

Science 7

Unit		Outcomes	Pages for reference
<i>Unit 1: Earth and Space Science: Earth's Crust</i>	1.1 Geological Plate Tectonics and Time scale	Analyze and compare data to determine patterns and trends on some catastrophic events that occur on or near Earth's surface (210-6, 311-1, 311-4, 311-5)	28-29
		Describe theories from the past to present plate tectonics, including Canadian examples (110-1, 110-4, 112-12)	28-29 111-115
		Organize and develop a chronological model or geological time scale of major events in Earth's history (209-4, 311-6)	28-29 85-88
	1.2 Rocks and Minerals	Classify minerals and rocks on the basis of their characteristics and method of formation, and compare with classification keys (210-1, 310-2)	32-33 93-99 100-102
		Collaboratively plan and construct a geological land mass profile using simulated core sampling (211-3, 211-4, 210-12)	32-33
		Explore and describe the composition of Earth's crust, using common samples, scientific studies, and society's needs (109-7, 111-2, 310-1)	34-35
	1.3 Weathering, Soil and the Rock Cycle	Investigate and explain various ways in which rocks can be weathered and explain the rock cycle (311-2, 208-2)	36-37, 40-41 89-92
		Relate various meteorological, geological, and biological processes to the formation of soils (311-3)	40-41 103-105
		Investigate and discuss procedures and expenditures for enriching soils, providing science and technology examples (112-7, 113-7)	40-41
<i>Unit 2: Physical Science: Mixtures and Solutions</i>	2.1 Mixtures	Examine and separate the components of a variety of mixtures, safely using materials in a laboratory (209-6, 307-2)	44-45 117-122
	2.2 Solutions	Distinguish between pure substances and mixtures, using the particle theory of matter (307-1)	46-47 142-147 148-152
		Apply criteria for evaluating evidence and describe, in a laboratory, the characteristics of solutions, using the	46-47

		particle model of matter (208-10, 307-3)	
		Demonstrate a knowledge of WHMIS standards by using proper techniques for handling and disposing of materials (209-7)	48-49
	2.3 Concentration of Solutions	Describe qualitatively and quantitatively the concentrations of solutions (307-4)	50-51 123-128
		Perform and solve testable questions about solutions' concentrations (208-1, 210-9)	50-51
		Design and carry out procedures to study the effect of temperature on solubility and explain the results (208-6, 209-1, 210-7)	52-53 129-130 135-138 139-141
		Predict the solubility of a solute by interpolating or extrapolating from graphical data (210-4)	52-53
		Identify questions and use a technology for collecting data (210-16, 109-4)	52-53
	2.4 Mixtures, Solutions and the Environment	Identify and explain examples of mixtures and solutions that have an impact on development in science, technology, and environment (112-7, 113-1)	54-55
		Describe the science underlying particular technologies designed to explore natural phenomena, extend human capabilities, or solve practical problems (111-5)	54-55 131-134
<i>Unit 3: Physical Science: Heat</i>	3.1 Temperature and Matter	Construct, test, and produce data using an air thermometer (208-8, 210-13, 210-2)	58-59 227-230
		Compare and demonstrate how to use and read various instruments used to measure temperature from the past to present technologies (308-1, 209-3, 110-7)	58-59 219-220
		Explain how each state of matter, including changes of state, react to changes in temperature, using the particle model of matter (308-3, 308-4)	60-61 213-214 217-218
		Explain temperature, using the concept of kinetic energy and the particle model of matter (308-2)	60-61 215-216
	3.2 Heat Transfer	Compare transmission of heat by conduction, convection, and radiation (308-5)	62-63 215-216

		Differentiate between science and technology applications of how heat affects lives (111-5, 113-4)	64-65, 66-67 221-224
		Demonstrate and compare qualitatively, the heat capacities and heat absorption of common materials by investigating and evaluating how the surfaces absorb heat and what potential variables produce errors (308-7, 210-11, 210-12)	64-65 219-220 221-224 225-226
		Investigate in a laboratory and describe in various formats how surfaces absorb radiant heat (308-6, 211-2)	64-65
	3.3 Technology, Temperature and Heat	Identify examples of science and technology based careers that use heat and temperature (112-9)	66-67
		Describe, with examples, our heat needs and insulating technologies from the past to present (112-1, 109-4)	66-67
<i>Unit 4: Life Science: Interactions within Ecosystems</i>	4.1 Components of an Ecosystem	Identify the roles of producers, consumers, and decomposers in a local ecosystem and describe both their diversity and their interactions (304-2)	70-71 178-182
		Identify questions, investigate, and record collected data on the ecosystem's components using materials effectively (208-2, 208-3, 210-1)	70-71 161-166 199-203
		Describe interactions between biotic and abiotic factors in an ecosystem (306-3)	70-71 199-203
		Distinguish and explain how biological classification reflects the diversity of life on Earth, using specific terms and characteristics (304-1, 109-1, 109-12)	72-73 167-171
	4.2 Food Chains, Food Webs, and Decomposers	Describe how matter is recycled in an ecosystem and evaluate potential applications of energy transformations (306-2, 210-2)	74-75 172-177
		Describe how energy is supplied to, and how it flows through, the structures and interactions in a natural system, using charts, diagrams, and terminology (306-1, 111-6, 210-3)	74-75
		Describe essential conditions to the growth and reproduction of plants and microorganisms in an ecosystem,	76-77

		providing examples related to aspects of the human food supply (304-3, 111-1)	
	4.3 Ecological Succession	Identify signs of ecological succession in a local ecosystem and predict its future based on characteristics of succession (306-4, 208-5)	78-79 204-209
	4.4 Action	Defend a proposal to protect a habitat and provide examples of various issues that can be addressed in multiple ways (113-11, 211-5, 113-10)	80-81
		Research individuals/groups in Canada that focus on the environment, using various print and electronic sources (112-4, 112-8. 209-5)	80-81 155-160