

HUMAN IMPACT: FOSSIL FUELS



Learn about the effects of fossil fuel use by answering the questions below. Reference textbooks and online resources as needed.

1. List some common fossil fuels. **Answers will vary. Some examples include coal, petroleum, and natural gas.**
2. How are fossil fuels formed? **Sample answer: Fossil fuels are formed when plants, animals, algae, and microorganisms are buried and subjected to millions of years of heat and pressure.**
3. What are some ways that using fossil fuels impacts the environment? **Answers will vary. Some examples include ocean acidification, land contamination, and air pollution.**
4. Give an example of how fossil fuels have impacted the environment in a specific location. **Answers will vary.**
5. How has this impact affected the local population? **Answers will vary.**
6. What are some ways that this impact could be reduced? **Answers will vary.**
7. List some alternative energy sources besides fossil fuels. **Answers will vary. Some examples include nuclear energy, geothermal energy, wind energy, wave energy, and solar energy.**

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Keep going! Answer the questions below.

8. What are some of the challenges of using alternative energy sources? Sample answer: Nuclear energy creates radioactive waste that remains harmful for thousands of years. Wind and solar energy need specific weather conditions to generate energy. Wave energy is very expensive. Geothermal energy systems need to be designed for each specific location and cannot be mass produced.

9. What is a renewable energy source? Give an example of one and explain why it is considered renewable.

Sample answer: A renewable energy source is a type of energy that is continually being replenished. Examples include solar, wind, and wave energy.

10. What are some of the differences between fossil fuels and renewable energy sources?

Sample answer: Fossil fuels are limited. Once we use them, they are gone and cannot be replaced for millions of years. Renewable energy sources cannot be used up. Burning fossil fuels creates pollution and greenhouse gasses. Solar panels and wind turbines do not generate greenhouse gasses as they generate energy.

11. In your opinion, is the continued use of fossil fuels justified? Look over your answers to questions 3 through 10. Compare the benefits, limitations, and negative effects of fossil fuels with those of alternative energy sources. Consider the cost, reliability, and environmental and human impacts of each. In the space below, construct an argument either in favor of or against the use of fossil fuels. Include evidence from your research to support your argument.

Answers will vary.
