

Lesson Plan

Pros and Cons: Nuclear Energy

Book: *Nuclear Energy*

Series: Energy for the Future

Level: Navigator

Objective

To help students craft objective, informative, and well-organized essays about nuclear energy and its pros and cons.

Supplies

- *Nuclear Energy* book
- Access to the PBS Learning Media video “Nuclear Energy”:
<https://www.pbslearningmedia.org/resource/nuclear-energy/nuclear-energy/>
- Pencils and paper

Before the Activity

Read through the *Nuclear Energy* book, or assign it to students to read on their own. Pull up the PBS Learning Media video in your web browser.

Activity

While nuclear energy is an important source of energy, it is not without controversy. The “Nuclear Energy” video discusses some of the pros and cons about this energy source. Watch the video as a class. Students should take notes on the video’s main ideas.

Students will use what they learned in the video and in the book to write essays of at least five paragraphs in which they describe the pros and cons of nuclear energy. Essays should be both informative and objective. They should not take a stand or give an opinion on nuclear energy. Instead, they should present both sides of the debate equally. Essays should address the following questions:

- What is nuclear energy and how does it work?
- What are at least three benefits of using nuclear energy, especially when compared to other energy sources?
- What are at least three risks of using nuclear energy, especially when compared to other energy sources?

Evaluation

Collect the essays and give each student up to 26 points:

- 2 points for a clear opening paragraph that introduces the topic
- 6 points for an informative discussion of what nuclear energy is and how it works
- 2 points each for three benefits of using nuclear energy. Sample benefits include:
 - Nuclear power can provide energy on a huge scale.
 - Nuclear power makes clean energy.
 - Nuclear power is a reliable source of energy, as its power plants can run all day and night.
 - Nuclear power can work on land, in space, and in the ocean.
 - Nuclear energy is less expensive than other sources of energy.
- 2 points each for three drawbacks of using nuclear energy. Sample drawbacks include:
 - Mining uranium releases gases that damage the ozone layer.
 - Nuclear waste will last thousands of years and remain radioactive (and thus dangerous) that whole time.
 - Accidental nuclear blasts can kill people and release deadly radiation.
 - Building a nuclear power plant is expensive and takes years.
 - Nuclear energy is not renewable; the supply of uranium will run out.
- 2 points for closing with a summarizing paragraph
- 2 points for writing that is relatively free of spelling and grammatical errors
- 2 points for writing that remains objective while describing the pros and cons of nuclear energy

Standards

This lesson may be used to address the Common Core State Standards' reading standards for informational text, grade 6 (RI 6.2), and writing standards, grade 6 (W 6.2).