

ENERGY IMAGERY: CANADA

METHOD

Through guided imagery, students compare their energy use with that of an indigenous person in the past. Students will then determine easy ways to conserve energy in their homes and schools in order to lessen their impact on the environment.

MATERIALS

- Student Worksheet

INTRODUCTION

The Canadian way of life is very energy intensive. Although Canadians make up only 0.5 percent of the world's population, the country uses 2.5 percent of the world's energy resources are used by the country. In fact, one Canadian uses as much energy as that of 2 Germans, 9 Albanians, 12 Colombians, 21 Indians, 103 Haitians, or 172 Ethiopians. In some countries, people have enough energy for their daily needs, but use the energy more efficiently than Canadians while in other countries, people lack the energy resources they need to live comfortably.

Most of Canada's energy comes from burning fossil fuel (oil, gas, coal and wood) which causes air pollution and contributes to climate change. About 60 percent of the electricity used in Canada comes from hydroelectric power, which is renewable and clean to generate, but can have serious environmental consequences for the ecosystems and landscapes involved. New technologies are being developed to help Canada get more of its energy from less impactful sources, like sun and wind. But for now, in addition to pursuing cleaner energy sources, it is important to find ways of conserving energy to lessen our harmful impact on the environment.

In this activity, you will be asking the students to use their imaginations while following simple instructions. The class will be led through two "guided imagery" experiences. In each case, the class is asked to consider a way of life and reflect on the way energy is used in that lifestyle.

PROCEDURE

1. Ask the class if they have ever wondered what it would be like to have lived in another time. Explain that you are going to take them on a guided journey back to a time when indigenous peoples had communities throughout **Alberta**. Give them the following instructions:



CONCEPT

Energy conservation is important in protecting the environment, sharing resources with others around the world, and making sure there are enough resources for future generations.

GRADE LEVEL

Upper elementary

SUBJECTS

Social Studies, Science, Family and Consumer Sciences

OBJECTIVES

Students will be able to:

- Examine individual energy use.
- Evaluate the reasons we use more energy today than in the past.
- Explain how energy conservation activities can be beneficial to the environment.
- Determine ways to individually conserve energy at home and at school.

SKILLS

Visual imagery, making comparisons, prioritizing, practicing conservation techniques, writing

Note: Replace the **bolded descriptions** with relevant information about groups that lived in your area/province 200-300 years ago.

“I want you to settle yourselves into your seats and then let yourself relax. Close your eyes. Everything around you is becoming quiet and settled. Quiet your body and quiet your mind until you feel soothed and peaceful. Now I am turning the clock back and I want you to become a young indigenous person, a member of the **Nehiyawak people (Cree)** living in **Alberta** over 200 years ago. You are sleeping in a **tipi, a cone-shaped dwelling with wooden poles covered in sheets of animal skins and woven mats**. You are covered by a **buffalo hide blanket**, and as the first rays of sun come in you are aware of those around you stirring and rising.”

“I’m going to ask you a few questions that you should consider, but don’t answer out loud. Just think about them. I want you to imagine that you are getting up and starting your day.

What are the things that you are seeing and touching?” [Pause a few seconds after each question.] “What will you do first? If you are eating something, what is it and how was it prepared? What sounds are you hearing? What things do you use as you get ready to start your day?”

“Now I am turning the clock forward through the years and you are returning to today. Let’s open our eyes and share some of the images you saw, the things that your body and hands felt, the smells and sounds of that morning a long time ago.”



2. Have students share their thoughts. List these items on the board under the heading “Long-Ago Morning.”

3. Now ask the class to quiet and relax themselves again.

“Now we are going on a shorter journey back in time, to this morning, when you woke up in your bed, in your own home. I want you to remember getting out of bed and doing all the things you do to get ready for school. Retrace all of your steps as you got ready for school today, and as you do, pay special attention to all the things you and your family used that require energy and electricity – all the appliances, the car, the bus – everything. Try to remember everything you used as you got ready for the day.”

4. Now draw a line to separate the “Long-Ago Morning” items from the “This Morning” items. Bring the class back to the present. Ask students to name all the energy-using appliances and utilities they used this morning and list them on the board.

5. When the students have named everything they can think of, ask them to focus on the “This Morning” list, and group items by writing #1 next to items that are needed for survival, and #2 by those which they don’t consider necessary for survival.

6. As suggestions are made in the selection process, ask them whether indigenous peoples had that particular item 200 or 300 years ago. If not, can it really be considered a “need?” There might be some debate regarding this question, as some items in our modern lives have become a necessity due to the way our society functions (having a refrigerator, using lights, etc.).

DISCUSSION QUESTIONS

1. What energy-using appliances have we come to depend on to make our lives easier, save time, and/or make us more comfortable? Are there any which are nice to have, but you could do without, use less often, or use more efficiently?

Answers will vary but may include: dishwashers, washing machines, televisions, hair dryers, clothing dryers, air conditioners, central heating units, water heaters, electric stoves, etc. Adjusting the thermostat just two degrees up or down depending on the weather, is a great way to lessen the amount of energy used. Only running full loads in the washing machine and dishwasher is another great way to use energy efficiently, and it will lower utility costs too! Plenty of appliances are very nice to have, but we could do without them and/or use them less often.

2. How did indigenous peoples accomplish the things we now use machines for? (For example, how did they stay cool in summer without air conditioners? How did they cook food and heat their homes without stoves or furnaces?) What has changed in how we live today that makes us depend so much on electronic appliances and cars for these same activities?

Indigenous peoples utilized their surroundings – they settled close to a water source, and they built structures according to the seasons to stay warm through winter (ex. the Cree in a tipi) or to stay cool through the summer, in a wall-less structure providing shade. Their diets consisted of what was in season, and they hunted and gathered for food, cooking over fires. Today, we could do plenty of what the indigenous peoples did in the same way, but we have gotten used to using electronic appliances that make our day-to-day activities much easier. Examples of what has changed could be: populations moving away from cities to the suburbs creating a greater need for cars to get from one place to another; technological advancements, like the invention of the washing machine instead of hand washing clothes; a telephone so we can communicate over long distances; etc.

3. Think about the diet of indigenous peoples. They ate what they could grow depending on the season. Now, think about a trip to the grocery store: how many miles has the food traveled to get from where it was grown to your grocery store? How would buying locally grown foods help conserve energy?

Buying produce that is in season, or grown locally, will conserve energy by cutting down on the indirect use of energy. Consider the energy used to transport the food from the farms to the grocery store – especially if you are purchasing an item that is out of season or grown in a different country. Your food may have traveled many kilometers to get from the farm, to the store, and then to your plate at home.

4. Was there anything about your imagined life as a **Cree** child years ago that you liked better than the way you actually live today? Was there anything that seemed worse?

Answers will vary.

5. What are some cultural and geographical aspects of Canada that might impact energy use?

Canada is a large country geographically, but sparsely populated. This requires Canadians to travel relatively long distances on a regular basis. The average distance driven by Canadians each year is around 15,200 kilometers! Culturally, Canada has been slow to adopt wide-spread public transportation, which means these long distances are traveled via car. Additionally, Canada is a cold, northern country, which leads to increased energy use as its citizens try to stay warm!

6. What are some personal habits we can adopt/change to use less energy on a daily basis?

Answers will vary. See “Student Worksheet” for suggestions.

MEASURING LEARNING

Duplicate the Student Worksheet and distribute to each student. Ask students to take the chart home and for one week, record how many times they performed each activity. After one week, have students bring their charts back into school to discuss as a class the outcomes of what they tracked. Encourage students to pledge on the back of their charts how they will save energy in the future. Have students write what they will do and how it will be beneficial to the environment. Combine all of the student’s charts into one class chart and discuss how each of their individual actions add up when combined with the whole class’ actions. Gauge understanding while students explore what kinds of savings (cost-savings, spending more time outside or with family, etc.) resulting from their efforts.

FOLLOW-UP ACTIVITY

1. Ask students to interview a senior citizen (grandparent, elderly neighbor, great-aunt or uncle, etc.) about how energy use has changed within their lifetime. Identify ways that technological advancement changed their life as they grew up, or how things were different for them during their childhood.
2. Read or have your students read a book/article that connects the history of indigenous people to their lives today. Here are some examples:
 - a. **The Elders Are Watching**, by David Bouchard and Roy Henry Vickers, for grades K-4. With gorgeous artwork and great storytelling, “The Elders Are Watching” is a powerful and stunningly beautiful way to impact young minds on the importance of the environment and respecting the wisdom and knowledge passed onto them from elders.
 - b. **The Water Walker**, Joanne Robertson, for grades 3-4. The story of a determined Ojibwe Grandmother (Nokomis) Josephine Mandamin and her great love for Nibi (water). Nokomis walks to raise awareness towards our need to protect Nibi for future generations, and for all life on the planet. Josephine challenges us all to take up our responsibility to protect water and to protect our planet for all generations.
 - c. **Life in an Aboriginal Community**, by Shaun from the Blue Hill First Nation discusses his life in a modern day indigenous community, and how it is similar and different from that of other Canadians.
 - d. There’s even more offered through the Government of Canada’s publication catalogue. Just use the search under the category “Kid’s Stop”.

ENERGY IMAGERY: CANADA

STUDENT WORKSHEET

Name: _____

Date: _____

Activity	Check or initials
Shut off the lights when leaving a room	
Used reusable grocery bags for any shopping trips	
Made sure the dishwasher was completely full before running a cycle	
Recycled cans, bottles, or papers	
Used cold water instead of hot (for washing hands, not bath/shower)	
Took a shorter shower	
Remembered to close the refrigerator door quickly	
Remembered to close the windows in the morning to save heat or air conditioning	
Put on a sweater instead of turning up the heat	
Turned off electronics (games, computers, TVs, etc.) when not in use	
Replaced incandescent light bulbs with longer-lasting, more energy efficient fluorescent bulbs	
Unplugged cell phone chargers from the wall when they were not in use	