

LEARNING INQUIRIES

HOW MUCH ENERGY DO I USE?

TIME: 60 MINUTES

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OVERVIEW/FOCUS QUESTION

How much energy do I use in a typical day? How can I change my energy use?

SUBJECT/TOPIC

SOCIAL STUDIES

GRADE LEVEL

ELEMENTARY/INTERMEDIATE

LEARNING GOALS

- Students will gain a better understanding of their energy needs in their daily life.
- Students will reflect upon ways in which they can cut their carbon footprint and use less energy.

MATERIALS NEEDED

- Activity Sheet: How much energy do I use?
- Leaf cut-outs
- Coloring pencils
- Scissors
- Energy IQ site for video
- Technology to access Energy IQ survey

CONNECTION TO THE CANADIAN GEOGRAPHY FRAMEWORK

CONCEPTS OF GEOGRAPHIC THINKING

- Patterns and trends
- Interrelationships

INQUIRY PROCESS

- Formulate questions
- Gather and organize
- Interpret and analyze
- Evaluate and draw conclusions
- Communicate

GEOSPATIAL SKILLS

- Foundational elements
- Spatial representations

LESSON DESCRIPTION

MINDS ON

Students will list the things they do in their daily lives.

ACTION

Students will connect all those actions to what types of energy they are using.

CONCLUSION

Students will write on leaf cut-outs two actions that they can take to reduce their carbon footprint.

LESSON IMPLEMENTATION

MINDS ON

Give students the handout A Typical Day in my Life and have them write five things they do in each part of their day.

Teacher example:

1. Wake up and get ready
2. Go to the gym
3. Cook Breakfast
4. Drive to work
5. Use computer to prepare lessons

ACTION

Once the worksheet is completed, have students share their daily happenings with a partner.

Have a class discussion about where energy comes from, giving local examples of resource extraction and use if possible.

Show the Energy IQ video *Managing Climate Change and Global Energy Demand* (https://energyiq.canadiangeographic.ca/learning_centre/explainer_videos) from the Energy IQ website's Learning Center, Explainer Videos section.

After the video, have a class discussion to answer the following question: *What energy uses in this video represent you and your family?*

Go back to your list of things you do in your daily life. Next to each item, write down if it uses energy and if yes, what form of energy.

Example for students:

I make coffee. This uses electricity for the coffee maker, as well as fossil fuels for transporting the coffee to my grocery store and making the actual coffee maker.

I drive to work. My car was made using electricity in the manufacturing plant, and the car uses fossil fuels to drive.

Note: Every single thing on a student's list should have an energy component. Help students make those connections.

Next, have students take the Energy IQ Energy Survey (https://energyiq.canadiangeographic.ca/learning_centre/survey) to assess how much energy they use and discuss the results as a class.

Ask:

- Are they surprised?
- What shocked them the most?
- What can they change in their life to use a bit less?

CONCLUSION AND CONSOLIDATION

Hand students a leaf cut-out. On the leaf, each student will write two things that they can do to reduce their carbon footprint. Make the trunk of a tree with branches using old newspapers and have students add their leaves to the tree. Revisit the tree every few weeks to see how everyone is doing in reducing their carbon footprint. Students can add or change anything they want as the year goes on.

Be sure to share with students' families what your class is doing through your preferred communication method (e.g., newsletter, email). Involving the parents in the lesson and sharing the video links with them will help start discussions at home on this topic. Encourage parents to view the videos and have these discussions at home. It's a win-win when families and schools work together on these topics and it encourages those important discussions at home. Celebrate mini milestones! These will give other students ideas and should be included in the communication with parents.

EXTEND YOUR GEOGRAPHICAL THINKING

There are more videos on the Energy IQ website to take this learning a step further. Global demands for energy use are not going down and by showing students the other videos on the site, students will be able to learn about the global implications of energy use. This might prompt them to change and/or add leaves to your class tree.

MODIFICATIONS

Pair up a modified student with another student. Communication with the parents of modified students could also help to find ways in which the family could do better with their energy use.

ASSESSMENT OPPORTUNITIES

Assess student participation in the class discussion. Review the progress of student commitments to reduce their energy use.

STUDENT ACTIVITY SHEETS

A TYPICAL DAY IN MY LIFE

MORNING	
AFTERNOON	
EVENING	

LEAF CUT-OUTS

