

# Lesson #5

## Exploring Our Energy Ethics

### Subject Areas

Social Studies, Language Arts,  
Personal Planning

### Student Skills

communication, discussion,  
values clarification, confidence  
development

### Developing Vocabulary

ethics, fuel efficient, energy  
efficient, consumption, renewable  
energy, greenhouse gas emissions,  
conventional energy, fossil fuels

### RELATED BACKGROUNDERS



### Energy and the Environment

Through an interactive group activity, students take a position on a number of environmental issues based on their own personal ethics. They consider the different opinions of their classmates and weigh the importance of factual evidence. As students hear other perspectives and learn new information, they discover that their own views and values may change. This lesson may be better suited to Grades 6 and 7.

### Learning Objectives

- ◆ understand different perspectives on energy and environment issues
- ◆ share views related to statements that deal with ethical issues about energy and the environment
- ◆ consider the opinions of classmates
- ◆ reflect on their own ethics related to choices about energy and the environment

### Materials You Need

- ◆ Five sheets of poster board to use as signs. Write one of the following phrases on each sheet: Strongly Agree, Agree, Don't Know, Disagree, Strongly Disagree.
- ◆ Tape to mark places on a large circle on the classroom floor for the change-your-place lead-in activity. You need as many places as you have students.
- ◆ The EnerAction backgrounder (optional), *Energy and the Environment: The Impacts of Our Energy Use*.

**Time Estimate**

**Lead In**

**Main Activity**

**Wrap Up**

20 minutes

30 minutes

30 minutes

**1.5**  
HOURS

“What gets us into trouble is not what we don’t know. It’s what we know for sure that just ain’t so.”

— Mark Twain

## Teacher Tips

This activity asks students to express their opinions on challenging and sometimes controversial issues. Ensure that a safe learning environment exists so that all students feel free to express their views. Remind students that there is no right or wrong opinion: what is important is that they listen and respect one another’s views. Explain that the process of understanding and reflecting on our views and values is a process of formulating our ethics.

## What You Do

### Lead In

#### Lead In

20 minutes

1. Ask students to form a circle so that each person is standing on a place marker. You stand in the middle of the circle and explain that this activity is called “Change your place.” Explain that the person in the middle of the circle will make a change-your-place statement that is true about themselves. Everyone standing on a place marker for whom that statement is also true must then move and find another place on the circle. The person in the middle must try to find a place on one of the markers too. The person who does not find a place on the circle markers is left in the middle and will start another round by making a new statement.
2. Demonstrate how it works by making the first true statement. For example, you might say “Change your place if you are the youngest person in your family” or “Change your place if you are wearing blue socks.” Everyone, you included, who is “the youngest person” or “wearing blue socks” must now move to find a new place in the circle. One person will be left in the middle.
3. The person in the middle starts again, “Change your place if...” Continue until at least 4 or 5 students have had a turn in the middle.
4. Take a few minutes to debrief by asking students for their comments on the activity.

# What You Do

## Main Activity

30 minutes

## Main Activity

5. Explain that the class will now do a similar activity, one that requires each person to “Take a Stand.” This time, students listen to a statement and make decisions about where they stand on it.
6. Place the five signs in different places in the classroom — in a line or in different corners of the room. Tell the students that you will read an opinion statement to them. After you read the statement, students must stand in front of the sign that most closely represents their view on the statement: either *Strongly Agree*, *Agree*, *Don't Know*, *Disagree*, or *Strongly Disagree*. Tell students that they must be prepared to explain why they chose to stand where they do.
7. Select from the opinion statements included at the end of this lesson plan or create your own. After you read a statement, ask students to stand in front of a sign, and then ask individuals (or groups of students standing in the same place) to explain why they are standing where they are. Give equal time to representatives of different sides of the issue, and allow many students to speak.
8. Ask students if their positions have changed after hearing different views on an issue. Invite them to move to a different sign if and when their opinions change. If students move, ask volunteers to explain why they changed their opinion.
9. To encourage discussion, read one of the facts that accompanies a statement. You can read the fact aloud, or have a student do so. Ask if any students want to change their place after hearing the new information, and then ask for volunteers to explain how the information influenced their view.

## Wrap Up

30 minutes

## Wrap Up

10. After exploring three or four take-a-stand statements, debrief the activity with discussion questions:
  - ◆ Which statements were most challenging to take a stand on? Why?
  - ◆ What influences your position on a statement?
  - ◆ How do our views determine our actions?
  - ◆ How do our views have environmental consequences?
  - ◆ What are effective ways to communicate our views on issues?
  - ◆ How might your perspective differ from that of people from other cultures, of different ages, places and times?
11. Ask students to reflect individually on what they learned through this activity. Have them write in their journals or create drawings about their energy ethics. Ask them to reflect on the statements, facts and different perspectives and to express their own ethics about energy and the environment.

## Adaptations & Extensions

- **Invite students to research an opinion statement.** Ask students to select a statement or create their own upon which to do some additional work. Encourage them to research the arguments on both sides and write an article, create an image or make a presentation about the different perspectives and their own view as well.
- **Work with student-generated statements.** Ask students to write their own opinion statements, incorporating local issues and debates, and then complete the activity again. Students could also provide the statements for another class to use.
- **Defend a position.** Assign students a position on an energy and environment statement that they must defend. Stage a debate or have students write a convincing speech on the statement.
- **Add an eLearning component.** Have students visit the EnerAction website at <http://www.eneraction.greenlearning.ca> and consider the characters' ethics. What views and values do Carbon Critters have? What about Electra? What are the parallels between the EnerAction characters and people? What do you think it will take for Carbon Critters to change their ways and conserve energy? How can Electra share her view with others?
- **Conduct interviews.** Ask students to interview other students, teachers, parents and/or community members using opinion statements from the list provided or statements that students generate themselves. Encourage students to track the number of people who agreed and disagreed with the statements and why.

# Assessment Rubric

These criteria can be expanded or adapted to emphasize different aspects of the lesson. You can use the rubric to help students self-assess their participation and experience, and then pose follow-up questions to the class encouraging them to reflect further on their challenges and insights.

Thinking	1	2	3	4
Demonstrate an understanding of appropriate listening behaviour by adapting active listening strategies to suit a variety of situations, including work in groups	Demonstrates limited understanding of appropriate listening behaviour	Demonstrates some understanding of appropriate listening behaviour by adapting up to two listening strategies	Demonstrates a well-developed understanding of appropriate listening behaviour by adapting a variety of listening strategies	Demonstrates a highly developed understanding of appropriate listening behaviour by adapting a wide variety of listening strategies
Demonstrate an understanding of appropriate speaking behaviour in a variety of situations, including paired sharing and small- and large-group discussions	Demonstrates a limited understanding of appropriate speaking behaviour	Demonstrates some understanding of appropriate speaking behaviour	Demonstrates a well developed understanding of appropriate speaking behaviour	Demonstrates a highly developed understanding of appropriate speaking behaviour
Communicate orally in a clear, coherent manner, presenting ideas, opinions and information in a readily understandable form	Limited effectiveness; communicates in a simple and fairly understandable form	Some effectiveness; communicates with a few supporting details and new ideas	Considerable effectiveness; communicates with a variety of supporting details and ideas	Considerable effectiveness; communicates with a variety of supporting details and ideas
Application	1	2	3	4
Analyze human use of energy and natural resources and the impact of this use on society and the environment	Demonstrates limited effective use of application skills by unfinished analysis	Demonstrates limited effective use of application skills by partial analysis	Demonstrates effective use of application skills by complete analysis	Demonstrates a high degree of application skills by extensive analysis

## Opinion Statements & Related Facts

**1. Everyone is responsible for protecting the environment.**

**2. Automobile makers should be required to make all vehicles as fuel efficient as possible.**

**Facts:**

- a. About 60% of the oil that the world consumes is used to power transportation vehicles, and half goes to passenger cars and light trucks. If we continue to consume as much oil as we are now, the U.S. Department of Energy says that the world will run out of conventional oil in 40 years.
- b. The average fuel efficiency of new vehicles has gotten worse by 13% in the last 10 years, largely due to the popularity of the SUV.

**3. Communities across Canada should use only renewable sources, such as wind, solar or micro-hydro to meet their energy needs.**

**Facts:**

- a. If your family could use only renewable energy for all of your energy needs, you could help reduce the amount of emissions in the air each year by 20,000 pounds of carbon dioxide, 70 pounds of sulfur dioxide and 50 pounds of nitrogen oxide.
- b. Fossil fuels still account for more than 85% of the world's primary energy consumption. The most significant greenhouse gas is carbon dioxide, which comes mainly from burning fossil fuels — coal, oil, natural gas — to generate energy.

**4. Jobs are more important than the environment.**

**Fact:**

- a. Conventional energy projects like oil and gas development or large-scale hydroelectric projects do not create that many jobs: only seven jobs for every million dollars invested. For the same investment, renewable energy projects created 60% more jobs.

**5. No matter what kind of energy we use, we must conserve energy.**

## Opinion Statements & Related Facts (continued)

**6. *Science and technology will solve many of our energy and environment problems.***

**Facts:**

- a. By using the “off the shelf” energy-efficient technologies that are available today, we could cut the cost of heating, cooling and lighting our homes and workplaces by up to 80%.
- b. Albert Einstein said, “We can't solve problems by using the same kind of thinking we used when we created them.”

**7. *To reduce the energy used to produce and transport food, grocery stores should sell only locally grown foods.***

**Facts:**

- a. The average fruit or vegetable travels more than 1,500 miles before it gets to your plate. Buying locally means food does not have to travel as far, which means less greenhouse gas emissions, and less of a contribution to global warming.
- b. Buying locally often costs more money because food is produced on a smaller scale. However, buying locally supports local farmers and the local economy.

**8. *There should be a law that states that all household appliances must be as energy efficient as possible.***

**Facts:**

- a. Compact fluorescent lamps use 75% less energy than incandescent lamps for the same amount of light, and they last up to eight times longer.
- b. An ENERGY STAR® refrigerator is at least 10% more efficient than the minimum government energy efficiency standards.
- c. Refrigerators are twice as efficient (or 200% more efficient) than they were 25 years ago; dishwashers are 62% more efficient; and washing machines are 56% more efficient. Clothes dryers are about the same as they were.