Thematic • Units

A Study Guide for

SAVING OUR PLANET

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LEARNING LINKS
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SAVING OUR PLANET

Introduction

As our planet becomes industrialized and overcrowded, problems of waste mount. Many species face extinction and many areas that once sustained vegetation are now virtual deserts. Clean air and water, formerly taken for granted, are now rare and precious. Human survival depends on increasingly strained natural resources. In fact, historians may look upon the twentieth century as the era when humanity almost destroyed the Earth.

Responsible adults and teachers, therefore, must become a part of the growing movement that is dedicated to making changes in our culture to avert global ecological disaster. Such changes range from personal lifestyles and community behavior to national priorities and global actions. We must impart this developing awareness to a new generation of young people so that they can continue to effect positive change.

For these urgent reasons, this thematic study unit, *Saving Our Planet*, has been developed. Using the activities in this study guide and curriculum materials chosen from different disciplines, you can provide children with the tools to explore the central problems and to work through possible solutions. Teachers can expand their students' limited perspective by presenting a series of learning activities about the web of life on Earth. This thematic unit offers an integrated look at factors historical and contemporary, scientific and literary, that must come together to make life on our planet fit for today and for future generations.

GLOSSARY

acid rain	rain or other precipitation that has been polluted by gases from burning coal, exhaust, and certain chemicals given off by factories and power plants
adaptation	changes that occur slowly over time in a species when there is a change in the environment
atmosphere	layer of air that surrounds the Earth—mostly oxygen, nitrogen, and some carbon dioxide
biodegradable	able to be broken down into the elements from which it was originally made
carbon dioxide	gas in the Earth's atmosphere used by plants to live
carnivore	meat-eating animal
chlorofluorocarbons (CFC)	harmful chemicals found in aerosol sprays
chlorophyll	green color in plants which absorbs sunlight
coniferous trees	trees that have cones, usually evergreens
conservation	protection of natural resources
consumers	organisms that eat food produced by other organisms
decomposer	organisms that feed on the waste materials of plants and animals, changing dead material into consumables.
deforestation	clearing away of forests, intentionally or unintentionally
ecology	study of how plants and animals live in relation to each other and the environment
ecosystem	all living and non-living things interacting within a defined area
endangered	threatened with extinction
environment	living and non-living surroundings of a particular group or population
extinct	living thing that once existed but no longer exists and will never exist again
food chain	sequence of living things that use each other as food

CHECK IT OUT

Use your home as a research site to check out the following questions. If you answer "yes" to any of these questions, try to correct any of these situations because they could cause environmental problems.

☐ Do windows and doors leak?

☐ Have the furnace and air conditioners been cleaned and repaired during the year?

☐ Are there any places where electric light bulb wattage can be reduced?

☐ Do you turn off lights when you leave a room?

☐ If you inhale deeply, can you detect any indoor pollution?

☐ Has your drinking water been analyzed for the compounds and chemicals it contains?

☐ Are there any leaky faucets or toilets?

☐ Do you have any disposable items that can be replaced with permanent products?

☐ Are all cleaning products labeled "low-phosphate" or "phosphate free"?

☐ Do you separate organic and inorganic trash?

☐ Do you take maximum advantage of the recycling opportunities near your home?

☐ Compare last year's utility bills with this year's bills. Allowing for annual increases, do any of the bill suggest poorly functioning equipment?

☐ In winter, is indoor temperature reduced at night by at least five degrees?

☐ Do you have any aerosol cans?

☐ Are dishwashers and washing machines run only when full?

☐ Do showers have low-flow shower heads?

I CAN MAKE A DIFFERENCE

Each of us can take some responsibility for improving the environment. Tell how you could make a positive contribution in each of the following ways:

• I will use less water if I _____

_____

_____

• I will have less trash if I _____

_____

_____

_____

• I will use less paper if I _____

_____

_____

_____

• I will save electricity if I _____

_____

_____

_____

• I will use up less fuel if I _____

_____

_____

_____

• I will help to preserve the ozone layer if I _____

_____

_____

_____

TOUCH CHOICES

Tell what choice you would make and the reasons for your decision.

Choice	Decision	Reasons
Buy a shampoo in a spray can or spray bottle.		
Use disposable or cloth diapers on a baby.		
Store leftovers in waxed paper, plastic wrap, or a reusable container.		
Put groceries into plastic bags, paper bags, or cloth bags.		
Buy a shirt made of cotton or polyester.		
Drink bottled water or tap water.		
Use paper napkins or cloth napkins.		

RIDDLES OF NATURE

Use the words and phrases in the Word Box to solve the following riddles. Then create an original riddle about nature or ecology.

WORD BOX

carbon dioxide	consumers	photosynthesis
chlorophyll	decomposer	producer
	oxygen	

1. You can call me a Green Machine. I worked in the first factory on Earth and I'm still working now. What is my name? _____.

2. I come from the sun and I make Earth "user-friendly." Green plants would have to close their factories without me. I am called _____.

3. Can this be magic, this action that takes sunlight and water and gas from the air and makes food for you and me? No, it is not magic, it is _____.

4. I have a strange job, but you could not live without me. I break down things that have died so you will always have nutrients. I am nature's recycler. People call me a(n) _____.

5. I start the food chain going. All living things would starve without me. I am a green plant, but scientists also call me a(n) _____.

6. We depend on producers and appear later in the food chain. Some people think we are smart. Others think we are strong. But we cannot even make our own food. We are called _____.

7. I am in the air everywhere. I am an important connection between plants and animals, but plants actually must have me around to live. What am I called? _____.

8. _____

_____

_____