

BE THE CHANGE

Grade: 5		Topic: Survival and Development	
Curriculum Area: Science: Conservation of Energy		Title: Energy Matters	
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U.N. Rights of the Child Article(s): <ul style="list-style-type: none"> Children have the right to good quality health care, to clean water, nutritious food and a clean environment, so that they will stay healthy 		Teaching Strategies Session 1 Write the word energy on the board. Ask students to define it. See how many types of energy they can name. e.g. wind energy, energy from moving water, energy from coal. Challenge them, in pairs, to describe the process energy undergoes from its source in the sun, to the electricity we use, using diagrams. You could also do this as a whole group. They tell, and you sketch the process. Read <i>My Light</i> which introduces students to a range of energy sources. Review the terms <i>renewable</i> and <i>non-renewable energy</i> . Introduce the “Big Question” which will guide this short research project: <i>Conserving energy – does it matter?</i> Divide your class in half. Collect a range of books on the following subjects – energy, conservation, care of the environment, active citizenship. Half of the class will browse the books. The other half will browse the websites listed under Resources, on the same topics. Using the Creating a good inquiry question black line master as a guide, students are asked to create one information-rich question, which will guide their inquiry during the following sessions. This will also be a place where they can record some good starting points for their research. They will not begin taking notes today. Session 2 (optional, but recommended given the emphasis on good inquiry skills throughout this unit) Invite students who feel confident that their question is “information-rich” to share it with the whole class. Record the question. If it is a good inquiry question, consider why, referring to the criteria stated in the <i>hint</i> in the black line master . If it is not a good inquiry question, reconstruct it, with peer input, so that it <i>becomes</i> information-rich. Developing good questioning skills is complex, and challenges students to think deeper than they may be accustomed to. It also builds an excellent foundation for life-long learning. After you have modeled the process, sort students into groups with 4 – 6 members. Remind them of the “Big Question” from session 1. The task of the group is to help each member develop a good question upon which to base their own inquiry. Once that task has been completed, and the groups have checked in with the teacher, they can continue the work in the previous session, browsing the resources, and noting useful starting points. They will not begin to take notes until the next session. Continued on next page	
Information Studies: Overall Expectations Inquiry and Research <ul style="list-style-type: none"> Define information needs using a variety of strategies Locate appropriate resources Synthesize findings and formulate conclusions Information Technologies <ul style="list-style-type: none"> Access a range of online resources including websites, encyclopedias and subject directories to meet information needs Evaluate online resources according to specific research needs 			
For specific grade-level expectations, refer to <i>Information Studies: Kindergarten to Grade 12</i> (OSLA 1999).			
Resources: <i>My Light</i> Selected books from your library on the topics of energy conversation, stewardship of the earth, active citizenship, care of the environment Set of atlases			
Websites <ul style="list-style-type: none"> Outline Maps National Geographic Link to Learning David Suzuki’s Nature Challenge for Kids KidsClick energy links 			
Black Line Masters: <ul style="list-style-type: none"> Creating a good inquiry question Conservation of energy 			
BE THE CHANGE... <ul style="list-style-type: none"> Have a card-sharing session with another class to share the information gathered Publish the action ideas in your class newsletter or the school newsletter Condense the action ideas, with illustrations, into one article, and submit it to your local newspaper Tell 3 friends and 3 family members what your recommended action is, and explain why Create a skit incorporating some of the action ideas, and share them at the next school assembly 			

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Teaching Strategies

Sessions 3 – 5

These are research periods. Review the key terms – renewable and non-renewable resources. Review the “Big Question”. As students define and begin to research particular energy sources, have them use atlases to locate where in the world particular kinds of energy is used. Access printable world maps from [Houghton Mifflin](#) or [National Geographic](#). Colour code energy use around the world. Collate this information on a larger map that all students can view.

Using the [conservation of energy black line master](#) review correct bibliographic notation and jot notes. Then support and direct students in the inquiry process as needed. They will use the information they have gathered to create an action card. The emphasis here is not on a major research product. The focus is on answering their question, and thinking of one action that would help address the issue that they have identified. All the information could be condensed onto one action card that states the question, the results of their research, and one positive action that would help.

Session 6

Begin with a card-trading session, in which students trade cards with at least 3 classmates, and explain the results of their inquiry to each. Once they have had several opportunities to share information, gather again as a whole group. Ask: *Share some of your thoughts about what you found out. Did anything surprise you?* Ask students to consider their findings in relation to the world map showing energy use. Ask:  *Do you notice any patterns? What do you think? Wonder?*

Session 7 (optional, but a good way to deepen understanding and transfer information into knowledge)

After students have had time to process the information gathered in their inquiries, ask: *Did you find any inquiries that were similar to yours? How could we group the issues in ways that make sense?* Explore the possibilities. Groups should form around related issues. Challenge the students in their newly formed group to create a board game, which incorporates what they have learned. Brainstorm the names of some popular board games to stimulate their thinking. This work could be started in class, divided up into parts, and finished for homework. When the games are complete, invite another class in for an afternoon of educational board games. See the *Be the Change* section on page 1 for further suggested actions.