

Lesson Plan

Compare and Contrast: Energy Sources

Book: *Energy from the Earth*

Series: Energy for the Future

Level: Navigator

Objective

To help students write an opinion piece supported by facts and details about one of several energy sources.

Supplies

- *Energy from the Earth* book
- Access to the PBS Learning Media video “Energy Sources”: <https://www.pbslearningmedia.org/resource/phy03.sci.phys.energy.energysource/energy-sources/>
- Whiteboard
- Pencils and paper

Before the Activity

Read through the *Energy from the Earth* book, or assign it to students to read on their own. Pull up the PBS Learning Media video in your web browser. Create a 5x9 chart on the whiteboard. Label the nine columns with the following terms: fossil fuels, nuclear energy, hydroelectricity, wind power, geothermal energy, solar energy, hydrogen, biomass, and nuclear fusion. Label the five rows with following questions:

- How is electricity made using this source?
- How else can this source be used?
- Does it cause pollution?
- Is it renewable?
- Are there other risks or challenges?

Activity

The “Energy Sources” video describes several important sources of energy. These sources of energy are listed on the chart on the whiteboard. People create charts to easily compare different things across different categories. In this case, the categories are the five questions.

Play the “Energy Sources” video. As students watch, they should take notes on the different energy sources. Afterward, have students work together to fill out the chart on the whiteboard. Students can raise their hands to suggest answers for the questions about the different energy sources. Write each answer in the corresponding box on the chart. Not every box will be filled.

Next, have students consider which energy source they think is the most important for Earth's future. Each student should write a five-sentence paragraph explaining his or her opinion and supporting that opinion with logical reasons. Paragraphs should open with a clear introductory topic sentence. After that, students should write three supporting sentences. Paragraphs should close with a summarizing concluding sentence.

Evaluation

Collect students' paragraphs at the end of class and award each student up to 6 points:

- 1 point for a clear introductory sentence giving the student's opinion
- 1 point each for three sentences that support the student's opinion with facts
- 1 point for a summarizing concluding sentence
- 1 point for writing that is relatively free of grammatical errors

Standards

This lesson may be used to address the Common Core State Standards' writing standards, grade 4 (RI 4.1).