Correlation of Manitoba Grade 5 Science Curriculum to
Pearson Science 5: Saskatchewan Edition

Unit 1: Human Body Systems	
5-1-01 Use appropriate vocabulary related to their investigations of human health. *Include: nutrients; carbohydrates; proteins; fats; vitamins; minerals; Canada's Food Guide to Healthy Eating; food group; serving size; terms related to the digestive, skeletal, muscular, nervous, integumentary, respiratory, and circulatory systems.*	Throughout Unit 1
5-1-02 Interpret nutritional information found on food labels. *Examples: ingredient proportions, identification of potential allergens, information related to energy content and nutrients...*	Lesson 3
5-1-03 Describe the types of nutrients in foods and their function in maintaining a healthy body. *Include: carbohydrates, proteins, fats, vitamins, minerals*.	Lesson 13
5-1-04 Evaluate a daily menu plan and suggest changes to make it align more closely with *Canada's Food Guide to Healthy Eating*. *Include: serving size recommendations according to age for each food group.*	Lesson 3 Design Project
5-1-05 Evaluate prepared food products using the design process. *Examples: frozen pizza, snack foods, beverages....*	
5-1-06 Identify the major components of the digestive system, and describe its role in the human body. *Include: teeth, mouth, esophagus, stomach, and intestines break down food.*	Lesson 7
5-1-07 Identify the major components of the skeletal, muscular, and nervous systems, and describe the role of each system in the human body. *Include: the skeleton provides protection and support; muscles, tendons, and ligaments enable movement; brain, spinal cord, and nerves receive sensory input, process information, and send out signals.*	Lesson 8 Lesson 9
5-1-08 Identify skin as the major component of the integumentary system, and describe its role in protecting and supporting the human body.	Lesson 12

5-1-09 Identify components of the human body's defenses against infections, and describe their role in defending the body against infection. *Include: tears, skin, white blood cells.*	Lesson 12 Unit Review
5-1-10 Identify the major components of the respiratory and circulatory systems, and describe the role of each system in the human body. *Include: the nose, trachea, and lungs take in oxygen and expel carbon dioxide; the heart, blood vessels, and blood transport oxygen, nutrients, and waste products such as carbon dioxide.*	Lesson 4 Lesson 5 Lesson 6 Unit Review
5-1-11 Describe how the human body gets rid of waste. *Include: kidneys filter blood and dispose of waste as urine; lungs give off waste carbon dioxide; the rectum collects and expels undigested food matter.*	Lesson 7
5-1-12 Give examples of how systems of the human body work together. *Examples: the circulatory system transports nutrients from the digestive system and oxygen from the respiratory system to the muscular system...*	Lesson 7 Lesson 8 Lesson 10 Unit Review
5-1-13 Identify and describe factors necessary to maintain a healthy body. *Include: daily physical activity, a balanced diet, fluid replacement, adequate sleep, appropriate hygiene practices, regular check-ups.*	Lesson 3 Lesson 13 Design Project Unit Review
5-1-14 Evaluate information related to body image and health from media sources for science content and bias. *Examples: glamorization of smoking in movies, promotion of unrealistic role models in magazines, trivialization of scientific information on television...*	Lesson 11
5-1-15 Explain how human health may be affected by lifestyle choices and natural- and human-caused environmental factors. *Include: smoking and poor air quality may cause respiratory disorders; unhealthy eating and physical inactivity may lead to diabetes or heart disease; prolonged exposure to the Sun can cause skin cancer.*	Launch Lesson 1 Lesson 13 Unit Review

Unit 2: Properties of and Changes in Substances	
5-2-01 Use appropriate vocabulary related to their investigations of properties of, and changes in, substances. *Include: characteristic, property, substance, matter, volume, state, solid, liquid, gas, reversible and nonreversible changes, physical change, chemical change, chemical product, raw material.*	Throughout Unit 2
5-2-02 Identify characteristics and properties that allow substances to be distinguished from one another. *Examples: texture, hardness, flexibility, strength, buoyancy, solubility, colour, mass/weight for the same volume...*	Lesson 1 Unit Review
5-2-03 Investigate to determine how characteristics and properties of substances may change when they interact with one other. *Examples: baking soda in vinegar produces a gas; adding flour to water produces a sticky paste...*	Lesson 2 Lesson 6 Lesson 7 Lesson 8 Lesson 9 Lesson 10 Design Project
5-2-04 Recognize that matter is anything that has mass/weight and takes up space.	Lesson 1
5-2-05 Identify properties of the three states of matter. *Include: solids have definite volume and hold their shape; liquids have definite volume but take the shape of their container; gases have no definite volume and take the volume and shape of their container.*	Lesson 3 Lesson 4 Unit Review
5-2-06 Experiment to compare the mass/weight of a substance in its liquid and solid states. *Examples: compare the mass of ice cubes with the mass of the liquid that results when they melt...*	Lesson 3 Lesson 7
5-2-07 Demonstrate that the mass/weight of a whole object is equal to the sum of the mass/weight of its parts. *Examples: compare the mass/weight of a pencil case and its contents with that of the individual components weighed separately and added together...*	Lesson 1 Lesson 3
5-2-08 Demonstrate that changes of state are reversible through the addition or removal of heat. *Include: melting, freezing/solidification, condensation, evaporation.*	Lesson 3 Lesson 5 Lesson 6

5-2-09 Explore to identify reversible and nonreversible changes that can be made to substances. *Examples: reversible—folding paper, mixing baking soda and marbles; nonreversible—cutting paper, mixing baking soda and vinegar...*	Lesson 6
5-2-10 Recognize that a physical change alters the characteristics of a substance without producing a new substance, and that a chemical change produces a new substance with distinct characteristics and properties.	Lesson 5 Lesson 6 Unit Review
5-2-11 Observe examples of changes in substances, classify them as physical or chemical changes, and justify the designation. *Examples: physical—bending a nail, chopping wood, chewing food; chemical—rusting of a nail, burning wood, cooking food...*	Lesson 5 Lesson 6
5-2-12 Identify potentially harmful chemical products used at home, and describe practices to ensure personal safety. *Include: use of products with parental supervision, recognition of safety symbols, procedures to follow in case of an emergency, proper storage of chemical products.*	Lesson 13
5-2-13 Evaluate household chemical products using the design process. *Examples: glass-cleaner, laundry soap, toothpaste...*	Lesson 8
5-2-14 Research and describe how raw materials are transformed into useful products. *Examples: food processing, oil refining, paper milling, plastic moulding, gold smelting...*	Lesson 10 Lesson 11

Unit 3: Forces and Simple Machines	
5-3-01 Use appropriate vocabulary related to their investigations of forces and simple machines. *Include: applied force, balanced and unbalanced forces, fulcrum, load, friction, terms related to types of simple machines.*	Throughout Unit 3
5-3-02 Describe, using diagrams, the forces acting on an object and the effects of increasing or decreasing them. *Include: force arrows representing direction and relative strength of forces acting in the same plane, balanced and unbalanced forces.*	Lesson 1 Unit Review
5-3-03 Investigate a variety of levers used to accomplish particular tasks in order to compare them qualitatively with respect to fulcrum position, applied force, and load. *Include: first-class, second-class, and third-class levers.*	Lesson 9 Lesson 10
5-3-04 Identify objects in the school and at home that use wheels and axles, and describe the forces involved. *Examples: doorknob, manual pencil sharpener, hinge, bicycle...*	Lesson 11 Unit Review
5-3-05 Recognize that a gear is a wheel and axle used to turn another wheel and axle.	Lesson 11
5-3-06 Identify common devices and systems that incorporate pulleys and/or gears.	Lesson 12
5-3-07 Explore to determine how the direction and amount of the applied force and the speed of rotation vary within a two-gear system.	Lesson 11
5-3-08 Compare, quantitatively, the force required to lift a load using a pulley system versus a single fixed pulley, and recognize the relationship between the force required and the distance over which the force is applied. *Include: a system of pulleys reduces the force required while increasing the distance over which the force is applied; a single fixed pulley requires a greater force but applies it over a shorter distance.*	Lesson 12 Unit Review
4**5-3-09** Identify and make modifications to their own pulley and/or gear systems to improve how they move loads. *Include: reducing friction.*	Lesson 12

5-3-10 Identify and describe types of simple machines. *Include: levers, wheel and axle, pulley, gear, inclined plane, screw, wedge.*	Lesson 7 Lesson 8 Lesson 9 Lesson 10 Lesson 11 Lesson 12 Lesson 13 Lesson 14 Unit Review
5-3-11 Describe the advantage of using simple machines to move or lift a given load. *Include: to decrease the force required; to increase the resulting force; to change the direction of the applied force*.	Lesson 8 Lesson 9 Lesson 10 Lesson 11 Lesson 12 Unit Review
5-3-13 Compare devices that use variations of simple machines to accomplish similar tasks. *Examples: a short- or long-handled pump, a racing or mountain bicycle...*	Lesson 8
5-3-14 Use the design process to construct a prototype containing a system of two or more different simple machines that move in a controlled way to perform a specific function.	Design Project

Unit 4: Weather	
5-4-01 Use appropriate vocabulary related to their investigations of weather. *Include: weather; properties; volume; pressure; air masses; fronts; weather instrument; severe weather; forecast; accuracy; water cycle; climate; terms related to public weather reports, and cloud formations.*	Throughout Unit 4
5-4-02 Describe how weather conditions may affect the activities of humans and other animals. *Examples: heavy rainfall may cause roads to wash out; stormy conditions may prevent a space shuttle launching; in excessive heat cattle may produce less milk...*	Lesson 9 Lesson 11
5-4-03 Describe properties of air. *Include: has mass/weight and volume; expands to fill a space; expands and rises when heated; contracts and sinks when cooled; exerts pressure; moves from areas of high pressure to areas of low pressure.*	Lesson 1 Lesson 5 Unit Review
5-4-04 Recognize that warm and cold air masses are important components of weather, and describe what happens when these air masses meet along a front. *Include: in a cold front the cold air mass slides under a warm air mass, pushing the warm air upwards; in a warm front the warm moist air slides up over a cold air mass*	Lesson 5
5-4-05 Use the design process to construct a weather instrument. *Examples: an instrument that measures wind direction, wind speed, rainfall...*	Lesson 4 Lesson 5
5-4-06 Observe and measure local weather conditions over a period of time, using student-constructed or standard instruments, and record and analyze these data.	Lesson 4 Lesson 5 Lesson 8
5-4-07 Identify and describe components of public weather reports from a variety of sources. *Include: temperature; relative humidity; wind speed and direction; wind chill; barometric pressure; humidex; cloud cover; ultraviolet index; warm and cold fronts; amount, types, and probability of precipitation.*	Lesson 7
5-4-08 Describe the key features of a variety of weather phenomena. *Examples: wind speed and precipitation of blizzards...*	Lesson 9 Lesson 10 Unit Review
5-4-09 Provide examples of severe weather forecasts, and describe preparations for ensuring personal safety during severe weather and related natural disasters.	Lesson 9

Examples: tornado, thunderstorm, blizzard, extreme wind chill, flood, forest fire...	
5-4-10 Investigate various ways of predicting weather, and evaluate their usefulness. *Examples: weather-related sayings, traditional knowledge, folk knowledge, observations of the natural environment...*	Lesson 6
5-4-11 Contrast the accuracy of short- and long-term weather forecasts, and discuss possible reasons for the discrepancies. Include: long-term forecasts may not be accurate as weather is a complex natural phenomenon that science is not yet able to predict accurately.	Lesson 5 Lesson 7 Ask …
5-4-12 Describe examples of technological advances that have enabled humans to deepen their scientific understanding of weather and improve the accuracy of weather predictions. *Examples: satellites collect data that scientists analyze to increase understanding of global weather patterns; computerized models predict weather...*	Lesson 7 Ask … Unit Review
5-4-13 Explain how the transfer of energy from the Sun affects weather conditions. *Include: the Sun's energy evaporates water and warms the Earth's land, water and air on a daily basis.*	Lesson 2 Unit Review
5-4-14 Explain how clouds form, and relate cloud formation and precipitation to the water cycle.	Lesson 3
5-4-15 Identify and describe common cloud formations. *Include: cumulus, cirrus, stratus.*	Lesson 3 Unit Review
5-4-16 Differentiate between weather and climate. *Include: weather includes the atmospheric conditions existing at a particular time and place; climate describes the long-term weather trend of a particular region.*	
5-4-17 Identify factors that influence weather and climate in Manitoba and across Canada, and describe their impacts. *Examples: jet stream, proximity to water, elevation, chinook...*	
5-4-18 Recognize that climates around the world are ever changing, and identify possible explanations. *Examples: volcanic eruptions, ozone depletion, greenhouse effect, El Niño, deforestation...*	