

Essential Outcomes and Common Assessments and Evaluations Grade 10 Academic Science

Essential Outcomes	Common Assessments and Evaluations
<p>Inquiry and Communication Skills</p> <p>Students will:</p> <ol style="list-style-type: none"> 1. formulate scientific questions. 2. design and conduct a scientific inquiry using materials safely and accurately, controlling major variables or extending procedures where required. 3. select and integrate information from various sources to answer the questions chosen. 4. analyze data and information and evaluate evidence and sources of information, identifying flaws such as errors and bias. 5. select and use appropriate vocabulary and numeric, symbolic, graphic and linguistic modes of representation to communicate scientific ideas, plans, results and conclusions. 6. describe experimental procedures and present data and conclusions in the form of a laboratory report. 	<p>Lab Design and Report: Independent Investigation Culminating Evaluation worth 10% of final grade.</p>
<p>Chemistry Unit</p> <p>Students will:</p> <ol style="list-style-type: none"> 1. demonstrate an understanding of chemical reactions, the symbolic systems used to describe them. 2. describe the factors affecting the rates of chemical reactions. 3. determine why knowledge of chemical reactions is important in addressing environmental concerns. 	<p>Test: Review of Grade 9 Chemistry (DA)</p> <p>Lab Design and Report: Applying Scientific Method (FA) Lab Report: Conservation of Mass (E) Lab Report: Neutralization (E) Lab Design and Report: Rates of Reaction (E)</p> <p>Quiz: Naming Ionic Compounds (FA) Quiz: Naming Polyatomic Compounds (FA) Quiz: Naming Ionic, Molecular and Polyatomic Compounds (FA) Quiz: Conservation of Mass (FA) Quiz: Balancing Chemical Equations (FA)</p> <p>Communication Assignment: Periodic Table (E) Communication Assignment: Label Design (E)</p> <p>Making Connections Assignment: WHMIS Questions (E) Making Connections Assignment: Acid Rain/Global Warming Pamphlet (E) Making Connections Assignment: Article Critique (FA) Making Connections Assignment: Article Critique (E)</p> <p>Test: Chemistry Unit (E)</p>

<p>Ecology Unit</p> <p>Students will:</p> <ol style="list-style-type: none"> 1. demonstrate an understanding of the diversity of life on earth and the relationships that exist between living things. 2. analyze factors that affect ecological ecosystems, predict the consequences of changing these factors and propose viable solutions to restore ecological balance and sustainability. 3. analyze issues related to environmental sustainability from the perspective of all stakeholders. 	<p>Quiz: Ecology Terminology (DA)</p> <p>Lab Report: Estimating Population Size (E) Lab Design: Environmental Lab Design (E)</p> <p>Inquiry Assignment: Predator-Prey Population Analysis (E)</p> <p>Communication: Journal Entry Feedback (FA) Communication: Journal Completion (E)</p> <p>Making Connections Assignment: Article Critique (E) Making Connections Assignment: Biome Project (E) Making Connections Assignment: Letter to MP (E)</p> <p>Test: Ecology Unit (E)</p>
<p>Motion Unit</p> <p>Students will:</p> <ol style="list-style-type: none"> 1. demonstrate and understanding of different kinds of motion and the quantitative relationships among displacement, velocity and acceleration by solving simple problems. 2. analyze everyday phenomena and technologies in terms of the motion involved. 	<p>Quiz: Basic Math Skills (DA)</p> <p>Quiz: Average Speed (FA) Quiz: Average Acceleration (FA) Quiz: Displacement (FA) Quiz: Velocity (FA)</p> <p>Communication: Graphing and Calculation Rubric (E)</p> <p>Lab Report: Acceleration, Ticker Tape / Walking Speed Lab(E)</p> <p>Making Connections Assignment: Avro Arrow (E) Making Connections Assignment: Article Critique (E)</p> <p>Test: Motion Unit (E)</p>
<p>Final Exam</p>	<p>Written Examination Culminating Evaluation worth 20% of final grade.</p>

Essential Outcomes and

Common Assessments and Evaluations

Grade 10 Applied Science

Essential Outcomes	Common Assessments and Evaluations
<p>Chemistry Unit</p> <p>Students will:</p> <ol style="list-style-type: none"> 4. demonstrate an understanding of chemical reactions, the symbolic systems used to describe them. 5. investigate chemical reactions encountered in everyday life and their practical applications. 6. determine why knowledge of chemical reactions is important in addressing environmental concerns. 	<p>KNOWLEDGE: Test I: Atomic Structure, Periodic Table, Naming Ionic & Mol. (E) Test II: Chemical Reactions, Acids and Bases (E) Quizzes: Scientific Method, Atomic Structure, Naming, Balancing (FA) Worksheets: Various (FA)</p> <p>INQUIRY: Chemical Detection Lab (E) Blast Off Lab (E) Household Chemical pH Lab (E) Antacid Neutralization Lab (E) – if time allows</p> <p>MAKING CONNECTIONS: Safety Assignment (MSDS or WHMIS) (E) Consumer Product labels Assignment (E) End of Lab Discussion Questions (E) 2 articles with questions? (E)</p> <p>COMMUNICATION: Part of Lab Evaluation (E) Type of Reaction Cartoons (E) Journal Entries (FA, E)?</p> <p>CULMINATING EVALUATION: <u>Dangerous Chemicals in Society Research & Pamphlet</u> or <u>Waste Disposal Project</u> (E)</p>
<p>Ecology Unit</p> <p>Students will:</p> <ol style="list-style-type: none"> 4. demonstrate an understanding of the diversity of life on earth and the relationships that exist between living things. 5. analyze factors that affect ecological ecosystems, predict the consequences of changing these factors. 6. analyze issues related to environmental sustainability from the perspective of all stakeholders. 	<p>KNOWLEDGE: Test: Ecology End of Unit (E) Quizzes: Food Web, Nutrient Cycles, Population Graphing (FA) Assignment: Food Web (E) Worksheets: Various (FA)</p> <p>INQUIRY: Population Dry Lab? Predator-Prey Assignment (Hare and Lynx) (E) Tragedy of the Commons Activity?</p> <p>MAKING CONNECTIONS: 2+ articles with questions (E) Eco-footprint Survey (E) Tragedy of the Commons Activity? Stakeholders Assignment?</p> <p>COMMUNICATION: Population Graphing Assignment (E) Carbon Cycle Cartoon (E)</p> <p>CULMINATING EVALUATION: <u>Endangered Species Project</u> (E)</p>
<p>Motion Unit</p>	<p>KNOWLEDGE:</p>

<p>Students will:</p> <ol style="list-style-type: none"> 3. demonstrate and understanding of different kinds of motion and the quantitative relationships among distance, speed, and acceleration by solving simple problems. 4. analyze everyday phenomena and technologies in terms of the motion involved. 5. demonstrate number sense 	<p>Test: Motion End of Unit (E) Quiz: Average Speed, Acceleration (FA) Worksheets: Various (FA)</p> <p>INQUIRY: Walking Speed Lab (E)</p> <p>MAKING CONNECTIONS: 1 article with questions (E) Buying a Car Assignment (E)</p> <p>COMMUNICATION: Distance-Time Graphing (E) Speed-Time Graphing (E) Vector Assignment (E)</p> <p>CULMINATING EVALUATION: Balloon Car Project (E)</p>
<p>Weather/Global Warming</p> <p>Students will:</p> <ol style="list-style-type: none"> 1. demonstrate and understanding of impact and issues surrounding global warming. 2. be able to identify the stakeholders involved with global warming 	<p>KNOWLEDGE: Quiz: Heat Transfer, Parts of the Atmosphere (FA)</p> <p>INQUIRY: Weather Lab? (E)</p> <p>MAKING CONNECTIONS: An Inconvenient Truth <u>or</u> Strange Days on Planet Earth Video</p> <p>COMMUNICATION: Reading Weather Maps</p>
<p>Final Exam</p>	<p>Written Examination: Culminating Evaluation worth 15% of final grade.</p>