

#9188

GEOGRAPHY BASICS:

ENVIRONMENTAL IMPACTS

SVE & CHURCHILL MEDIA

2000

Grade Levels: 4-8

13 minutes

1 Instructional Graphic Enclosed



DESCRIPTION

Describes human activities' effects on earth. Examines how humans, industrialization, and technologies impact the environment, water cycle, and land use. Encourages better planning and management of resources.

ACADEMIC STANDARDS

Subject Area: Geography

- Standard: Understands how human actions modify the physical environment
 - Benchmark: Understands the environmental consequences of people changing the physical environment (e.g., the effects of ozone depletion, climate change, deforestation, land degradation, soil salinization and acidification, ocean pollution, groundwater-quality decline, using natural wetlands for recreational and housing development)

Subject Area: United States History

- Standard: Understands how the rise of corporations, heavy industry, and mechanized farming transformed American society
 - Benchmark: Understands various influences on the scenic and urban environment (e.g., how rapid industrialization, extractive mining techniques, and the "gridiron pattern" of urban growth influenced the city and countryside; environmentalism and the conservation movement in the late 19th century)

Subject Area: Technology

- Standard: Understands the relationships among science, technology, society, and the individual
 - Benchmark: Knows that technology can benefit the environment by providing scientific information, providing new solutions to older problems, and reducing the negative consequences of existing technology (e.g., monitoring a habitat or measuring greenhouse gases, improving renewable energy sources, and creating scrubbers to improve coal-burning facilities)

INSTRUCTIONAL GOALS

1. To list the four major problems facing the environment today.
2. To define *industrialization* and discuss its impact on humans and the environment.
3. To understand how carbon dioxide is produced and what it does to the atmosphere.
4. To describe *global warming* and its effects on the earth's climate.
5. To understand how acid rain is formed and to name some of its environmental impacts.
6. To explain how humans have transformed physical features of the earth with the aid of technology.

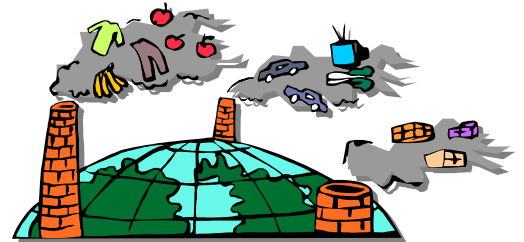


VOCABULARY

- | | |
|-----------------------|----------------------------|
| 1. acid rain | 14. global warming |
| 2. atmosphere | 15. industrialization |
| 3. carbon dioxide | 16. landscape |
| 4. chlorofluorocarbon | 17. meteorologists |
| 5. clear-cutting | 18. nitrous oxide |
| 6. climate | 19. nonrenewable resources |
| 7. coal | 20. ozone layer |
| 8. communities | 21. pollution |
| 9. ecosystems | 22. population |
| 10. environments | 23. rainforest |
| 11. extinct | 24. renewable resources |
| 12. geography | 25. sulfur dioxide |
| 13. global citizens | 26. topography |

BEFORE SHOWING

1. Ask students to close their eyes and imagine what their lives would be like without modern technology. How would they get to school? How would the food they eat be cooked? How else would their lives be different? Ask students to draw a picture of something about their lives that would be different.
2. Have your students step outside of the school building or look out the window. What do they see? Can they see any signs of industrialization, such as things that use electricity, gasoline, or other power sources? Are there any visible signs of pollution? Write all of the modern conveniences and signs of pollution your students mention on the blackboard.
3. Ask students if they can name any problems facing the environment today. Write this list on the board. Then ask them how they learned about these problems. Are any students involved in efforts to save the environment? What steps are they taking?



AFTER SHOWING

Discussion Items and Questions

1. What is *geography*? How did geography affect early humans?

2. What is *industrialization*? Why has industrialization been so important to humans?
3. How has industrialization allowed humans to impact the *environment*?
4. How has industrialization affected the earth's *atmosphere*? What is another factor contributing to the increased amount of CO₂ in the atmosphere? What is the function of CO₂ in the atmosphere?
5. What is it called when the planet gets warmer because there is more CO₂? How will global warming affect our environment?
6. What is the *ozone layer*? Why is there a hole in it? What steps are being taken to repair the ozone layer?
7. How has pollution affected the earth's water? What is *acid rain*? What are the effects of acid rain?
8. What are *renewable resources*? What are *nonrenewable resources*? What is a *global citizen*?

Applications and Activities

1. Divide into groups and develop lists of global problems in the area and possible solutions that can be implemented.
2. Select an environmental problem that is important to you. Write sentences about it and illustrate. (See INSTRUCTIONAL GRAPHICS.)

SUMMARY

This video will familiarize students with the most threatening problems facing our environment. Beginning with an examination of how geographical features determined the location of early human habitation, this program traces the alterations humans have made to the environment. In particular, students will learn how industrialization has led to environmental problems such as global warming, acid rain, the ozone hole, and the destruction of the rainforests.

After viewing the program, students will be able to identify the major environmental problems facing the earth today. By becoming more aware of how humans impact their environment, students will develop a greater sense of responsibility regarding their own interactions with the earth. Not only will they gain an understanding of their surroundings, but they will also learn about the steps being taken to preserve them.

Environmental Impacts will lay the foundation for students to become global citizens in an increasingly threatened world.



RELATED RESOURCES



Captioned Media Program

- Making a Difference: Restoring the Earth Around Us #3054
- Nature's Delicate Balance #8833



World Wide Web

The following Web sites complement the contents of this guide; they were selected by professionals who have experience in teaching deaf and hard of hearing students. Every effort was made to select accurate, educationally relevant, and "kid safe" sites. However, teachers should preview them before use. The U.S. Department of Education, the National Association of the Deaf, and the Captioned Media Program do not endorse the sites and are not responsible for their content.

- **U.S. ENVIRONMENTAL PROTECTION AGENCY**

<http://www.epa.gov/>

Provides information on numerous topics to search on this site from acid rain to zinc. Has a kids' section on "You & Your Environment," "Air," "Garbage & Recycling," and other topics. Learn how to make a difference in global warming, find out "What's Wrong With this Picture?" and more activities.

- **ATMOSPHERIC RADIATION MEASUREMENT PROGRAM**

<http://www.arm.gov/>

Click on the "Education" heading to be led to various topics, including "Global Warming." Provides different grade levels on this and numerous other topics relating to global change.

INSTRUCTIONAL GRAPHICS

- ENVIRONMENTAL IMPACTS

Environmental Impacts

Directions: Write three sentences about an environmental problem that concerns you by using some of the words in the box below. Then draw a picture that describes what you wrote.



environment
industrialization
communities

rainforests
water
population

air
extinct
ozone layer

pollution
land
plants

A large rectangular box for drawing. In the top right corner, there is a cartoon globe with a face, looking sad, with grey smoke or clouds around it. In the bottom left corner, there is another cartoon globe with a face, looking sad, with yellow flames or smoke coming out of its mouth. The box is outlined in black.