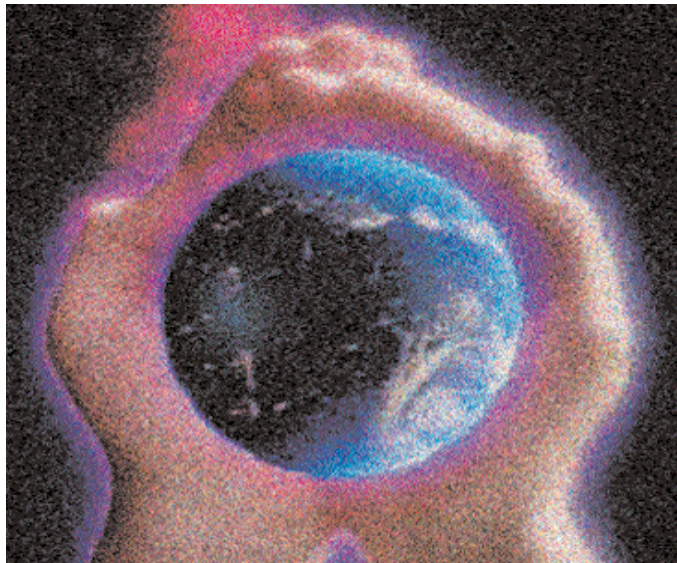
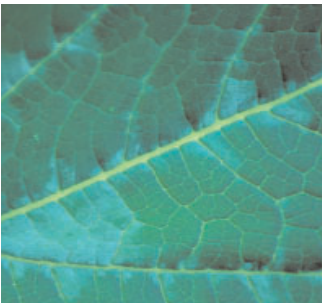
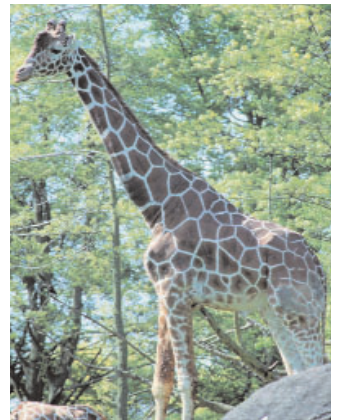


Earth Day Every Day



A HOT TOPICS SUPPLEMENT FROM



A Diversity of Species

People know so much about the Earth, and we learn more every single day. But there's so much we have yet to fully understand, like exactly how many species of plants and animals share our planet with us.

Scientists are using a new word, biodiversity, to mean the variety of life on Earth, from microscopic bacteria to whales, the world's largest animals. So far, scientists have identified 1.4 million species (a species is a kind of living thing, plant or animal), including more than 750,000 species of insects, 248,800 species of flowers and trees, 18,800 species of fish, and 27,000 species of ocean plants called algae. But some scientists think we've only found the tip of the iceberg, that somewhere between 10 and 100 million species of life can be found on Earth!

On Earth Day, people will gather worldwide to discuss how to preserve biodiversity, to make sure that all the plants and all the animals that currently live on Earth stay here forever.



Redwoods



Monarch Butterfly



Panda



Polar Bear



Humpback Whale

FIND & SEEK

Look at the pictures of plants and animals that live here on Earth. Match the picture with its description and write the number on the line below the photo. Can you draw a line from the species to the place in the world where it lives? Give it a try!



Zebra



Three-toed Sloth

1. A large meat-eater that hunts seals and fish in tundra habitats near the Arctic circle.
2. A large ocean-dwelling mammal that captures large quantities of shrimp-like krill underwater.
3. An Asian mammal that eats only one plant, bamboo.
4. A slow-moving plant-eater that hangs from trees in the South American rainforest.
5. The largest trees in the world, some reaching heights of 200 feet or more.
6. A swift-running grass-grazer that uses white-and-black stripes to blend into its surroundings.
7. An nectar-sipping insect that flies all the way to Mexico to spend the winter.

1. Polar bear, 2. Humpback Whale, 3. Panda Bear, 4. Three-toed Sloth, 5. Redwoods, 6. Zebra, 7. Monarch Butterfly.

ANSWER KEY:

Check Out The Newspaper!

◆ Read through today's newspaper. Is there any news story about plants or animals? What is the story about?

Extra! Extra! Learn More!

1. There are many ways you can help preserve biodiversity. Your class might place some bird feeders outside your classroom window to attract and feed birds. You can even put up bird, bat and/or butterfly nesting boxes, available now at garden stores.

2. Plant a large butterflybush outside your classroom window (a garden store will know what the plant is). Each year, its nectar-rich blossoms will attract and feed butterflies, and butterflies are finding it increasingly hard to find field flowers.

3. Learn more about biodiversity. Contact the World Wildlife Fund and ask them about their program, *Windows on the Wild*.



Celebrating Earth Day Every Day!



That day was christened “Earth Day,” and it changed the world. Two decades later, the twentieth anniversary of Earth Day was a global happening of unprecedented proportions: more than 100 million people participated in events in more than 100 countries!

In October 1993, American Heritage magazine called Earth Day: “... one of the most remarkable happenings in the history of democracy...” New laws like the Endangered Species and Clean Water Acts were passed by Congress and signed by President Richard Nixon. The eggshell-thinning pesticide DDT was banned. The Environmental Protection Agency was founded. Several national environmental organizations like Friends of the Earth and Greenpeace were formed, and people began to see the world differently. Recycling programs started. Environmental education classes flourished in schools and thousands of people began tackling projects to protect the environment.

“It was truly an astonishing grassroots explosion,” said Nelson. “The people cared, and Earth Day became the first opportunity they ever had to join in a nationwide demonstration to send a big message to the politicians – a message to tell them to wake up and do something.”

This April 22nd, Earth Day returns, and so many things have changed, some for the better, some for the worse. Some endangered species like pelicans, eagles and ospreys have been saved. The air we breathe and the water we drink are cleaner in many places, and more recycling occurs now than ever before in history. There are many more people working full time in science, government and industry to solve environmental problems. Earth day has become a day celebrated worldwide.

But the problems have not all gone away. There are new endangered species, and endangered habitats, too. Many scientists worry that the Earth’s climate may be warming. While there is more recycling than ever, there still is a lot of waste thrown out. And while water and air pollution have been significantly reduced, we still have a long way to go.

Nelson said, “The future of the environment depends on kids asking hard questions, and following a ‘conservation ethic,’ understanding that everything on the planet is connected to everything else. We must always ask the question: If we mess with nature, what will be the consequence, and how can we minimize the damage?”

“The objective of the first Earth Day was to get a nationwide grassroots demonstration of concern for the environment so large that it would shake the political establishment out of its lethargy and, force this issue permanently onto the national political agenda.”



Courtesy of The Wilderness Society

HOW EARTH DAY BEGAN

In the late 1960s, a series of environmental catastrophes occurred that scared a whole lot of people. The Cuyahoga River, which flows through the city of Cleveland, was so polluted that it caught fire, twice! A major oil spill occurred off the coast of California, smearing thousands of seals and ocean birds with goopy, life-threatening petroleum. Birds like bald eagles, pelicans and ospreys were disappearing, as pesticides caused their eggshells to thin, and the thin shells cracked when the mother bird tried to incubate her eggs. Dense smog covered too many cities, the product of car exhaust and industrial pollution. Rivers reeked from untreated waste flowing out of millions of pipes. Too much human waste poured into waterways uncleaned. Almost no one anywhere recycled anything.

In 1969, Gaylord Nelson, then a United States Senator from Wisconsin, decided to organize a national demonstration on behalf of the environment. During a speech he made in Seattle in September 1969, he announced there would be a national environmental teach-in in the Spring of 1970. The wire services carried the story nationwide. The response was dramatic. It took off like gangbusters.

“The objective was to get a nationwide grassroots demonstration of concern for the environment so large that it would shake the political establishment out of its lethargy and, finally, force this issue permanently onto the national political agenda,” explained Sen. Nelson, former Counsellor to The Wilderness Society, a national conservation group. “It was a gamble, but it worked.”

On April 22, 1970, newspapers estimated that some 20 million Americans of all ages gathered in cities and towns across the country to say one word very loudly: Enough. Enough pollution. Enough waste. Enough endangered species.



Get in on the action and excitement, and plan a special way for your class and your school to become involved in Earth Day. Here are some ideas.

1. Plan an All-School Gathering

Begin Earth Day with an outdoor gathering around the school's flag pole. Under the American flag, hoist an Earth flag, as is done at many schools. Work with your teacher and music teacher to create an Earth Day ceremony that includes an environmental song sung by the whole school, environmental readings and poems, and perhaps ends with the unveiling of the school's newly planted tree.

2. Parade

Plan a parade, involving your entire class or your entire school, celebrating Earth Day. Dress up as hundreds of different species of plants and animals. Create floats out of recycled material that teach about the environment and environmentally responsible actions. Each float could represent a different natural habitat or you could have marching habitats, like rainforests and reefs, and involve the school marching band in some novel way.

3. Community Service

Call a nature center, park or local environmental group to volunteer your class time on Earth Day. Help them

clean a park or creek, or improve the environment in some other notable way. Write to the local press to let them know what you are doing.

4. Testify

Every town, suburb, city, and rural area has some form of local government, a Mayor and Town Council or Board of Commissioners. Every school is governed by a School Board. Some of these officials are elected representatives. Find out when their next public meeting is and how they invite public testimony. Have a group of students in your class write a statement about Earth Day. Ask your town government to endorse Earth Day and plan a special commemoration. Ask the School Board to adopt a trash reduction or energy conservation plan. Make sure you have discussed any testimony with your parents, teachers, and principals.

5. Write to the Newspaper

Check out this newspaper's letters to the editor column. In small groups, read two or three aloud. What are people writing about? Do you agree or disagree? Write a letter to the editor, using the format, and following any guidelines described on the letters page. Send the letter(s) to the newspaper. Are they printed? Are there any letters sent to the newspaper that comment on your Earth Day ideas?



Check Out The Newspaper!

◆ Read today's newspaper, especially its news sections. Is there any news about Earth Day? News about the environment? What stories have you found? Are they good news or bad news about the environment?

Extra! Extra! Learn More!

1. If your class is connected to the Internet, conduct a search on the web for the phrase "Earth Day." Can you find organizations dedicated to promoting Earth Day? Can you find Earth Day activities for schools and families?

2. Interview a parent or grandparent about what they remember about the first Earth Day in 1970. Write a report about their memories of Earth Day.

3. Learn more about Earth Day, the conservation ethic, migrating birds and the lands that all Americans own at The Wilderness Society's website: <http://earthday.wilderness.org>.

4. Write to Senator Gaylord Nelson. Let the founder of Earth Day know your hopes and concerns for our planet, and how you want to help improve the environment. Send an e-mail message to him by visiting The Wilderness Society website or write to him at: The Wilderness Society, 900 17th St., NW, Washington, DC 20006.



"No one is too young or too old to get involved in saving the environment."

Sen. Gaylord Nelson

MAKE YOUR VOICE HEARD!

<http://earthday.wilderness.org>



1

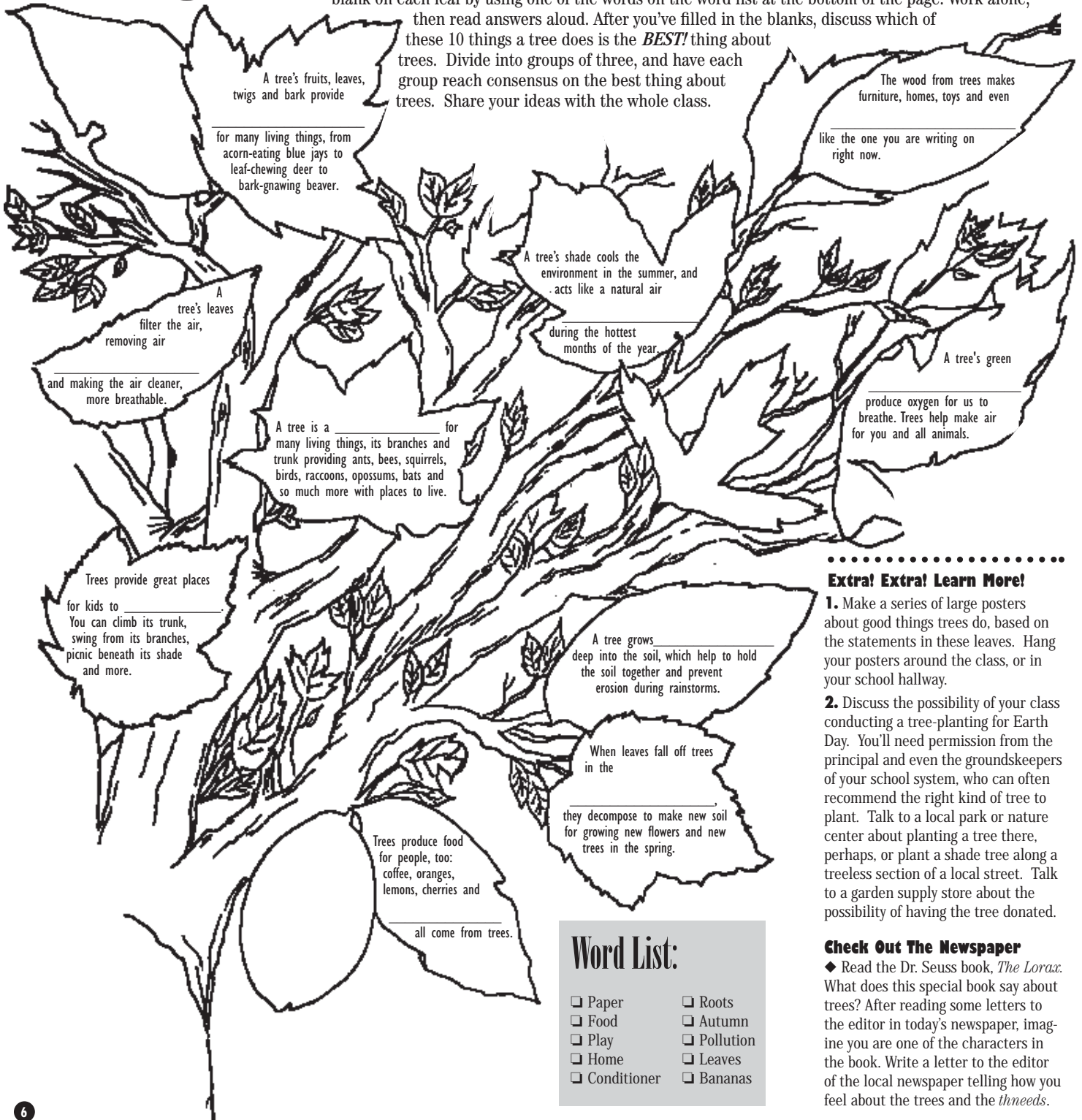
Good Things About TREES

Trees help us in so many ways, and so much of the Earth was once, and still is, covered by forests and trees. Once, it is said, a squirrel could walk across tree branches from Maine to the Mississippi River, and never touch ground. Forests worldwide are troubled by a variety of problems, from too much cutting and clearing to too much pollution.

In response to this problem, many schools plant trees on Earth Day. That's because one tree does so many things to improve the environment and help nature.

Here's a tree growing on this page. On each leaf is one good thing a tree does to help ecology. Fill in the blank on each leaf by using one of the words on the word list at the bottom of the page. Work alone,

then read answers aloud. After you've filled in the blanks, discuss which of these 10 things a tree does is the **BEST!** thing about trees. Divide into groups of three, and have each group reach consensus on the best thing about trees. Share your ideas with the whole class.



A tree's fruits, leaves, twigs and bark provide

for many living things, from acorn-eating blue jays to leaf-chewing deer to bark-gnawing beaver.

The wood from trees makes furniture, homes, toys and even

like the one you are writing on right now.

A tree's shade cools the environment in the summer, and acts like a natural air

during the hottest months of the year.

A tree's leaves filter the air, removing air

and making the air cleaner, more breathable.

A tree is a _____ for many living things, its branches and trunk providing ants, bees, squirrels, birds, raccoons, opossums, bats and so much more with places to live.

A tree's green

produce oxygen for us to breathe. Trees help make air for you and all animals.

Trees provide great places

for kids to _____. You can climb its trunk, swing from its branches, picnic beneath its shade and more.

A tree grows _____ deep into the soil, which help to hold the soil together and prevent erosion during rainstorms.

When leaves fall off trees in the

_____ they decompose to make new soil for growing new flowers and new trees in the spring.

Trees produce food for people, too: coffee, oranges, lemons, cherries and

_____ all come from trees.

Extra! Extra! Learn More!

1. Make a series of large posters about good things trees do, based on the statements in these leaves. Hang your posters around the class, or in your school hallway.

2. Discuss the possibility of your class conducting a tree-planting for Earth Day. You'll need permission from the principal and even the groundskeepers of your school system, who can often recommend the right kind of tree to plant. Talk to a local park or nature center about planting a tree there, perhaps, or plant a shade tree along a treeless section of a local street. Talk to a garden supply store about the possibility of having the tree donated.

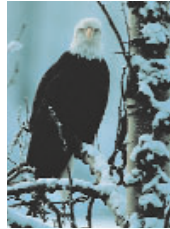
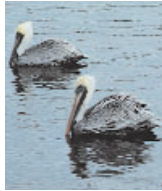
Check Out The Newspaper

◆ Read the Dr. Seuss book, *The Lorax*. What does this special book say about trees? After reading some letters to the editor in today's newspaper, imagine you are one of the characters in the book. Write a letter to the editor of the local newspaper telling how you feel about the trees and the *thneeds*.

Word List:

- Paper
- Food
- Play
- Home
- Conditioner
- Roots
- Autumn
- Pollution
- Leaves
- Bananas

NATURAL WINNERS!?



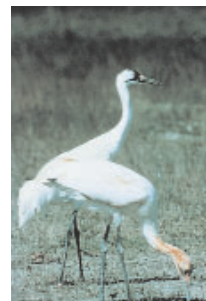
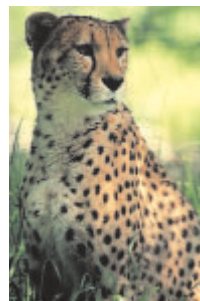
In 1970, one of the biggest worries of those organizing Earth Day was the disappearance of species. In fact, the first Earth Day led Congress to pass the Endangered Species Act, which gives the federal government the right to name species as rare, threatened or endangered, and provides protections for plants and animals on the list.

Brown pelicans, buffalo, peregrine falcons, American alligators, bald eagles and timber wolves were animals people wanted protected quickly, for the numbers of each were declining quickly. Not only did the law make it illegal to hunt these animals, but the law required state and federal wildlife officials to devise plans to produce larger numbers of these animals. More than 30 years later, the numbers of each of these animals has increased dramatically.

Below are eight more endangered species. They are deeply in trouble. The success stories of their survival depend on caring and persistent conservation efforts. Think about how you can be part of the solution.

Searching for Clues Searching for Solutions

Unscramble the letters of the names of the endangered species to solve the puzzle. Then, divide your class into groups, and assign each group one of the species. Find library books about the animals and conservation efforts to save them. Write group reports about what you have learned. Present your findings to your class.



1. A large ape native to Southeast Asia **G N A T O R U N A**

2. A very rare, fast-charging grass grazer **C L A B K H I R O N**

3. A stilt-legged American wading bird **P H O N I W O G R E N C A**

4. The fastest cat on Earth **T H E A C H E**

5. The biggest fish in the ocean **H A K R S**

6. A giant of the American West **Z R I L Z G Y R A B E**

7. A striped Asian predator **G R I T E**

8. A slow-swimming Floridian **T A N A M E E**

Things To Think About

◆ Are any of the endangered species listed here found in the community where you live? Are local groups organized to protect them? Write a letter to the editor of your newspaper letting them know what you think about protecting this animal.

◆ More than 1,000 species are on the endangered species list. How many have been removed from the list because their situation improved? Is that better or worse than you'd expect after 30 years of listing species?

◆ What do you know about wolves? Would you mind a wolf pack living in a forest near your home?

Photos: U.S. Fish & Wildlife Service and National Oceanic and Atmospheric Administration

1. Orangutan, 2. Black Rhino, 3. Whooping Crane, 4. Cheetah, 5. Shark, 6. Grizzly Bear, 7. Tiger, 8. Manatee.

ANSWER KEY:



Below: Fan coral off Grand Cayman, John Roseborough, NOAA. Left: Coral Reef off Grand Cayman, John Roseborough, NOAA.

PICTURE THIS...

ONCE environmental issues were considered local problems. People worried about pollution near their homes. They wanted this smokestack cleaned, that pipe to stop pumping pollution. In 1970, people wanted to preserve species like eagles, pandas and grizzlies. These were and are all admirable goals for the environmental movement.

But today, because of advances in science, computers and TV, air travel and e-mail, we can know instantly how whole ecosystems around the world are doing. Whether they are thriving or barely surviving. This instant global knowledge is a big change from the first Earth Day.

The result has been that instead of demanding protection for a single species, more people are demanding the protection of whole habitats. The focus on habitats has brought much attention to the dilemma of rainforest destruction. You can learn more about it in a story on page 3 of this tabloid.

But, a lesser known habitat is also being threatened. The oceans' coral reefs. Like rainforests, reefs are valuable resources and important parts of the global ecosystem. Coral reefs have often been described as "underwater gardens," with their beautiful colors, intricate shapes and exotic creatures.

Yet, despite their ecological importance and beauty, the reefs are being threatened around the globe by human activities such as coastal development, overfishing and pollution. Worldwide, the coral reefs are dying and disappearing. And, as with the rain forests, it will be up to humans to stop the damage and learn how to protect coral reefs for future generations.

How can you help?

All of the human threats posed to corals can be reduced. By using the best available technologies in power plants, oil tankers and sewage treatment facilities, the effects of disturbance and pollution can be lessened. Increased public education can reduce and eliminate the damage caused by pollution deforestation, fishing and other human activities. Use your voice to promote conservation. Make your actions support your good intentions.

The Center for Marine Conservation (CMC), is working to help create marine sanctuaries in which human activities are regulated and marine ecosystems, such as coral reefs, can prosper. The organization is dedicated to the protection of marine life, and strives to increase public awareness of marine conservation issues. Recently, CMC was part of a successful effort to have the Florida Keys designated as our nation's largest marine sanctuary.



Top: Boothbay Lab, NOAA. Above: Brain Coral, Center for Environmental Education, James H. Yelvington.



Below: Cyanea, NOAA, Auster.



Above: Sea star. Below: Sea Anemone, NOAA. Bottom: Crab.



Things to do!

1. Become a reef artist and explorer. Use the photos of real coral reef creatures on this page to create your own coral reef picture or model. Add one or as many of each to your reef as you like. Learn more about the reef and add more species. Color your creation with bright, lively colors because coral reefs are among the brightest places on the planet.
2. Find out what coral is. Is it a plant or an animal? Write a research paper on corals. Describe their life cycle and the danger posed to coral reefs. Include drawings.

Extra! Extra! Learn More!

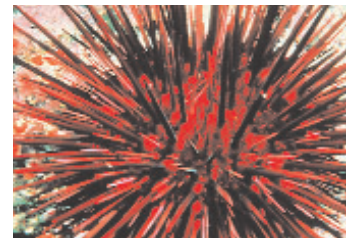
Find school or public library books to learn more about the coral reef. Use computer encyclopedias or perform an Internet search for reef information. Write to or visit the websites of these two organizations that concentrate on coral reef conservation.

Center for Marine Conservation

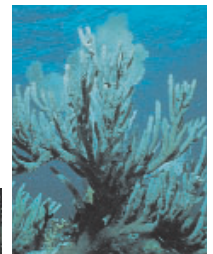
1725 DeSales Street, NW
Suite 600
Washington, DC 20036
202-429-5609
<http://www.cmc-ocean.org>

CORAL: The Coral Reef Alliance

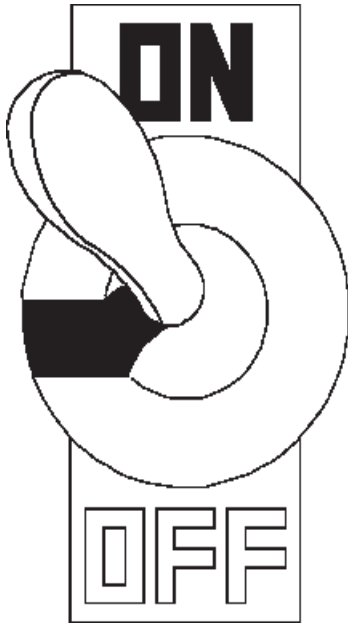
64 Shattuck Square, Suite 220
Berkeley, CA 94704
(510) 848-0110
Fax: (510) 848-3720
CORALmail@aol.com



Above: Purple Sea Urchin, Center for Marine Conservation, Ron Schneider. Right: Sea Foam, Center for Environmental Education.



Left: Rox Anemone, Center for Environmental Education, Ron Schneider.



Power from the Planet

Look around your classroom: how many uses of electricity can you find? Are the lights on? Is there an electric pencil sharpener? What else do you see?

On Earth Day, it's important to remember that electricity fuels our lives, and all electricity comes from the Earth's resources. Power plants run by making steam, (from boiling large amounts of water) and using the steam to turn a turbine and generate power. Some power plants run by burning coal mined from the Earth. Others burn oil, drilled from the planet. Still others run by nuclear power, where uranium ore, a radioactive mineral found in the Earth, heats water as its atoms split.

In 1970, people wanted power plants to burn more cleanly. At the time, coal-fired power plants poured large amounts of soot, ash, waste and heat into both skies and waterways. Today, power plants are required to burn more cleanly, in part because of laws like the Clean Air Act passed after the first Earth Day.

Still, using electricity generates pollution. When a light switch or a TV set is turned on, it uses electricity. The electricity comes to your house over wires from the power plant. To make the electricity, ore is mined, which can harm habitats. Fuel is burned, and even though a smokestack pollutes less than it once did, it still emits some possibly harmful chemicals. Power plants also release gases like carbon dioxide that, some say, may be harming the Earth's weather systems. All

power pollutes, and conserving energy is an important way to help the Earth's environmental systems.

Examine the picture of a girl in her home. Can you find at least ten uses of electricity in this picture? Write them in the space provided on the right.

Now, let's imagine your parents suddenly announce you are moving to a log cabin in the woods to start a new life.

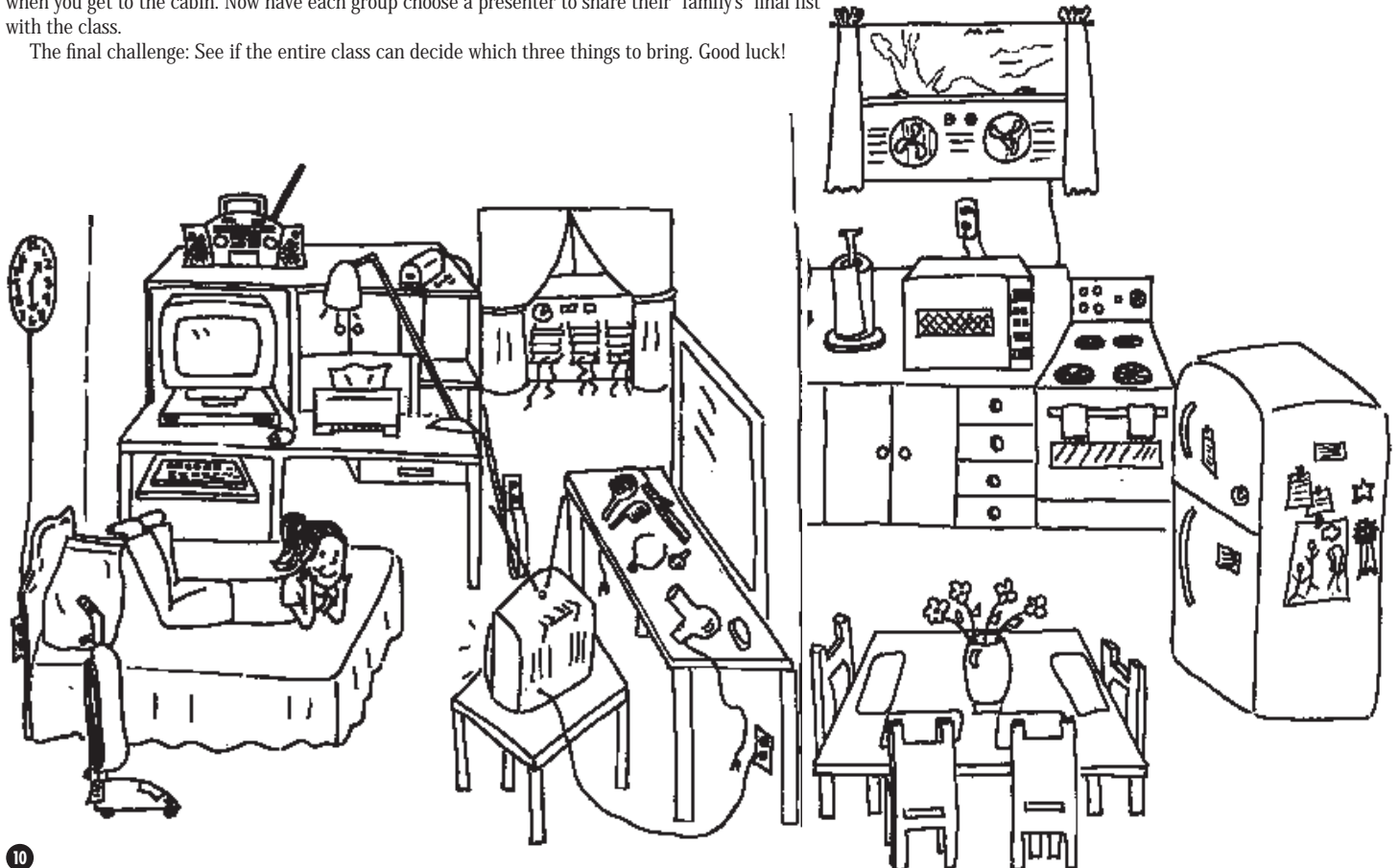
Unfortunately, the cabin will only have a small generator, and you can only take 3 uses of electricity with you! Read your list of devices that use electricity again carefully. Circle the three things you think your family should take.

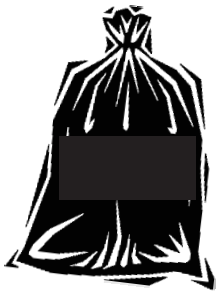
Next, let's see how your choices compare to your classmates. Divide the class into groups of 3 or 4. Pretend each group is a family heading to a cabin. Each family can take only three electrical appliances to the cabin. Figure out how to decide which three your family will take. Hint: Have each member of the group read their list aloud. Discuss which three things you could or should bring. If you choose NOT to bring something important, decide what you will do to replace what that appliance does when you get to the cabin. Now have each group choose a presenter to share their "family's" final list with the class.

The final challenge: See if the entire class can decide which three things to bring. Good luck!

..... Uses of Electricity

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____





BUILD A GARBAGE PIZZA

Every day, says the Environmental Protection Agency, every American (that includes you, and everyone else in the class)-- produces a little more than four pounds of solid waste. Every minute of every day, garbage trucks all over the world carry solid waste somewhere, loaded with day-old newspapers, orange peels, grass clippings, coffee grounds, pizza crusts, cigarette butts, unwanted toys, stale bread, soda cans, broken refrigerators, milk cartons, cardboard boxes and so much more. We bury solid waste in landfills, burn it in incinerators, recycle it back into useful products and sometimes even compost it by turning it into soil.

Check out the table below. It represents the different categories of solid waste the average American throws away, listed in order of weight for each category. First, find the total amount of trash the average person disposes of annually. Then, examine the pie chart. Perhaps you have studied pie charts in math class or your teacher can show you how to read them.

Your job is to label all the slices of the pie according to the kind and amount of solid waste the average person uses every year. Two hints: the largest slice represents the largest source of solid waste; the smallest slice the smallest source of waste. Can you fill in all the blanks?

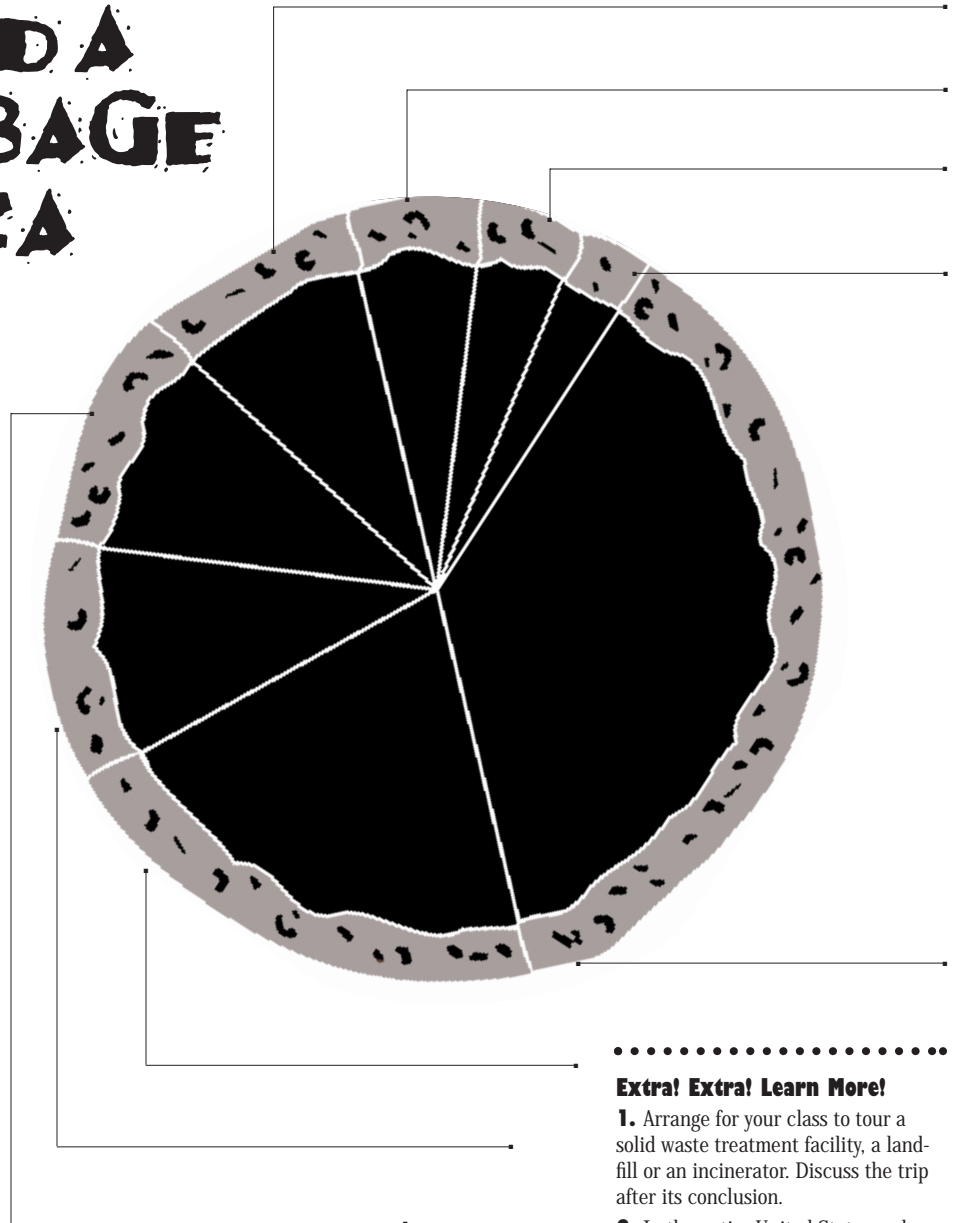
Now, if every person in your class throws away 4 pounds per person, how many pounds of trash does your class dispose of every day? Every year? How many pounds does your school produce annually?

Here's an idea for a special Earth Day project: build a Garbage Pizza in your schoolyard. (You'll need both your teacher's and principal's permissions.) Use chalk to draw a very large circle on the asphalt. Can you figure out a way to both draw a giant circle and create the right-sized slices on your circle? Collect large amounts of items to represent each slice of the pie -- piles of newsprint for the paper slice, aluminum soda cans for the metal slice, etc.

With your teacher, discuss how much of each item you will need, how it will be brought to school and how it will be handled safely. You might want to use plastic soda bottles for the plastic slice, but your class certainly should not pile food scraps in food waste section. Be creative. What might you use to represent the idea of food waste?

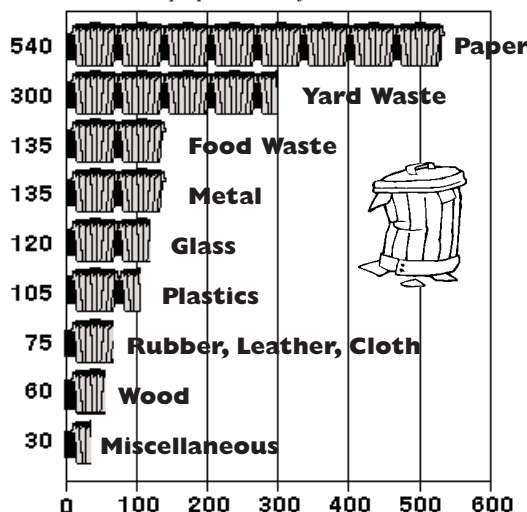
Once you have arranged the display of trash piled up in your Garbage Pizza, provide tours of your pizza to other classes or community groups. Call newspapers and TV stations to give them information about your project, and see if they will do a news or feature story about your project. Or, take your own photos and write a story to submit to the newspaper.

Be sure to plan what to do with the materials you have collected after Earth Day. Can you recycle the entire Garbage Pizza when Earth Day is over?



SOLID WASTE

Pounds of solid waste per person in one year.



Extra! Extra! Learn More!

1. Arrange for your class to tour a solid waste treatment facility, a landfill or an incinerator. Discuss the trip after its conclusion.
2. In the entire United States, only a little more than 10% of solid waste is currently recycled. If paper, metal, glass, plastics and cloth are recyclable, and if yard waste, food waste and wood can be composted, what percent of solid waste can be reclaimed, and not incinerated or buried? Does everyone in your class recycle all they can? Why or why not?

Check Out The Newspaper!

◆ Look at the editorial cartoons in the newspaper. Draw a cartoon that expresses your opinion about the trash situation in your school. Are kids careful about the amount of waste at lunch or could they do a better job? (Hint: check your lunchroom or cafeteria for some illustration ideas.)



Seeds of Change

On Earth Day, it's important to remember what happened to Squirrel. That's right, Squirrel, a neighbor of yours with a story to tell. Here's a short play for Earth Day, a play to be read aloud by your entire class. Divide the class into five groups: Squirrel, Water, Soil, Air and Sunlight. Choose a Narrator and an Acorn. Have the characters read the parts aloud. So, get ready on the set. And, **ACTION!**

Narrator: Once upon a time, there was a forest filled with trees: dogwoods that bloomed beautifully, spicebush that smelled sweetly, pines that grew straight and tall, oaks laden with acorns.

Water: As the rains fell on the forest;

Air: As the winds blew across the forest;

Sunlight: And as the sun shone brightly upon the forest;

Soil: Seeds sprouted from the rich brown earth, growing wildflowers and weeds, shrubs and trees of all colors, shapes, and sizes.

Narrator: And the trees and plants provided homes, food and shelter for a bewildering variety of animals.

Water: Trout lived in the forest's streams, eating the mayflies and the mosquito babies that lived underwater. Raccoons came to its water searching for crayfish and frogs, birds called kingfishers dove into the water to spear their prey.

Air: Hummingbirds hovered in the summer air, blue jays squawked through its branches, butterflies fluttered among the flowers, bats skimmed the night air in search of moths.

Soil: Turtles laid eggs deep in the earth, moles tunneled underground in search of earthworms, foxes raised pups in burrows stolen from the woodchucks they devoured, chipmunks slept underground during the cold winters.

Sunlight: And the sun shined on it all, fueling the life that lived in the forest.

Narrator: Everything in the forest was used wisely and used forever. Nothing was wasted.

Air: Animals breathed air, inhaling oxygen into their lungs, burning the oxygen, and taking it from the air.

Narrator: But plants always made new oxygen, and the cycle continued.

Soil: Plants took nutrients from the soil, growing taller and taller, building themselves out of the very earth itself.

Narrator: But trees shed their leaves in the fall, and wildflowers withered and died. Their decaying leaves and bodies made new soil, more soil, for new trees and new flowers.

Water: Animals drank the water, removing it from creeks and streams. Plants pulled water from the soil, their thirsty roots continuously drinking from the soil.

Narrator: But the rains always came, bringing new water to the forest.

Sunlight: And when the sun's energy waned in the winter, no one worried. They all knew that spring would come, that the sun's fierce rays would one day return, and grow the forest again.

Narrator: And so the world worked, flowing in cycles, air, water, soil and energy all renewed in the circle of the seasons.

Squirrel: Until the squirrels came. Now, there's one thing you should know about squirrels.

Air, Wind, Water, Sunlight (together): What that?!

Squirrel: Squirrels are hungry, very hungry. We just LOVE to eat. In a forest, we'll eat just about anything: buds and flowers, walnuts and hickory nuts, sumac seeds and maple seeds, leaves and twigs. But squirrels love one thing more than anything else.

Acorns: Acorns for breakfast. Acorns for lunch. Acorns for afternoon snack, and for dinner, and at bedtime.

Narrator: Ah, acorns, the fruit of the oak tree. Oak trees, one of the mightiest trees in the forest, big of limb and strong of build, all begin life as acorns.

Squirrel: And all acorns end up in my stomach. Why, this forest has so many acorns, I simply must call all my brothers and uncles and aunts and cousins and invite them to move into this forest.

Narrator: So the forest was soon filled with squirrels, all happily eating seeds, fruits, leaves and branches.

Water: And when the rain fell, no acorns sprouted, for they all had been eaten.

Air: And when the wind blew, no acorns grew, for they were gone.

Sunlight: And when the sun shined, nothing sprouted from earth, for there were no seeds.

Soil: And as fewer seeds grew, the soil lost its richness, and became lifeless and barren.

Narrator: As oak trees died, fewer oak trees grew to replace them, fewer acorns sprouted to become new oaks.

Air, Wind, Water, Sunlight (together): The squirrel had eaten its future.

Narrator: So the squirrels began to hoard their acorns, and hide them from each other.

Squirrel: I'll make sure the other squirrels don't find these acorns. I'll bury them in the ground, hide them inside holes in trees, place them underneath stumps, any place the other squirrels won't look.

Air: Luckily, the squirrel buried more acorns than it really needed.

Water: So when springtime arrived in the forest,

Sunlight: And the sun rays warmed the frozen, lifeless earth,

Soil: The acorns the squirrel had hidden in the ground began to sprout.

Narrator: The squirrel noticed new oak trees growing from the earth.

Squirrel: So that's where those acorns were.

Narrator: And the squirrel considered eating the newly sprouted oaks.

Squirrel: They would taste great, but if I let these grow, perhaps there will be more acorns a few years from now.

Narrator: Which is what the squirrel did. The squirrel struck a deal with the oak trees. The oak would produce lots of acorns, millions of acorns.

Air: And the squirrel would eat a lot of them.

Sunlight: But not all of them.

Water: No, for the squirrel needed oak trees to produce acorns, its favorite food.

Soil: And the oak trees needed squirrels in return, for it became the squirrel's job to grow oak trees.

Squirrel: So every fall, I bury lots of acorns, some for me, but some for the forest.

Narrator: And that's the way the forest came back. The squirrel took what it needed to stay alive.

Squirrel: But I made sure to give back to the forest that sustained me.

Narrator: So should we all live, giving back to the Earth that keeps us alive

Water: We all drink water, use water, consume water. But how do we give back to the water we need?

Air: We all breathe air, burn oxygen. But how do we give back to the air we need?

Sunlight: We all use sunlight energy for power, light and heat. How do we give back to the energy that sustains us?

Soil: We all eat food grown from the soil, use trees cut from soil. How do we give back to the soil that nurtures all life?

Squirrel: Like me, everyone can plant acorns.

Narrator: Acorns: good works. Seeds of change. Small deeds that protect a mighty planet.

Air, Wind, Water, Sunlight (together): What acorns have you planted today? Now plant an acorn!

Things to Do!

1. Write the word "ACORNS" on the chalkboard. Below the word, brainstorm a list of good deeds that help the environment. Any good environmental act is an acorn.
2. Brainstorm a list of good deeds that help other people, and might have little to do about nature, ecology and the environment. Are good deeds important? Which good deeds have students in your class done?
3. Draw a large picture of an acorn. Inside the acorn, write the following statement: "This Earth Day, to help improve the planet, I am going to...." Complete the sentence any way you'd like. Choose any acorn, any good deed, you think you'd like to do.
4. Share your acorn with one other student.
5. Make sure you perform your acorn act on Earth Day.

Check Out The Newspaper!

◆ Search today's newspaper for a story about a good deed-- something good someone did to help other people, animals, plants, or the environment. What is the story about? What did the person do?

DRIVE POLLUTION

AWAY!

During the first Earth Day, people protested about cars. They said cars created too much pollution, that car exhaust choked the air. Highways built only for cars were ruining too many habitats like forests and fields. Too many resources were used for producing cars.

With time, cars have changed. Before the first Earth Day lead was an additive in gasoline, and while lead helped cars run smoothly, it poisoned the air, because it is a very dangerous chemical for people to breathe. Today, all new cars run only on unleaded gasoline. Cars run cleaner, more efficiently, producing less pollution, using less gas. Some car manufacturers are even experimenting with recycled and re-used parts.

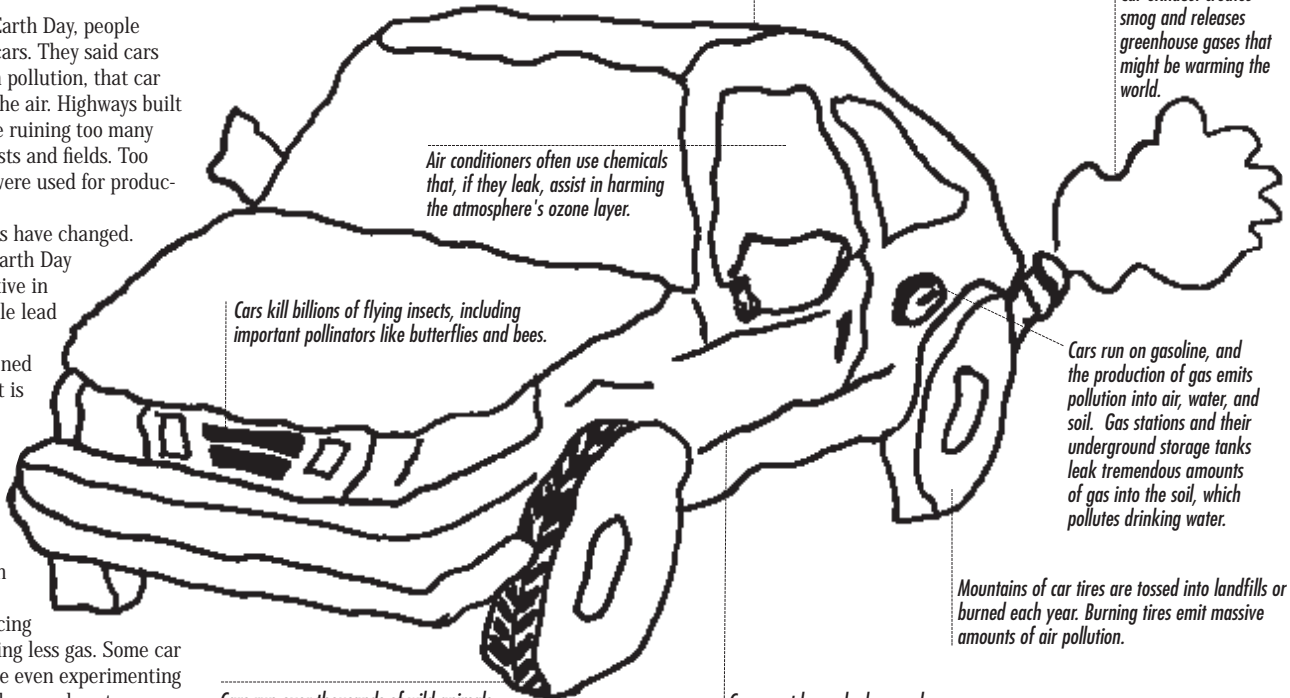
Still, few things affect the environment quite like a car. People are now driving more cars than ever and longer distances than ever, adding to urban smog. Check out the drawing to find all the different ways a car causes pollution.

Here's your job.

In groups of 3-4, invent the car of the future, a car that creates little or no pollution. How does it run? What is its fuel? Of what materials is it made? Use the worksheet on this page to help you and your group design your car. Then give your car a name.

Draw large poster-sized ads for your cars, and display them in your school's hallway.

Or create TV ads, and perform them for each other as skits.



Cars are made from metal, requiring tons of ore to be mined from the ground, harming habitats worldwide.

Car exhaust creates smog and releases greenhouse gases that might be warming the world.

Air conditioners often use chemicals that, if they leak, assist in harming the atmosphere's ozone layer.

Cars kill billions of flying insects, including important pollinators like butterflies and bees.

Cars run on gasoline, and the production of gas emits pollution into air, water, and soil. Gas stations and their underground storage tanks leak tremendous amounts of gas into the soil, which pollutes drinking water.

Mountains of car tires are tossed into landfills or burned each year. Burning tires emit massive amounts of air pollution.

Cars must be parked somewhere, requiring millions of acres of land for paved-over parking lots.

Cars run over thousands of wild animals, including skunks and snakes, raccoons and rabbits.

WORKSHEET:

Car's Name: _____

Year it's produced: _____

Your car company's name: _____

Your ad slogan: _____

List five ways your car helps improve the environment:

1. _____
2. _____
3. _____
4. _____
5. _____



Wait a Minute!

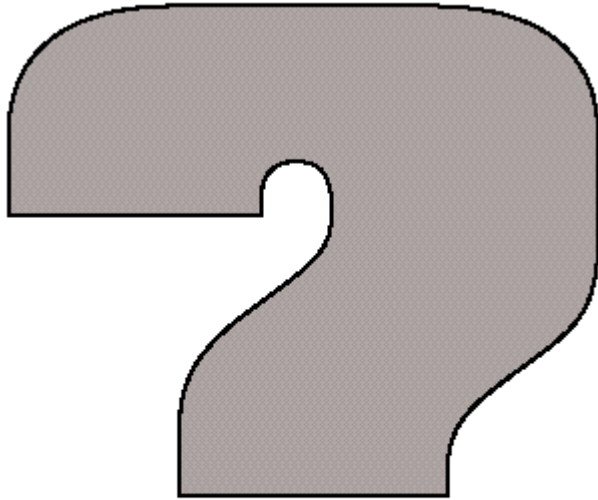
◆ If cars do all these things – dirty the water, warm the climate, kill animals – why do we drive them? Is there anything useful that cars do? Write a statement below about one good thing that cars do. Share your statements in your group. What's the best thing about cars?

Check Out The Newspaper!

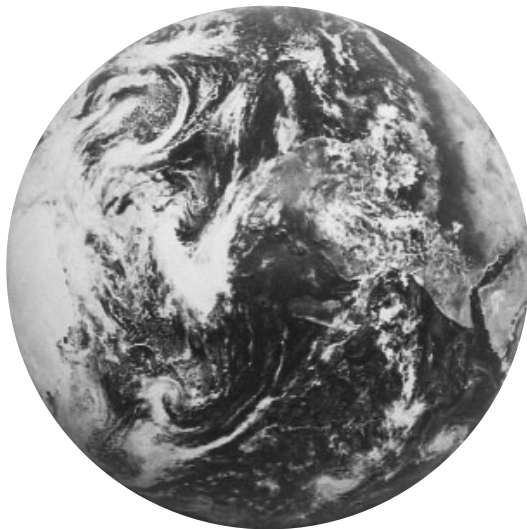
1. Look through the car ads in the newspaper and create an ad for your car based on the ones you read.
2. Search through the newspaper's advertising. Seek out ads that promote products that help improve the environment. Clip out and create a bulletin board collage. As a class, vote for the most environmentally friendly product.



PLUGGING INTO THE PLANET



Test what you know



To help care for the environment, there are many things you should know. One of the most important is how you personally use the resources of planet Earth, how you are plugged into the planet every day. Here are some questions about how you connect to the Earth's resources. Try to answer these questions by yourself first. Circle the letter of the choice you think is correct. Then, share your answers as a group. Discuss with your classmates why you believe your answer is correct. Don't worry if you don't know all the answers, you're not being graded. If you're stumped, take this test home with you and ask your parent or someone else at home about the answers.

1. The source of the drinking water that flows into my house is:
 - a. A river
 - b. An underground well
 - c. A reservoir
 - d. I don't know
2. When the trash truck picks up my house's solid waste, the destination for that waste is:
 - a. The ocean
 - b. A landfill
 - c. A solid waste incinerator
 - d. I don't know
3. When I flush the toilet in my home, the water flows into:
 - a. A septic tank
 - b. The sewer system
 - c. I don't know
4. The lights that glow in this classroom use electricity made by the local power plant that uses:
 - a. Coal
 - b. Oil
 - c. Nuclear fuel
 - d. Hydropower
 - e. I don't know
5. My family recycles which of the following items?
 - a. Aluminum cans
 - b. Glass bottles
 - c. Newspapers
 - d. All of these
 - e. None of these
6. Which of the following actions causes pollution?
 - a. Watching TV
 - b. Driving a car
 - c. Flushing a toilet
 - d. Eating a hamburger
 - e. Buying a book
 - f. All of these
7. Which of the following actions lessens pollution?
 - a. Walking to school
 - b. Recycling glass and metal
 - c. Taking short showers
 - d. Planting a tree
 - e. Reusing paper
 - f. All of these
8. Many scientists are very worried about the disappearance of plants and animals. The biggest reason animals are vanishing from the Earth is:
 - a. Illegal hunting
 - b. Chemical pollution in air and water
 - c. Habitat loss
 - d. Forest fires

Answers 1-5 depend upon where you live. There is no one correct answer. New York City residents might get their water from Catskill Mountain reservoirs; Miami residents from underground wells. 6: f. All cause pollution - TV sets need electricity from power plants, the toilet's water needs cleaning, a process that requires noxious chemicals; hamburgers require cattle ranching, which seeps huge amounts of waste into waterways; a book is made from bleached paper, and the bleach leaches into waterways. 7: f. Walking cuts down on auto/bus emissions; recycling conserves energy, saving on power plant emissions; short showers require less water to be cleaned; trees remove pollutants from the air; recycling and reusing paper means fewer trees need to be harvested. 8: c. Especially in rainforests and coral reefs.

ANSWER KEY:

Polling the Planet

At the first Earth Day in 1970, people gathered together to advocate local pollution controls. Residents of Cleveland demanded the clean-up of the Cuyahoga River, a river so polluted with petroleum-based chemicals that its surface caught fire and Lake Erie, one of the Great Lakes, almost devoid of all fishlife. In New York City, protests focused on the city's smog and the fishkills on the Hudson River. People in Pittsburgh wanted their city's infamous air pollution reduced. In Los Angeles, well known for its fierce lung-choking smog, people advocated for cleaner air.

The good news is that many smokestacks have been cleaned, and the Cuyahoga and Hudson Rivers, as well as Lake Erie, are far less polluted. Still, there continue to be many issues to discuss, learn about and act upon.

But today's environmental issues are very different. Many are global in scope. You may have read about global warming, the possibility that the Earth's climate is increasing and becoming hotter, due to an increase in atmospheric gases like carbon dioxide, generated from cars, buses, factories and power plants. People are also working on ozone depletion, a seasonal lessening of the amount of ozone in the atmosphere high above Antarctica. And, due to the release of ozone-eating chemicals like CFCs (chlorofluorocarbons) from air conditioners and refrigerators, more solar radiation shines through the atmosphere. This condition increases the risk for skin cancer that we all face.

Habitat loss is another global issue scientists and environmentalists are addressing. Many habitats are in trouble. We must prevent habitat loss in order to prevent the loss of biodiversity – the decline in the number of species inhabiting our planet. Ecologists are working hard worldwide, hoping to save natural habitats that include the coral reefs, rainforests and prairies.

The problems and challenges of rainforest preservation are a good example. Much of the tropical landscape is covered by rainforests – huge expanses of land that include many species of plants and animals. Rainforests around the world are suffering from numerous threats, especially from being burned down to create farmland. Of course, the people who live alongside the rainforests need food to eat and money to live. Unfortunately, many of them burn down the rainforests in order to turn the area into farmland. But, the land is not really good for farming and after a few years, they desert the land, having destroyed the rainforest. Real rainforest preservation must include finding ways for people who live near these forests to grow food and earn a living while keeping the forests intact.

Here's your job.

Below is a list of 10 environmental issues. Rank each issue in order of importance. Give a number 1 to what you think is the most important environmental issue of all, a number 10 to the least important issue. Fill in all the blanks in between. Write your ranking on the line next to each one.

Next, compare your answers as a class. Work with your teacher to compute an average score for each listing. Remember, since 1 is the most serious, the most important issue will have the lowest average. Which issue does your class consider the most important? Which the least? Talk about the difference between least important and unimportant. Are any environmental issues really unimportant?

Now devise a way to take a poll of 100 students in your school. How does the 100-student poll compare to your class results? Do a poll of 10 adults in your school. Do the adults and kids in your school agree on the most important issue? Try to explain your results. How and why are they the same or different?

- _____ Too much litter on roadsides and in public parks.
- _____ The decline in the number of species living on Earth.

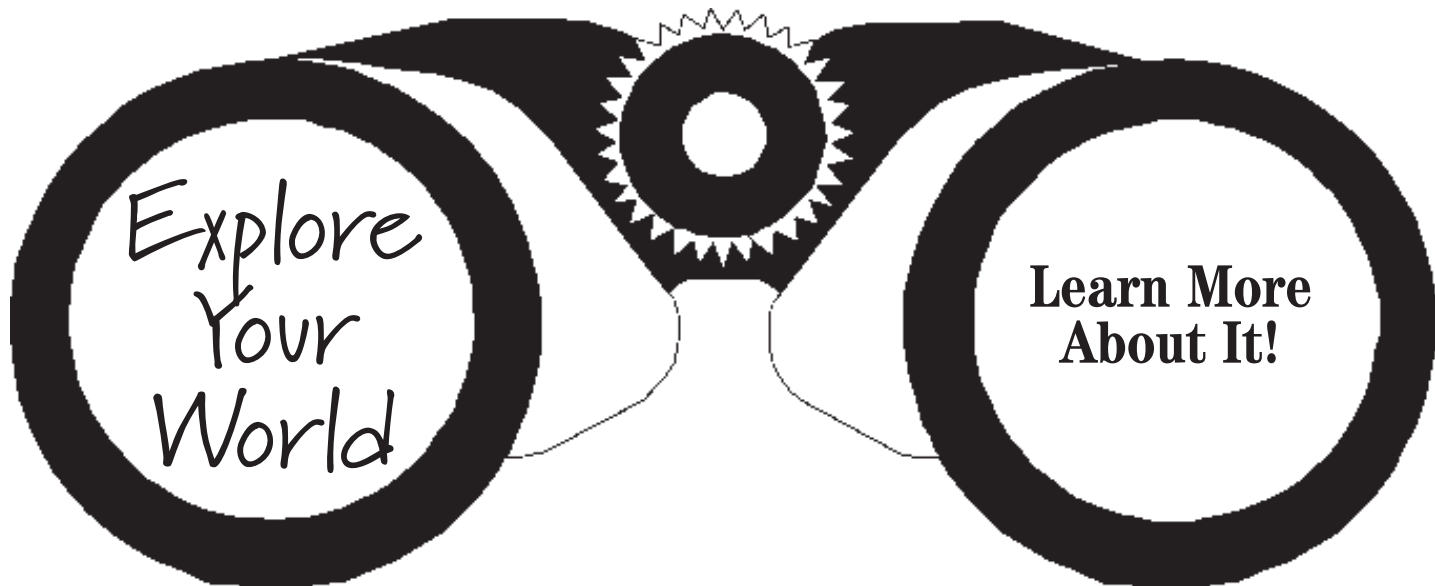


- _____ The creation of too much solid waste, with too little recycling.
- _____ The hole in the ozone layer from the release of CFCs.
- _____ The possible warming of the planet's climate from greenhouse gases.
- _____ The pollution of rivers, streams and oceans from both industry and households.
- _____ Loss of natural places as land is developed into malls, roads, and houses.
- _____ The pollution of the air, especially during the summer, from urban smog.
- _____ The loss of important habitats, like rainforests, coral reefs, wetlands, and old growth forests.
- _____ The creation of too many dumping grounds from toxic chemicals.

Other:

Check Out The Newspaper!

- ◆ Can you find news stories about habitat conservation and biodiversity?
- ◆ Write a letter to your newspaper about the results of your school poll.
- ◆ Find articles in the newspaper about the environment.
- ◆ Write a letter to the editor of your newspaper about what you see as the most important conservation issue in your community.
- ◆ Compare how your newspaper and the tv news cover an environmental news story. Discuss with your class how they are different and the same.



**Kids and Conservation
EarthForce**

1501 Wilson Boulevard
12th Floor, Arlington, VA 22209

Kids Against Pollution

P.O. Box 775
High Street, Closter, NJ 07624

Kids F.A.C.E.

P.O. Box 158254
Nashville, TN 37215

Kids for Saving Earth

P.O. Box 47247
Plymouth, MN 55447-0247

The Natural Guard

142 Howard Avenue
New Haven, CT 06519

**Coral Reef Information:
Living Oceans Program**

National Audubon Society
700 Broadway
New York New York 10003

**Earth Day Information:
The Wilderness Society**

900 Seventeenth St. N.W.
Washington D.C. 20006-2598
202-833-2300
<http://earthday.wilderness.org/home.htm>

EcoTopia/USA

<http://www.ecotopia.org/about/ecolinks.html>
The Ecology Hall of Fame is a project of EcoTopia/USA, a non-profit corporation dedicated to promoting ecological thinking and ecological behavior, especially in the Monterey Bay, CA Area.

Ecology Hall of Fame

www.ecotopia.org/ehof/index.html
The Ecology Hall of Fame is a national center for environmental education. It honors the heroes of the environmental movement – those individuals who have had the greatest positive impact on the movement. This website is a

prelude to what will be a museum-like facility for multi-media educational exhibits teaching the simple truth that individuals, by remaking themselves, can remake the world.

Environmental Defense Fund

257 Park Avenue South
New York, NY 10010
EDF Membership 1-800-684-3322
www.edf.org
<http://www.edf.org/Earth2Kids/>

EDF's mission is dedicated to protecting the environmental rights of all people. These rights include are a flourishing ecosystem, healthy and nourishing food, clean air and clean water.

EDF concentrates its efforts on the achievement of four goals. They are:

1. Stabilizing the Earth's climate by reducing emissions of greenhouse gases.
2. Safeguarding the world's oceans from pollution and overfishing.
3. Protecting human health from exposure to toxic chemicals and pollution.
4. Defending and restoring biodiversity, with particular concentration on rivers and watersheds.

Kids for Saving the Earth

kidsforsavingearth.org
PO Box 421118
Minneapolis, MN 55442
612-559-1234/Fax 612-559-6980.

The mission of Kids for Saving the Earth (KSE) is to educate, inspire, and empower children to protect the Earth's environment. KSE Worldwide provides information, support and action-oriented educational materials to environmentally concerned kids, families, groups, classrooms and schools. KSE materials include posters, CD-Roms, certificates and guidebooks.

National Wildlife Federation

8925 Leesburg Pike
Vienna, VA 22184
703-790-4100 or <http://nwf.org/>

The National Wildlife Federation (NWF) is the nation's largest member-supported, environmental education organization, with over four million supporters. NWF's classroom programs include *Animal Tracks*® and *National Wildlife Week*. *Animal Tracks* provides teacher training workshops and curriculum materials in both traditional and on-line formats. Every year since 1938 the *National Wildlife Week* program has provided free theme-based educational materials to teachers. Information on workshops, *National Wildlife Week*, free downloadable classroom activities, educational games, puzzles and much more, is available on the NWF website.

Project WILD

707 Conservation Lane, Suite 305
Gaithersburg, MD 20878
Tel: 301-527-8900/Fax: 301-527-8912
Email: info@projectwild.org
www.projectwild.org
Since 1983, Project WILD, through a national network of state coordinators and facilitators has provided workshops and materials (Project WILD K-12 Activity Guides and Project WILD Aquatic Education Activity Guides) focusing on hands-on, activity-based, environmental education to over 550,000 educators. The program emphasizes wildlife—because of its intrinsic and ecological values, as well as its importance as a basis for teaching how ecosystems function. In the face of competing needs and pressures affecting the quality and sustainability of life on earth, Project WILD addresses the need for human beings to develop as responsible citizens of our planet.

World Wildlife Fund

www.worldwildlife.org
Known worldwide by its panda logo, WWF is the world's largest and most experienced independent conservation organization with 4.7 million supporters and a global network active in some 100 countries. WWF's mission is to protect nature and the biological diversity that we all need to survive.

The Peregrine Fund

566 West Flying Hawk Lane
Boise, Idaho 83709
208-362-3716/Fax 208-362-2376
E-mail, tpf@peregrinefund.org
The Peregrine Fund works to conserve birds of prey and their natural habitats. The World Center for Birds of Prey, in Boise, Idaho, is The Peregrine Fund's world headquarters. From there they operate national and international conservation programs. The World Center breeds birds of prey for release to the wild. They house about 200 falcons, condors, and eagles for propagating. Research is also underway on behavior, nutrition and many other topics to help understand birds of prey and their needs.

Sierra Student Coalition

145 Waterman St. 1st Floor
Providence, RI 02906
888-JOIN-SSC or <http://www.ssc.org/>
The Sierra Student Coalition (SSC) is the student-run arm of the Sierra Club. The SSC exists to empower young people to take action for our planet. Founded in 1991 by 17-year-old Sierra Club member Adam Werbach, the SSC is an activist network of thousands of young people across the U.S. The purpose of the SSC is to help students become effective, responsible activists by tailoring the resources of the Sierra Club to fit their needs.