Science 10-4
Multimedia Interactives

The Alberta Education Multimedia Interactives Web links contain instructional material that may be labelled at a grade level different from the corresponding Knowledge and Employability course level. Please preview the resources, including any links to Web sites, before they are accessed by students to determine how each might best be used.

Unit A: Investigating Properties of Matter	
Chemical Safety	***Safety in the Science Classroom 2006***. Alberta Education. The Web site contains a downloadable PDF document. Scroll down to view the resource by chapters. Information on WHMIS may be found by clicking on the index link at the bottom of the screen.
	***Science in Action 9,* Unit B: 1.1 Safety in the Science Class (e-Textbook)**. *Addison* Wesley, Pearson Education Canada. The Web site contains information on safety in the science class. Click on icons to access resources.
Solutions	***Science in Action 9,* Unit B: 1.2 Types of Mixtures (e-Textbook)**. Addison Wesley, Pearson Education Canada. The Web site contains information on solutions. Click on icons to access resources.
	Chemistry Revealed. *Solutions* (video). Alberta Education. The Web site contains a series of videos with information and activities on solutions. Click on a title to select a topic. Scroll down to view user instructions.
States of Matter: Physical Changes	***Science in Action 9,* Unit B: 1.2 Organizing Matter (e-Textbook)**. Addison Wesley, Pearson Education Canada. The Web site contains information about states of matter and physical changes in matter. Click on icons to access resources.
Chemical Changes	***ScienceFocus 9,* Unit 2, Topic 7: Chemical Reactions (e-Textbook).** McGraw-Hill Ryerson. The Web site contains information on chemical reactions and changes. Scroll down to access information.
	Cyber-Science. *Physical and Chemical Change* (interactive). Alberta Education. The Web site contains interactive activities designed to teach students about physical and chemical changes. Follow the onscreen instructions.

Unit B: Understanding Energy Transfer Technologies	
Cooling and Heating Systems	***Forced Warm-air System* (video)**. Alberta Education. The Web site contains a video that shows how a household furnace works.
Thermal Energy Transfer: Conduction, Convection and Radiation	**ExploreLearning. *Heat Transfer by Conduction* (interactive)**. Alberta Education. The Web site contains an interactive activity that demonstrates heat transfer by conduction.
Reducing Reliance on Nonrenewable Energy Sources	***Science in Action 9,* Unit D: 4.1 Renewable and Nonrenewable Energy (e-Textbook)**. Addison Wesley, Pearson Education Canada. The Web site contains information on renewable and nonrenewable energy sources. Click on icons to access resources.

Unit C: Investigating Matter and Energy in Living Systems	
Digestion, Respiration and Circulation	***Digestion and Respiration* (video)**. National Geographic Science Centre. The Web site contains a video that explains digestion, respiration and circulation.
Energy and Respiration	***Respiration* (video)**. National Geographic Science Centre. The Web site contains a video that explains the circulatory system and explores the structure and functions of parts of the respiratory system.
Storing Energy	***Role of the Liver* (video)**. National Geographic Science Centre. The Web site contains a video that examines the role of the liver, including the production of bile and the removal of excess glucose from the blood. The video describes how glucose is stored as glycogen and then is converted back into glucose when the body needs energy.
Reproductive Systems	***Human Reproduction* (video)**. National Geographic Science Centre. The Web site contains a video that provides an overview of human reproduction, including the roles of chromosomes, deoxyribonucleic acid (DNA), genes, sperm, eggs, ovulation and menstruation.

Influences on Human Health	***Staying Healthy: Your Body's Defenses*** **(video)**. National Geographic Science Centre. The Web site contains a video that discusses the protective role of the skeletal system and the body's ability to repair itself. The video addresses such aspects of the immune system as how microbes are kept out of the body; the function of mucus, cilia, tears and earwax; how white blood cells react to germs; and the role of the lymphatic system.

Unit D: Investigating Matter and Energy in Environmental Systems	
Food Chains, Webs and Energy Pyramids	***Adaptations within Food Chains and Webs*** **(video)**. National Geographic Science Centre. The Web site contains a video that examines a marine food chain and explains how energy in a food web is transferred among animals.
	Diminishing Glaciers **(video)**. National Geographic Science Centre. The Web site contains a video that links the retreat of the Athabasca Glacier to global warming.
Human Impact on the Environment	***Diminishing Glaciers*** **(video)**. National Geographic Science Centre. The Web site contains a video that links the retreat of the Athabasca Glacier to global warming.
	Growing Deserts **(video)**. National Geographic Science Centre. The Web site contains a video that discusses two changes in ecosystems caused by humans: the expansion of the Sahara desert and the decrease in ancient forest regions.
	Depletion of Marine Animals **(video)**. National Geographic Science Centre. The Web site contains a video that illustrates how human activities, e.g., fishing, offshore oil projects, oil spills, are contributing to a reduction in the numbers of fish and other marine animals.
	Great Lakes Pollution **(video)**. National Geographic Science Centre. The Web site contains a video that explores the impact of human development on the Great Lakes and shows students performing water-quality tests.
Biomes	***Tropical Rain Forests*** **(video)**. National Geographic Science Centre. The Web site contains a video that describes the environmental conditions in a tropical rain forest that encourage plant growth.