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| **Unit –Time** | **BC Big Ideas (Understand)** | **BC Curricular Competencies (Do)** | **BC Content (Know)** | **Instructional Strategies/ Learning Activities** | **Materials & Resources** | **Assessment Methods/Assessment Date** | **Key Vocabulary**  **(should be indicated on word wall)** |
| Biology: The Human Body  Sept 2nd. -Nov.1st | Multicellular organisms have organ systems that enable them to survive and interact within their environment. | Key questions about systems: How do the systems of the human body work together? How can you observe the concept of interconnectedness within ecosystems in your local area?  **Processing and analyzing data and information**  -Experience and interpret the local environment  Identify First Peoples perspectives and knowledge as sources of information  - Demonstrate an openness to new ideas and consideration of alternatives  **Applying and innovating**  -Contribute to care for self, others, and community through personal or collaborative approaches  **Communicating**  Communicate ideas, explanations, and processes in a variety of ways | Basic structures and functions of body systems:  - digestive: mouth, stomach, intestines, etc.  -musculo-skeletal:  muscles and skeleton  - respiratory: trachea, lungs and diaphragm  -circulatory: heart, blood, blood vessels | What is a body system.  Digestive system: Organs and how they work as a system.  Respiratory system: Organs and how they work as a system.  Circulatory system: Organs and how they work as a system.  Musculo-skeletal system: Organs and how they work as system. | Nelson: Science 5  BC Science Probe 4  Unit B: Chapters 4,5, 6  Online resources:  [www.studyladder.com](http://www.studyladder.com) (free)  [www.superteacherworksheets.com](http://www.superteacherworksheets.com) (subscription) - optional worksheet resource  <https://kids.nationalgeographic.com> | Class Work:  -Design your own experiment: Does exercise affect your heart rate.  -Make a good health poster (digestive system)  Project/ Experiment:  Design and build a leg model - October 11th  Assessments (guidelines only):  -Quiz 1: Digestive system September 20th  - Quiz 2 Respiratory system October 4th  -Quiz 3: Musculo-skeletal system October 18th  -Quiz 4: Circulatory system. October 24th  -Unit Test November 1st | cells  organs  system  tissue  digestion  nutrients  esophagus  stomach  large intestine  small intestine  colon  liver  chemical  oxygen  carbon dioxide  trachea  lungs  rib cage  diaphragm  heart  pulse  blood vessels  arteries  veins  capillaries  membrane  red blood cells  white blood cells  bones  spinal column  cartilage  muscles  tendon |
| Chemistry: Solutions and solubility  Nov. 4 - Jan 17 | Solutions are homogeneous. | **Planning and conducting**  With support, plan appropriate investigations to answer their questions or solve problems they have identified  Decide which variable should be changed and measured for a fair test  Choose appropriate data to collect to answer their questions  Observe, measure, and record data, using appropriate tools, including digital technologies  Use equipment and materials safely, identifying potential risks | Solutions are homogeneous:  What are homogeneous solution/mixtures.  Solutions can be separated.  Solubility of solids, liquids and gases.  Properties of solutions.  Dissolving of substances. | Mixtures, solutions and solubility.  Solutions (e.g., apple juice, coffee) that can be separated through distillation, evaporation, and crystallization  Solubility of solids, liquids, and gases (e.g., salt [solid], honey [liquid], carbon dioxide [gas in water makes pop])  Properties of solutions: concentration, pH, etc.  Dissolving: process of forming a solution | file:///C:/Users/1  23/Downloads/Mi  xturesSolutionsMi  niUnitforUpperGr  ades.pdf - see  google drive  Solutions -binder  Online resources:  [www.studyladder.com](http://www.studyladder.com) (free)  [www.superteacherworksheets.com](http://www.superteacherworksheets.com) (subscription) - optional worksheet resource | Class Work:  -mixture and solutions mini-unit  -homogeneous mixtures  -separating mixtures.  Project/Experiment:  -Experiment - Properties of substances affect their solubility. -Nov 28  Assessments:  -Quiz Dec 13th  -Unit Test Jan 17th | liquid  solid  gas  mixture  solution  solubility  homogeneous  substance  prediction  hypothesis  distillation  crystallization |
| Physics: Simple machines  Jan 20. - March 28 | Machines are devices that transfer force and energy. | **Questioning and**  **predicting**  Make observations in familiar or unfamiliar contexts  Identify questions to answer or problems to solve through scientific inquiry  **Processing and analyzing data and information**  Experience and interpret the local environment | Properties of simple machines and their forces.  Effects of machines: -constructed -found in nature  Power - the rate at which energy is transferred. | Forces around us affect the movement of objects.  Machines uses forces to do work: levers, wheels and axles, pulleys, inclined planes and wedges, screws.  We use simple machines to do work for us. | Nelson: Science 5 Forces and Machines  Unit A: Chapters 1, 2 and 3.  Simple machines kit - library  Online resources:  [www.studyladder.com](http://www.studyladder.com) (free)  [www.superteacherworksheets.com](http://www.superteacherworksheets.com) (subscription) - optional worksheet resource | Class Work:  -How does surface texture affect force.  Project/ Experiment:  -How do slope and load affect how far a can rolls. March 14th (Science fair)  Assessments:  -Quiz Feb 21st  -Unit Test March 28th | Force  weight  friction  surface texture  ramp  slope  load  balanced forces  work  simple machines  lever  pulley  wedge  wheel and axle  inclined plane  screw  fulcrum  effort force  first class lever  second class lever  third class lever |
| Earth/Space:  Rock cycle  April 1st - May 29th | Earth materials change as they move through the rock cycle and can be used as natural resources. | **Processing and analyzing data and information**  -Experience and interpret the local environment. -Identify First Peoples perspectives and knowledge as sources of information. | The rock cycle.  Local types of earth materials.  First Peoples concepts of interconnectedness in the environment.  The nature of sustainable practices around BC’s resources  First Peoples knowledge of sustainable practices. | Depending on earth’s resources for survival.  Renewable resources: How does pollution affect living things.  Non renewable resources and how to protect them. | Nelson: Science 5 Physics and Earth  Unit C  Chapters 8, 9, 10  Online resources:  [www.studyladder.com](http://www.studyladder.com) (free)  [www.superteacherworksheets.com](http://www.superteacherworksheets.com) (subscription) - optional worksheet resource | Class Work:  -Research the rock cycle  -design a conservation plan.  Project:  -Research a local non-renewable resource. May 29th  Assessments:  -Quiz May 2nd  -Unit Test May 16th | natural resources  environmental impact  ecosystem  conservation  recycling  biodegradable  renewable  harvesting  mineral  rock  clay  boulder  sand  soil |