habitats.</p>	Lesson 6 Lesson 7

<p>6-1-12 Classify vertebrates as fishes, amphibians, reptiles, birds, and mammals, and provide examples to illustrate the diversity within each group.</p>	<p>Lesson 8 Lesson 9 Lesson 10</p>
<p>6-1-13 Compare and contrast the adaptations of closely related vertebrates living in different habitats, and suggest reasons that explain these adaptations.</p>	<p>Lesson 11 Lesson 12</p>
<p>6-1-14 Identify, based on evidence gathered by paleontologists, similarities and differences in animals living today and those that lived in the past. <i>Examples: archaeopteryx and modern birds...</i></p>	<p>Lesson 10</p>
<p>6-1-15 Identify and describe contributions of scientists and naturalists who have increased our understanding of the diversity of living things.</p>	<p>Lesson 3 Careers and Profiles, p. 25 Ask a Traditional Knowledge Keeper, p. 41 Ask an Expert, p. 49 Ask an Expert, p. 55 Lesson 16</p>

Unit 2 Understanding Electricity	
<p>6-3-01 Use appropriate vocabulary related to their investigations of electricity. <i>Include: positive charge, negative charge, current electricity, static electricity, electrical circuit, insulator, conductor, switch, series circuit, parallel circuit, electromagnet, magnetic field, motor, generator, transformation, electrical energy, renewable, non-renewable, energy consumption.</i></p>	- throughout Unit 2
<p>6-3-02 Explain the attraction and repulsion of electrostatically charged materials. <i>Include: negatively and positively charged materials attract one another; materials of like charge repel one another.</i></p>	Lesson 2
<p>6-3-03 Explain current electricity, and compare the characteristics of current and static electricity by using a model.</p>	Lesson 6 Unit Review
<p>6-3-04 Identify dangers associated with static and current electricity, and demonstrate and describe appropriate safety precautions.</p>	Lesson 14
<p>6-3-05 List electrical devices used at home, at school, and in the community, and identify the human needs that they fulfill. <i>Examples: heat, light, communication, movement...</i></p>	Launch
<p>6-3-06 Develop a definition of an electrical circuit, based on classroom explorations. <i>Include: an electrical circuit is a continuous path for charges and must contain a power source and a conductor.</i></p>	Lesson 6
<p>6-3-07 Experiment to classify a variety of materials as insulators or conductors.</p>	Lesson 7
<p>6-3-08 Demonstrate and describe the function of switches in electrical circuits.</p>	Lesson 8
<p>6-3-09 Construct and diagram simple series circuits and simple parallel circuits.</p>	Lesson 8 Lesson 9
<p>6-3-10 Explore to determine factors that affect bulb brightness in simple series and parallel circuits. <i>Include: number of bulbs, number of batteries, placement of bulbs and batteries.</i></p>	Lesson 9
<p>6-3-11 Use the design process to construct an electrical circuit that performs a useful function. <i>Examples: doorbell, alarm, motorized toy, game...</i></p>	Design Project
<p>6-3-12 Demonstrate, using a simple electromagnet constructed in class, that an electric current can create a magnetic field.</p>	Lesson 12
<p>6-3-13 Explore motors and generators to determine that electromagnets transform electricity into motion, and motion into electricity.</p>	Lesson 3 Lesson 13

<p>6-3-14 Identify forms of energy that may result from the transformation of electrical energy, and recognize that energy can only be changed from one form into another, not created or destroyed. <i>Include: light, heat, sound, motion.</i></p>	Lesson 13
<p>6-3-15 Identify the two major sources of electrical energy, and provide examples of each. <i>Include: chemical sources such as batteries; electromagnetic sources such as turbine motion caused by wind, falling water, and steam.</i></p>	Lesson 1 Lesson 4 Lesson 5
<p>6-3-16 Identify renewable and non-renewable sources of electrical energy, and discuss advantages and disadvantages of each. <i>Examples: renewable sources such as hydroelectric, wind, geothermal, solar; non-renewable sources such as fossil fuels, nuclear fission...</i></p>	Lesson 4 Lesson 5 Unit Review
<p>6-3-17 Evaluate an electrical device using the design process. <i>Examples: light bulbs, kitchen appliances...</i></p>	Lesson 10
<p>6-3-18 Describe factors that affect the consumption of electrical energy, and outline an action plan to reduce electrical energy consumption at home, at school, or in the community.</p>	Lesson 15 Lesson 16 Unit Review
<p>6-3-19 Describe the ways in which electricity has had an impact on daily life.</p>	Lesson 1 Lesson 3 Lesson 13 Lesson 15 Unit Review

Unit 3: Principles of Flight	
6-2-01 Use appropriate vocabulary related to their investigations of flight. <i>Include: fluid, pressure, lift, gravity, thrust, drag, Bernoulli's principle, propulsion, unbalanced forces.</i>	Throughout Unit 2
6-2-02 Describe properties of fluids using air and water as examples, and identify manifestations of these properties in daily life. <i>Include: air and water flow and exert pressure; objects can flow through air and water; warm air and water rise.</i>	Lesson 6 Lesson 7
6-2-03 Identify adaptations that enable living things to propel themselves through air, water, or to be transported by the wind. <i>Examples: the streamlined shape of dolphins and barn swallows, the helicopter-like motion of the winged fruit of maple trees, the parachute-shaped fruit of dandelions...</i>	Lesson 1 Lesson 2 Unit Review
6-2-04 Recognize that in order for devices or living things to fly they must have sufficient lift to overcome the downward force of gravity, and that the force of gravity increases as mass increases.	Lesson 1 Unit Review
6-2-05 Describe how "lighter-than-air flying devices" are able to achieve lift. <i>Include: hot-air balloons, helium balloons.</i>	Lesson 4
6-2-06 Test models of aircraft to observe Bernoulli's principle. <i>Include: the shape of a wing affects the speed of airflow, creating lift in a "heavier-than-air flying device."</i>	Lesson 6 Lesson 7 Lesson 8
6-2-07 Explain how Bernoulli's principle is applied in a device other than an aircraft. <i>Examples: paint sprayer, perfume mister...</i>	
6-2-08 Provide examples of design features or adaptations that enhance or reduce lift, and explain how they work. <i>Examples: race car spoilers reduce lift; bird wing shapes enhance lift...</i>	Lesson 1 Lesson 8 Lesson 9 Unit Review
6-2-09 Provide examples of design features or adaptations that enhance or reduce drag, and explain how they work. <i>Examples: pilots use flaps to increase drag when landing aircraft; birds tuck their wings to decrease drag when diving...</i>	Lesson 1 Lesson 7 Lesson 8 Lesson 9 Lesson 10
6-2-10 Identify and diagram the four forces that act on living things or devices that fly through the air. <i>Include: lift, gravity, thrust, drag.</i>	Lesson 1 Lesson 10 Unit Review

<p>6-2-11 Compare a variety of propulsion methods that are used to produce thrust in animals and flying devices. <i>Examples: rockets for spacecraft, propellers, or jet engines for aircraft, wings for flying animals...</i></p>	<p>Lesson 10 Lesson 11 Lesson 12</p>
<p>6-2-12 Describe how unbalanced forces are used to steer aircraft and spacecraft.</p>	<p>Lesson 1 Lesson 4 Lesson 7 Lesson 8 Lesson 10 Lesson 11 (unbalanced never mentioned directly, always implied)</p>
<p>6-2-13 Explain why the design of aircraft and spacecraft differs.</p>	<p>Lesson 3 Lesson 10 Lesson 11</p>
<p>6-2-14 Identify milestones in the history of air travel and describe their impacts on daily life.</p>	<p>Lesson 2 Lesson 3 Lesson 5 Unit Review</p>
<p>6-2-15 Use the design process to construct a prototype that can fly and meet specific performance criteria. <i>Examples: a glider that can loop; a hot-air balloon that can stay aloft for a given time...</i></p>	<p>Lesson 4 Lesson 8 Design Project</p>

Unit 4: Our Solar System	
<p>6-4-01 Use appropriate vocabulary related to their investigations of Earth and space. <i>Include: astronauts, communication and remote sensing satellites, solar system, inner and outer planets, asteroid belt, mass, weight, points of reference, apparent movement, celestial objects, astrology, astronomy, rotation, revolution, axis, moon phases, eclipses.</i></p>	- throughout Unit 4
<p>6-4-02 Identify technological developments that enable astronauts to meet their basic needs in space. <i>Examples: dehydrated foods, backpacks with an oxygen supply, hermetically sealed cabins with temperature and air controls...</i></p>	Lesson 14 Lesson 15 Unit Review
<p>6-4-03 Identify Canadians who have contributed to space science or space technology, and describe their achievements.</p>	Lesson 12 Ask an Expert: Dr. Stéphanie Côté Lesson 14 Careers and Profiles: Dr. Dayfidd Rhys Williams Careers and Profiles: Dr. Nicole Buckley Unit Review
<p>6-4-04 Investigate past and present space research programs involving astronauts, and explain the contributions to scientific knowledge. <i>Examples: Apollo, Mir, International Space Station...</i></p>	Lesson 8 Lesson 14
<p>6-4-05 Describe positive and negative impacts arising from space research programs. <i>Examples: advantages—increased knowledge about space and medicine, the development of technologies such as orange drink crystals and pocket calculators; disadvantages—space pollution and the high cost of research projects...</i></p>	Lesson 14 Unit Review
<p>6-4-06 Identify technological devices placed in space that help humans learn more about the Earth and communicate more efficiently. <i>Include: communication and remote sensing satellites.</i></p>	Lesson 14 Lesson 15 Unit Review
<p>6-4-07 Describe how the conception of the Earth and its position in space have been continuously questioned and how our understanding has evolved over time. <i>Include: from a flat Earth, to an Earth-centred system, to a Suncentred system.</i></p>	Lesson 3 (a bit)
<p>6-4-08 Recognize that the Sun is the centre of the solar system and it is the source of energy for all life on Earth.</p>	Lesson 1 Lesson 2 Lesson 3
<p>6-4-09 Identify the planets in the solar system and describe their size relative to the Earth and their position relative to the Sun.</p>	Lesson 10 Lesson 11

<p>6-4-10 Classify planets as inner or outer planets, based on their position relative to the asteroid belt, and describe characteristics of each type. <i>Include: inner planets are small and rocky; outer planets (except Pluto) are giant balls of gas.</i></p>	<p>Lesson 10 Lesson 11 Lesson 12 Unit Review</p>
<p>6-4-11 Recognize that mass is the amount of matter in an object, that weight is the force of gravity on the mass of an object, and that the force of gravity varies from planet to planet.</p>	
<p>6-4-12 Explain, using models and simulations, how the Earth's rotation causes the cycle of day and night, and how the Earth's tilt of axis and revolution cause the yearly cycle of seasons.</p>	<p>Lesson 3 Lesson 4 Lesson 5</p>
<p>6-4-13 Use the design process to construct a prototype that tells the time of day or measures a time span.</p>	
<p>6-4-14 Explain how the relative positions of the Earth, moon, and Sun are responsible for moon phases and eclipses.</p>	<p>Lesson 6 Lesson 7 Lesson 8 Lesson 9 Unit Review</p>
<p>6-4-15 Identify points of reference in the night sky and recognize that the apparent movement of celestial objects is regular, predictable, and related to the Earth's rotation and revolution. <i>Examples: planets, constellations...</i></p>	<p>Lesson 13 Unit Review</p>
<p>6-4-16 Identify and describe how people from various cultures, past and present, apply astronomy in daily life. <i>Examples: using celestial bodies to navigate; knowing when to plant crops...</i></p>	<p>Lesson 5</p>
<p>6-4-17 Differentiate between astrology and astronomy, and explain why astrology is considered unscientific.</p>	