



Scope and Sequence

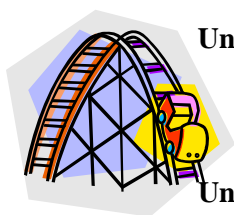
Grade Eight Science

Fall Semester

Unit 1 – Safety in the Science Lab

1 week

1. Safety Equipment, Rules and Symbols
2. Reading MSDS Sheets
3. Safety Contract
4. Safety Test



Unit 2 – Experimental Design (Scientific Method)

1 week

1. Review: Components of a Scientific Investigation
2. Skills of a Scientist

Unit 3 – Force and Motion

2 weeks

1. Review: Simple Machines
2. Review: Changes in Motion can be Measured
3. Unbalanced Forces cause Change in Motion
4. Forces in Living Organisms

Unit 4 – Energy

3 weeks

1. Review: Energy transformations in Energy Production
2. Review: Examples of Potential and Kinetic Energy
3. Heat versus Temperature
4. Conduction, Convection, Radiation
5. Complex Interactions between Matter and Energy – Specific Heat

Unit 5 – Part I – Matter is Composed of Atoms

5 weeks total

1. Structure and Parts of an Atom
2. The Periodic Table
3. Physical Properties of Elements

Part II – Chemical Reactions

1. Substances React Chemically
2. Chemical Formulas
3. Types of Chemical Reactions
4. Conservation of Mass



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Fall Semester con't

Unit 6 – Waves	3 weeks
1. Characteristics of Waves	
2. Properties of Waves	
3. Types of Waves	
4. Review: Predict the impact of catastrophic events on the Earth	

Unit 7 – Living Systems and Genetics	2 weeks
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Spring Semester

Unit 8 – The Earth System and the Universe	3 weeks
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Unit 9 – Weather and Climate	4 weeks
1. Interactions between matter and energy.	
2. Interactions among solar and weather systems.	
3. Interactions among weather and ocean systems	
4. Interactions among solar and ocean systems.	
5. Role of oceans to climate changes.	
6. Global warming, the Greenhouse effect, El Nino, etc.	
7. Results of modifying the Earth's nitrogen, water and carbon cycles.	
8. Ground water and surface water in a watershed (w/ Water Cycle)	

Unit 10 – Earth Resources	2 weeks
1. Human activities have modified the soil, water and air quality.	
2. Air Pollution	
3. Human activity on the Earth's renewable, nonrenewable and Non-renewable resources.	

Unit 11 – Plate Tectonics and the Rock Cycle	3 weeks
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Unit 12– Oceans	4 weeks
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Unit 13: Scientific Research	2 weeks
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