Activity Planner

Activity/ Investigation/Project	Advance Preparation and Alternative Materials	Apparatus/Materials (per group or student)	Time Required
Unit 1 Sustainable Ecosystems and Human Activity			
Topic 1.1 What are ecosystems, and why do we care about them?			
Starting Point activity	- make an overhead of BLM 1-3 (optional)		• 20 min in class • 5 min preparation
Activity 1.1 Inspiring Connections			• 15 min in class
Activity 1.2 Pondering Ponds	- create labels, photocopy BLM	- graphic organizer such as **BLM G-33 Concept Map**	• 10 min in class • 5 min preparation
Activity 1.3 Interaction I.D.	- photocopy BLM	- **BLM G-37 T-chart** (optional)	• 15 min in class • 5 min preparation
Activity 1.4 Ecosystems Where You Live	- find local map	- 1 large sheet of paper - coloured markers - neighbourhood map (optional)	• 30 min in class • 10 min preparation
Topic 1.2 How do interactions supply energy to ecosystems?			
Starting Point Activity			• 15 min in class
Activity 1.5 Pass It on!	- photocopy BLM	- 100 pennies or plastic game chips - **BLM 1-9 Activity 1.5 Conversion Chart** (optional)	• 15 min in class • 10 min preparation
Investigation 1A Plot the Pathway	- photocopy BLM and cut pieces of paper	- writing materials - 12 small pieces of paper - **BLM 1-10 Plot the Pathway** (optional)	• 30 min in class • 5 min preparation
Topic 1.3 How do interactions in ecosystems cycle matter?			
Starting Point Activity		- map of Ontario	• 20 min in class
Activity 1.6 Interactions and Nutrient Cycles	- prepare overhead		• 20 min in class • 5 min preparation
Activity 1.7 Cycle It			• 20 min in class
Activity 1.8 Helping to Restore Balance	- photocopy BLM	- **BLM G-32 Cause and Effect Map** (optional)	• 20 min in class • 5 min preparation
Activity 1.9 Recycling on Mars			• 45 min in class
Topic 1.4 What natural factors limit the growth of ecosystems?			
Starting Point Activity	- photocopy the BLM	- **BLM 1-16 Topic 1.4 Starting Point Activity**	• 10 min in class • 5 min preparation
Activity 1.10 Up for the Count	- create a large-scale graph of the data (optional)	- graph paper	• 10 min in class • 5 min preparation

Activity 1.11 What's the Link?			• 20 min in class
Investigation 1B Investigating Limiting Factors for Algae Growth	- prepare fertilizer concentrations	- 5 Erlenmeyer flasks - Fertilizer solutions (5 different concentrations) - eye dropper - pond water containing algae - graph paper - grow lights or well-lit space	• 40 min initially, then time during 6 classes • 10 min preparation
Topic 1.5 How do human activities affect ecosystems?			
Starting Point Activity			• 15 min in class
Activity 1.12 Predict the Consequences	- prepare multiple copies of the three scenarios - photocopy BLMs	- library or Internet access - **BLMs G-13**, **G-14**, **G-32**, **G-33**, **G-35** (optional)	• 60 min in class • 5 min preparation
Activity 1.13 Ontario's Most Wanted–Not!	- obtain large pictures of each species	- large pictures of each introduced species - library or Internet access	• 60 min in class • 10 min preparation
Activity 1.14 A Watershed Mind Map	- photocopy BLM	- **BLM G-33 Concept Map** (optional)	• 20 min in class • 5 min preparation
Investigation 1C Human Activity in a Local Ecosystem	- save local newspapers and magazines - photocopy BLMs	- local newspapers and Canadian magazines - **BLM G-13**, **G-14**, **G-17**, **G-35** (optional)	• 60 min in class • 10 min preparation
Activity 1.15 I Remember When	- arrange for a speaker or speakers	- writing materials - audio-visual recording materials (optional)	• 30 min in class before interview • 30 min in class after interview • 60 min preparation
Topic 1.6 How can our actions promote sustainable ecosystems?			
Starting Point Activity	- obtain current Earth Hour participation statistics for your community		• 15 min in class • 10 min preparation
Activity 1.16 Reflecting on Responsibilities			• 15 min in class
Activity 1.17 Look for the Links	- photocopy BLM	- **BLM 1-26 Activity 1.17 Comparisons** (optional)	• 30 min in class • 5 min preparation
Activity 1.18 Town Council Meeting	- find recent newspaper articles	- library or Internet access - recent newspaper articles - **BLM G-15**, **G-16** (optional)	• 60 min in class • 10 min preparation
Investigation 1D Investigating a Local Environment Project	- identify local resources - photocopy BLM	- Internet access or local environmental club brochures - **BLM G-14** (optional)	• 60 min in class • 10 min preparation

Unit 1 Inquiry Investigation: Investigating Compost	- collect materials - photocopy BLM	- 500 mL soil - 4 plastic cups - 4 plant seeds - 4 labels or white tape - marker - biodegradable household waste - **BLM A-34 Controlling Variables** (optional) - **BLM A-42 Unit 1 Inquiry Investigation Rubric** (optional)	• 60 min in class • 10 min preparation
Unit 1 An Issue to Analyze: Going Greener	- photocopy BLM	- journals - **BLM G-40 The 10 Challenges Checklist** - **BLM A-43 Unit 1 An Issue to Analyze Rubric** (optional)	• 40 min in class • 5 min preparation

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Unit 2 Exploring Matter			
Topic 2.1 In what ways do chemicals affect your life?			
Starting Point Activity	- gather materials	- examples of different plastics (containers, tableware, scouring pads, netting) - metal glass containers	• 10 min in class • 10 min preparation
Activity 2.1 Chemical-Free! (Oh, Really?)	- gather materials	- household cleaning products - decaffeinated coffee tins - antibacterial cleaning cloths (optional)	• 10 min in class • 10 min preparation
Activity 2.2 Considering Pros and Cons		- research materials or Internet access - material data safety sheets for each chemical (optional)	• 30 min in class
Activity 2.3 Safety First	- Prepare cards	- **BLM G-3 WHMIS Symbol Cards** - **BLM 2-5 Activity 2.3** (optional)	• 20 min in class • 10 min preparation
Topic 2.2 How do we use properties to help us describe matter?			
Starting Point Activity		- samples of foods (optional)	• 15 min in class
Activity 2.4 Linking Physical Properties of Objects with their Uses	- photocopy BLM	- 5 mL salt - 2 cm copper wire - bottle cork - 2 cm square of aluminum foil - paper cup - Styrofoam® cup - plastic paper clip - metal paper clip - beaker - 100 mL water - eight stirring rods - conductivity apparatus - **BLM 2-9 Activity 2.4** (optional)	• 45 min in class • 5 min preparation
Activity 2.5 Identifying Chemical and Physical Properties of Substances	- photocopy BLM	- 10 mL baking soda - 10 mL calcium chloride - 10 mL bromothymol blue - 2 small spoons - 10 mL graduated cylinder - 1 resealable plastic bag - beaker - **BLM 2-10 Activity 2.5** (optional)	• 40 min in class • 5 min preparation

Investigation 2A Physical and Chemical Properties of Substances in the Home	- photocopy BLM	- 10 mL table sugar - 10 mL baking soda - 10 mL salt - 20 mL vinegar - 4 cm square of aluminum foil - Additional chemicals such as flour, powdered - sugar, or plastic wrap - 6 test tubes - test tube rack - 100 mL water - 6 stirring rods - conductivity apparatus - BBQ lighter (optional) - **BLM 2-11 Investigation 2A** (optional) - **BLM 2-12 Alternative Investigation 2A** (optional)	• 180 min in class • 5 min preparation
Topic 2.3 What are pure substances and how are they classified?			
Starting Point Activity		- samples or photographs of mixtures and pure substances	• 15 min in class
Activity 2.6 Classify Elements		- research materials or Internet access - index card	• 45 min in class
Investigation 2B Comparing the Physical Properties of Metals with Non-metals		- 10 cm copper wire or 2 copper pennies - 4 cm square of aluminium foil - 2 nickel ball bearings - sulfur - one small piece of carbon - conductivity apparatus - magnet - magnifying lens - hammer - other equipment or materials as required	• 60 min in class
Topic 2.4 How are properties of atoms used to organize elements into the periodic table?			
Starting Point Activity		- **BLM 2-15 Classifying Matter** (optional) - photographs of gold objects - models of gold and silver atoms (optional)	• 10 min in class
Activity 2.7 Building Atoms		- Option 1: paper shapes in three colours - Option 2: modelling clay in three colours - Option 3: beads in three colours (two colours of large bead and one colour of small bead) - scissors - tape or glue - string or thread and needle - skewers or stir sticks	• 30 min in class

Activity 2.8 Patterns in the Periodic Table	- photocopy BLM	- index cards from Activity 2.6 - **BLM 2-21 Activity 2.8** (optional)	• 10 min in class
Activity 2.9 Build a Periodic Table	- photocopy BLM	- models from Activity 2.7 - **BLM 2-22 Activity 2.9 Template** (optional) - **BLM 2-23 Activity 2.9 Models** (optional) - **BLM 2-24 Topic 2.5 Starting Point Activity** (optional)	• 15 min in class • 5 min preparation
Topic 2.5 In what ways do scientists communicate about elements and chemicals?			

Starting Point Activity	- photocopy BLM	- samples of each substance in the photographs (optional)
		- **BLM 2-24 Topic 2.5 Starting Point Activity** (optional)
		- For demonstration (optional):
		  - water
		  - calcium carbide
		  - charcoal
		  - calcium
		  - weak acid
		  - splint
		  - lighter
		  - test tubes
			• 15 min in class
			• 5 min preparation

Activity 2.10 Building Molecules	- photocopy BLM	- **BLM 2-29 Colouring Molecules** - molecular model kits - modeling clay and toothpicks (optional)	• 30 min in class • 5 min preparation
Activity 2.11 Learning More About the Elements and their Compounds		- research materials and Internet access - **BLM G-32** and **G-38** (optional)	• 60 min in class
Topic 2.6 What are some characteristics and consequences of chemical reactions?			
Starting Point Activity		- 200 mL vinegar - 4 small jars with lids - steel wool - stainless steel spoon - 5 mL baking soda - 1 egg	• 5 min in class plus time to observe on subsequent days
Activity 2.12 Analyze some Chemical Reactions	- photocopy BLM	- **BLM 2-31 Activity 2.12** (optional)	• 20 min in class • 5 min preparation
Activity 2.13 What's on a Label?	- gather household products	- several containers of six different household products, or their labels	• 15 min in class • 20 min preparation
Activity 2.14 Which Would You Choose?		- 3 or 4 cleaners - 3 or 4 surfaces - oil or marker - 20 mL vinegar - 1 lemon - 20 mL baking soda - cloths or paper towels	• 30 min in class

Investigation 2C Identifying an Unknown Gas		– 10 mL dilute hydrochloric acid – small piece of mossy zinc – 5 mL 3% hydrogen peroxide – 5 mL limewater – yeast – marble or limestone chip – 4 test tubes – test tube rack – test tube holder – 2 rubber stoppers – 2 wooden splints – balloon	• 20 min in class
Unit 2 Inquiry Investigation: Rust Formation		– a variety of hardware made of steel, iron and aluminum. – containers (jars or beakers) – water – salt (or other hypothesized accelerators) – paint, oil or any other material used to protect from corrosion - **BLM A-44 Unit 2 Inquiry Investigation Rubric** (optional)	• 40 min in class
Unit 2 An Issue to Analyze: Evaluating the Use of Road Salt		– research materials - **BLM A-45 Unit 2 An Issue to Analyze Rubric** (optional)	• 60 min in class

Activity/ Investigation/Project	Advance Preparation and Alternative Materials	Apparatus/Materials (per group or student)	Time Required
Unit 3 Space Exploration			
Topic 3.1 What do we see when we look at the night sky?			
Starting Point Activity	- photocopy BLM	- **BLM G-29 K-W-L Chart** (optional)	• 20 min
Activity 3.1 Estimate the Number of Stars		- a glass or clear plastic jar with a lid (optional) - 3000 beans or other small objects (optional) - **BLM G-27 Estimating** (optional)	• 20 min in class
Draw Orbits		- Mathematical compasses	• 20 min in class
Activity 3.3 Choose Your Units	- photocopy BLM	- various measurement materials (centimetre rulers, metre sticks) - **BLM G-28 Metric Conversions** (optional)	• 10 min in class • 5 min preparation
Activity 3.4 Classify Galaxies	- photocopy colour-enlargements of the galaxies shown in the student textbook	- enlargements of text photographs	• 30–40 min in class • 5 min preparation
Activity 3.5 Build Constellations in 3-D	- ask students to bring in a shoebox from home - photocopy BLMs	- shoebox (or other small box) - string, scissors, glue, tape - **BLM G-41 Big Dipper Diagram** - 7 small beads with holes - **BLM G-4 Group Roles** (optional) - **BLM A-19 Group Investigation Group Assessment Checklist** (optional)	• 40–60 min in class • 5 min preparation
Investigation 3A Make a Star-Finder Wheel	- you may choose to prepare the star-finder wheels in advance - photocopy BLMs	- cardboard - scissors - tape - cardstock or file folders (optional) - glue (optional) - telecopes or binoculars (optional) - **BLM G-2 Star-Finder Wheel Template** - **BLM 3-7 Five-Column Table** (optional) - **BLM 3-8 Star-Finder Wheel Grid** (optional)	• 40–50 min in class • 30 min preparation (optional)
Topic 3.2 What are the Sun and the Moon, and how are they linked to Earth?			
Starting Point Activity	- photocopy BLMs	- **BLM G-29 K-W-L Chart** (optional)	• 15–20 min in class • 5 min preparation

Activity 3.6 What's Cool About the Sun?	- book library or computer lab - photocopy BLMs	- **BLM G-35 Main Idea Web** (optional) - **BLM G-14 Research Worksheet** (optional) - **BLM A-28 Presentation Rubric** (optional) - access to the Internet or library	• 20–30 min in class • 5 min preparation
Activity 3.7 More About the Moon	- book library or computer lab - photocopy BLMs	- access to the Internet or library - **BLM G-12 Scientific Research Planner** (optional) - **BLM G-14 Research Worksheet** (optional) - **BLM A-24 Co-operative Group Work Rubric** (optional) - **BLM A-18 Group Investigation Self Assessment Checklist** (optional)	• 60 min in class • 5 min preparation
Activity 3.8 Modeling Eclipses	- photocopy BLMs	- directed light source, such as a flashlight or an overhead projector - globe - ball for Moon - **BLM A-6 Developing Models Checklist** (optional) - **BLM A-31 Developing Models Rubric** (optional)	• 40–60 min in class • 5 min preparation
Activity 3.9 Colony on Another Planet	- photocopy BLMs	- **BLM G-38 Venn Diagram** (optional) - **BLM G-39 Double Bubble Organizer** (optional)	• 40–60 min in class • 5 min preparation
Topic 3.3 What has space exploration taught us about our solar system?			
Starting Point Activity			• 15–20 min in class
Activity 3.10 News from NEOs	- book library or computer lab - photocopy BLMs	- access to the library and/or the Internet - **BLM G-13 Citing Sources** (optional)	• 60 min in class for research • 60 min to develop the news report • 5 min preparation
Activity 3.11 Bike me to the Moon, and Beyond	- photocopy BLMs	- calculators (optional) - **BLM 3-17 Bike Me To the Moon, and Beyond** (optional) - **BLM G-24 Using Scientific Notation**	• 30–40 min in class • 5 min preparation
Activity 3.12 Map the Solar System	- photocopy BLM	- map of your community - sticky notes - coloured pencils or markers - ruler - **BLM 3-18 Planet Distances from the Sun** (optional)	• 30–40 min in class • 5 min preparation

Topic 3.4 What role does Canada play in space exploration?			
Starting Point Activity		- paper - coloured markers or pencil crayons - computers with graphics program (optional)	• 40–60 min in class
Activity 3.13 We Grow Astronauts, Too	- book library or computer lab - photocopy BLMs	- access to the library and the Internet - **BLM 3-21 We Grow Astronauts, Too** (optional) - **BLM G-4 Group Roles** (optional) - **BLM G-12 Scientific Research Planner** (optional) - **BLM G-14 Research Worksheet** (optional)	• 120 min in class • 60 min for research • 60 min for recording and presenting • 5 min preparation
Activity 3.14 Canadians Exploring Space	- book library or computer lab - photocopy BLMs	- access to the library and Internet - **BLM G-12 Scientific Research Planner** (optional) - **BLM G-13 Citing Sources** (optional) - **BLM G-14 Research Worksheet** (optional) - **BLM G-33 Concept Map** (optional) - **BLM G-34 Flowchart** (optional) - **BLM G-35 Main Idea Web** (optional) - **BLM G-36 Spider Map** (optional) - **BLM A-11 Concept Map Checklist** (optional)	• 60 min in class • 5 min preparation
Investigation 3B You, Robot	- remind students to wear shoes with laces	- tongue depressor - heavy gloves - masking tape - two pairs of pliers - blindfold - shoes with laces - stopwatch	• 40–60 min in class
Topic 3.5 How do we benefit from space exploration?			
Starting Point Activity	- book the library or computer lab	- access to the library and/or Internet (optional)	• 30 min in class

Activity 3.15 Travelling Bombs–Worth the Risk?	- book the library or computer lab - photocopy BLMs	- library or Internet access - **BLM G-14 Research Worksheet** (optional) - **BLM G-15 Worksheet for Investigating Issues** (optional) - **BLM G-16 Decision-Making Organizer** (optional) - **BLM G-32 Cause-and-Effect Map** (optional) - **BLM G-33 Concept Map** (optional) - **BLM G-34 Flowchart** (optional) - **BLM G-35 Main Idea Web** (optional) - **BLM G-36 Spider Map** (optional) - **BLM A-5 Investigating an Issue Checklist** (optional)	• 30–40 min in class • 5 min preparation
Activity 3.16 Off-World Earths–Worth the Risk?	- photocopy BLMs	- **BLM G-31 English Word Study** (optional)	• 30–40 min in class • 5 min preparation
Unit 3 Inquiry Investigation: Space Thirst	- prepare samples	- water - glucose - food colouring - plastic or glass containers for samples - other materials as per students' design - **BLM G-1 Safety Contract** (optional) - **BLM G-9 Experimental Design Worksheet** (optional) - **BLM A-46 Unit 3 Inquiry Investigation Rubric** (optional)	• 40–60 min in class • 30–40 min preparation
Unit 3 An Issue to Analyze: The Costs and Benefits of Space Travel	- prepare a list of information needed - photocopy BLMs	- Internet access - **BLM G-13 Citing Sources** (optional) - **BLM A-47 Unit 3 An Issue to Analyze Rubric** (optional)	• 60–90 min in class • 30–40 min preparation

Activity/ Investigation/Project	Advance Preparation and Alternative Materials	Apparatus/Materials (per group or student)	Time Required
Unit 4 Electrical Applications			
Topic 4.1 How do the sources used to generate electrical energy compare?			
Starting Point Activity			• 30 min in class
Activity 4.1 Your Source of Energy			• 5–10 min in class
Activity 4.2 Assess the Sources		- Internet access - chart paper (one per group) - markers (at least one per group)	• 60 min in class
Investigation 4A Leapin' 'Lectricity		- Internet access	• 60 min in class
Topic 4.2 What are charges and how do they behave?			
Starting Point Activity		- latex ballons about 20–30 cm diameter (one per student or pair of students)	• 10 min in class
Activity 4.3 Remembering Atoms	- photocopy BLM	- **BLM 4-9 Remembering Atoms** (optional)	• 10–15 min in class • 5 min preparation
Activity 4.4 Like Charges Repel		- latex balloons about 20–30 cm diameter (two per student or pair of students) - string (about 2 m per student or group of students cut into 1 m lengths)	• 10 min in class
Activity 4.5 Conductors or Insulators	- prepare solutions	- conductivity meter (one for each group) - a variety of materials such as paper, glass, plastic, metal, water, salt solution, and sugar solution (for each group)	• 30–40 min in class • 10 min preparation
Activity 4.6 Rubbing and Static Electricity	- photocopy BLM	- ebonite rod, fur, small pieces of paper (for each group) - **BLM 4-11 Rubbing and Static Electricity** (optional)	• 20–30 min in class • 5 min preparation
Topic 4.3 How can objects become charged and discharged?			
Starting Point Activity	- set up materials	- pith ball - clamp - retort stand - ebonite rod - fur - glass rod	• 10–20 min in class • 15 min preparation
Activity 4.7 Predict the Result	- set up materials	- electroscope - ebonite rod - fur	• 10–15 min in class • 5 min preparation

Activity 4.8 Charging an Electroscope	- set up materials	- electroscope - ebonite rod - fur - glass rod - silk (optional) - **BLM 4-15 Charging and Grounding an Electroscope** (optional)	• 10–15 min in class • 5 min preparation
Activity 4.9 Grounding An Electroscope	- set up materials	- electroscope - ebonite rod - fur - glass rod - silk (optional) - **BLM 4-15 Charging and Grounding an Electroscope** (optional)	• 10–15 min in class • 5 min preparation
Investigation 4C Materials for Lightning Rods	- set up materials - photocopy BLM	- Styrofoam® cup - two 5 cm aluminum foil strips - invisible tape - 2 cm × 10 cm test materials, including metal, plastic, cardboard, wood - ebonite rod - fur - **BLM 4-16 Investigation 4C** (optional)	• 30–40 min in class • 10–15 min preparation
Topic 4.4 How can people control and use the movement of charges?			
Starting Point Activity	- set up materials	- 1.5 V battery - a flashlight bulb - two insulated wires with alligator clips on the ends	• 10–15 min in class • 5–10 min preparation
Activity 4.10 Battery Size		- Examples of different size batteries: 1 each of AAA, AA, A, D, 9-volt, lantern batteries (optional)	• 10 min in class
Activity 4.11 Voltmeters and Ammeters in Circuits			• 30–40 min in class

Investigation 4D Using Ammeters and Voltmeters	- set up materials
	- photocopy BLMs
		- For each pair or group of students:
		  - ammeter
		  - voltmeter
		  - power supply
		  - switch
		  - 2 identical light buls with bases
		  - 7 wire leads with alligator clips
		- **BLM G-20 Using Ammeters and Voltmeters** (optional)
		- **BLM G-21 Reading an Analogue Meter** (optional)
		- **BLM 4-19 Investigation 4D** (optional)
			• 50–60 min in class
			• 15–20 min preparation

Investigation 4E Observing the Effects of Resistance on Current	– set up materials – photocopy BLM	– For each pair or group of students, one of each of the following: – power supply – ammeter – switch – 3 identical light bulbs with bases – 6 wire leads with alligator clips – **BLM 4-20 Investigation 4E** (optional)	• 50–60 min in class • 15–20 min preparation
Investigation 4F Potential Difference and Current	– set up materials – photocopy BLMs	– power supply – ammeter – switch – light bulb with base – 4 wire leads with alligator clips – **BLM G-25 Constructing a Line Graph** (optional) – **BLM G-26 Interpreting 4F** (optional) – **BLM 4-21 Investigation 4F** (optional)	• 50–60 min in class • 15–20 min preparation
Topic 4.5 What are series and parallel circuits and how are they different?			
Starting Point Activity			• 15–20 min in class
Investigation 4G Observing Characteristics of Series Circuits	– set up materials – photocopy BLMs	– Each pair or group of students will need the following: – 1 power supply – 1 switch – 1 ammeter – 3 flashlight bulbs with bases – 3 voltmeters (or use one and move it for each measurement) – 12 wire leads with alligator clips – **BLM 4-23 Observing Characteristics of Series Circuits** (optional) – **BLM 4-24 Investigation 4G** (optional)	• 40–50 min in class • 10–15 min preparation
Investigation 4H Observing Characteristics of Parallel Circuits	– set up materials – photocopy BLMs	– Each pair or group of students will need the following: – 1 power supply – 1 switch – 1 ammeter – 3 flashlight bulbs with bases – 3 voltmeters (If there are not enough, use one and move it for each measurement.) – 13 leads with alligator clips – **BLM 4-25 Observing Characteristics of Parallel Circuits** (optional) – **BLM 4-26 Investigation 4H** (optional)	• 40–50 min in class • 10–15 min preparation

Topic 4.6 What features make an electrical circuit practical and safe?			
Starting Point Activity			• 5–10 min in class
Activity 4.12 Make and Break the Circuit			• 15–20 min in class
Activity 4.13 Delivering Electrical Energy to Your Home	– photocopy BLMs	– scientific calculator (one per group of 2 or 3 students) – **BLM G-24 Using Scientific Notation** (optional)	• 10–20 min in class
Topic 4.7 How can we conserve electrical energy at home?			
Starting Point Activity		– students may review the meaning of sustainable on p. 65	• 10–15 min in class
Activity 4.14 Best Time to Use			• 15–20 min in class
Activity 4.15 Reading EnerGuide Labels	– find and photocopy EnerGuide labels	– bring in examples of other EnerGuide labels, at least four, and photocopy these for student use. Each student will need at least three different EnerGuide labels; download EnerGuide labels in pdf at **www.scienceontario.ca**.	• 20–30 min in class
Using the Case Study Investigation: People Power			• 30–40 min in class
Unit 4 Project Inquiry Investigation: Energy Savings	– photocopy BLM	– **BLM A-48 Unit 4 Inquiry Investigation Rubric** (optional)	• 30–40 min in class
An Issue to Analyze: Choosing Energy Sources in Ontario		– Internet access – **BLM A-49 Unit 4 An Issue to Analyze Rubric**	• 30-40 min in class on two separate days