DOCUMENT RESUME

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AVAILABLE FROM	Zero Population Growth, Inc., Education Program, 1400 16th Street NW, Suite 320, Washington, DC 20036. Tel: 800-767-1956 (Toll Free); Fax: 202-332-2302.
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ABSTRACT

This fun and educational kit is designed specifically for elementary students. The "Kid's PACK" (Population Awareness Campaign Kit) entertains and informs children on the environment and human population growth through stories, games, and concrete ideas for making a difference. In three booklets, the "Kid's PACK" offers elementary students materials to educate and empower: students write their own booklets on their "place on the planet," observe the effects of crowding in a home gardening activity, and "catch" pollution around their neighborhoods. After identifying the challenges of environmental protection and population pressures, children learn how to use the "power of the pen" in crafting measures to newspaper and magazine editors of their favorite publications, as well as to their legislators. The "Kid's PACK" includes zany stickers, brainteasing word games, and a pull-out poster of "Amazing Eco Facts and Figures." (AA)

Kid's PACK: Population Awareness Campaign Kit

ZERO POPULATION GROWTH, INC.

Population Awareness Kit

part 1

ALBERT'S

Albert lives in a small two-bedroom house. He is free to watch TV, skateboard, and read, but sometimes he gets a bit lonely. When his friend Brian comes to visit, Albert is always happy to see him.

"Why don't you move in with me, Brian?" says Albert to his friend one day. "You can have the extra bedroom."

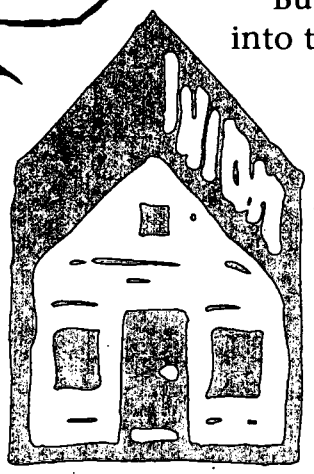
The next day, Brian moves in. Now the population of the house has doubled and both boys are happy. Albert and Brian do things together, or each can be alone if he chooses.

But soon Charles and Dave come to visit their friends Albert and Brian. They enjoy their stay and decide to move in.

"No problem," says Brian. "We'll put two beds in each room and everyone will have a place to sleep."

With four people living in the house, everybody has to give up something to make things work. Albert can't read in bed late at night because the light keeps Charles awake. And Brian agreed not to play the radio when Dave is home because the two boys don't like the same kind of music. But all in all, everyone gets along.

But soon Charles invites four friends from out of town to move into the house.



"This is going to be a problem," says Dave. "Where will eight people sleep?"

"We can buy bunk beds at a second-hand store," says Charles. "My friends are great guys. You'll really like them."

Soon the population of the house has doubled again. Everyone still has a place to sleep, but the boys begin to have trouble.

Frank wants to practice his clarinet while Gary is studying

HOUSE...

and Ethan is talking on the phone. Hal likes to do jigsaw puzzles. But when he spreads the pieces out on the dining room table, Albert gets mad.

"Hey! Get those off of there," says Albert. "I'm fixing the radio, and I can't work with your puzzle pieces all over everything."

The boys begin to argue and fight among themselves.

"I can't get into the bathroom to take a shower in the morning," says Brian.

"Charles leaves his dirty socks lying around," Frank complains. "He's spoiling it for everyone."

"Hal watches television when I'm trying to think," says Gary.

"When someone gets a cold, we all end up getting it," says Hal. I don't know about you guys, but I'm moving out."

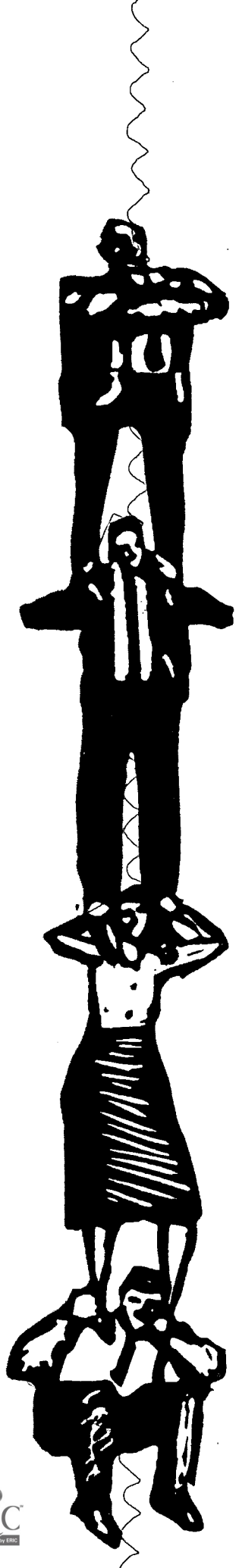
The next day everyone is gone.

"Whew!" says Albert. "Alone at last."

BY ELLEN JACKSON

A FAMILY OF 6 BILLION

Imagine that your household had twice as many people as it does now. What sort of things might change in the way you live? What are some things you would need more of in your home? For starters, you would need more food, beds, clothes, and energy to heat water for showers and power all of the appliances that would be used more often. As you can tell from "Albert's House," you would also need more cooperation because each person would have less privacy and personal space.



In addition to our own families, each of us is also part of the "global family," made up of all people in the world. If your family grew, you might decide to build on to your house or move to a bigger house or apartment. When the global family grows, there is no bigger planet on which to move. Earth is the only planet where humans can live and it is a finite system. We can never expand the number of oceans or mountains on Earth. None of the minerals buried in the Earth can be resupplied. And when we pump oil from the ground, it can never be replaced.

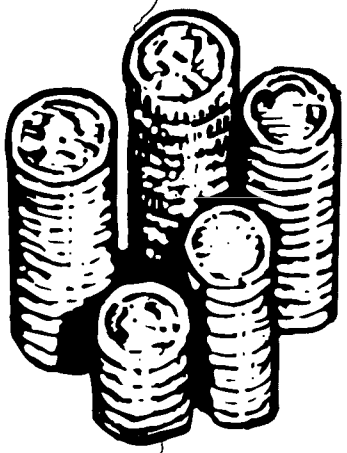
We must take care of Earth, because it will always be our home. But our global family grows every day. In the time it takes you to blink your eyes, three more people have been added to the family. That works out to 184 more people every minute, 11,083 every hour, 265,000 every day and 92 million every year! In fact, our family has nearly six billion (6,000,000,000) people now!

Oh! How We've Grown!

The global family wasn't always so large and hasn't always grown so quickly. In fact, years ago, the number of people on the planet grew very slowly because people didn't live as long as they do today. Many people lived in unsafe and unclean conditions, and there were no cures for many common diseases. The population (number of people) in the world started to grow as people discovered ways to improve life through medicine, growing and eating the right foods, and avoiding harmful germs by bathing and purifying drinking water.

At the time Christopher Columbus sailed to the New World in 1492, there were about 500 million people in the world. By 1800 (over 300 years later), that number doubled to one billion. Then in 1930 (130 years later), our population had doubled again to two billion. It only took 45 years (to 1975) to double again to four billion. Doubling a number (even a very small number) over time will add up to a huge number.

Think of it this way. Let's say you got an allowance of $5 each week. After about one month (4 weeks), you would have $20. But what if you got just one penny on the first day of the month and doubled the amount on the next day and the day after that on through the end of the month? So, you'd get 1 cent, then 2 cents, then 4 cents, then 8 cents, etc. Would you be richer at the end of the month, than if you got the straight five bucks a week? You betcha! By the 31st day of the month, you'd get over $10 million ($10,737,418.24 to be exact) and that doesn't count all the money you'd get on days 1-30!



Double Trouble

When the number of people doubles, it can have a big impact on the environment and people's quality of life. Every new person added to the planet needs food, shelter, clothes and fuel. Plus, more people will want cars, roads, schools, hospitals, restaurants and stores. But more buildings mean cutting more trees for lumber, burning more fuel for energy and using up land that may have been home to different plants and animals.

There is only so much land on our planet to grow food, plant trees, build cities and still leave space for animals and plants to live in the wild. If there are too many people, there may not be enough of some of the things we need for everyone to have a share.

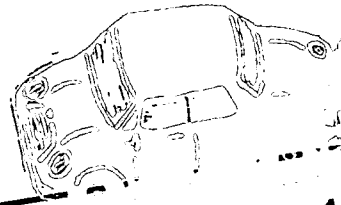
Cooperation among all the members of the global family is important if we are going to make our home a healthy place to live. Every time we use electrical appliances, ride in a car or throw away garbage, we are polluting our air and water. Any time fuel is burned in power plants or in cars, it also dirties our air. And we all know that garbage never really "goes away." It is either taken to a landfill where it piles up, dumped into the oceans where it harms fish or is burned and pollutes the sky. So, we must think about what we do and use resources wisely.

Earth can be a more comfortable home, if we all live in balance with other living creatures, conserve the planet's resources (such as water, energy and trees), and are considerate of the needs of others.

AMAZING ECO FACTS AND FIGURES:

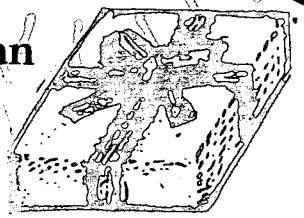
Did you know.....

1. Americans make up 1/20 of the world's population, but use 1/4 of the world's energy.

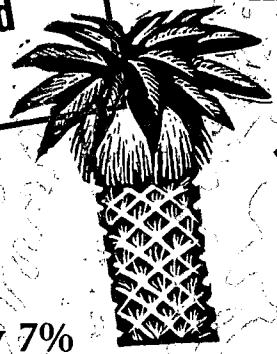


2. Each American's energy use is equal to that of 2 Japanese, 6 Mexicans, 13 Chinese, 32 Indians, or 372 Ethiopians.

3. There are more shopping malls than high schools in the United States.



4. Americans own 1/3 of all the world's cars and drive about as many miles as the rest of the world combined.



5. In the U.S., there is one car for every two people. In China, there is one car for every 679 people.

6. Tropical forests cover only 7% (1/14) of the Earth's surface, but house over half of all the plant and animal species in the world.

7. Forest area the size of Pennsylvania is cut down every year in the world.

8. Each American produces about 4 pounds of garbage each day.

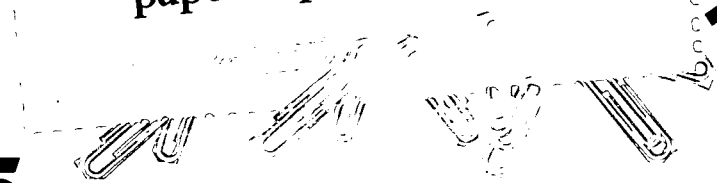
9. If everyone in the U.S. recycled their newspapers (including the comics), we'd save 500,000 trees every week.

10. Although 3/4 of the Earth is covered by water, less than 1 percent is readily available for humans to use.

11. We use over 80 billion aluminum cans every year and we could recycle every one of them!

12. If you lined up all the styrofoam cups made in just one day, they would circle the Earth and go a little further!

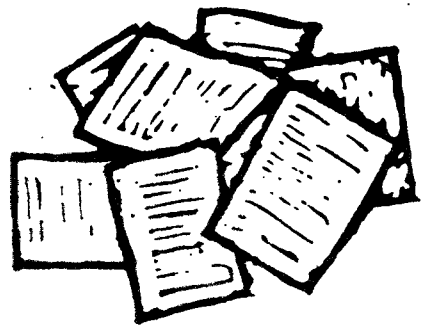
13. Americans use 35 million paper clips every day.



14. Every week, about 20 plant and animal species become extinct. That means they disappear from the Earth forever!

15. If all U.S. homes turned their heat down by six degrees in the winter, we'd save 500,000 barrels of oil each day.

16. Every year, Americans throw away enough writing paper to build a wall 6 feet high from Los Angeles to New York City and back.



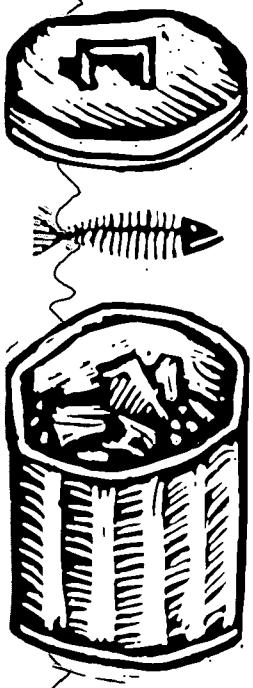
17. The energy saved by recycling one six-pack of aluminum cans will operate a television set for 18 hours.

18. In the time it takes you to read this sentence, there will be 18 more people added to the planet.

19. One billion people around the globe are surviving on less than $400 each year.

20. At the current rate of growth, the current population would double in just 45 years.

Things We Can Do to Pr

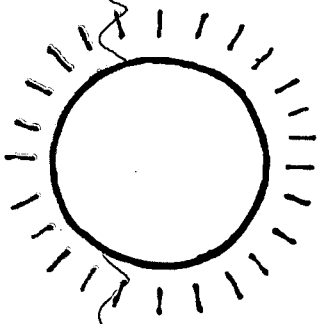


GARBAGE:

1. Not all garbage has to be thrown away. Glass bottles, cans, plastic containers and newspapers can often be recycled (made into new items). Ask your parents and teachers if you have curbside pick-up of recyclable materials in your neighborhood. Or, see if any of the items you're about to throw away can be reused in your home or school for containers, art projects, bird feeders and more...Use your imagination!

2. Food scraps such as egg shells and orange peels can be composted. Your parents, teachers or librarians may know how to find information for you on starting a compost pile if you have a yard. As you toss food scraps onto the pile, they break down into tiny parts, making fertilizer to grow new plants and flowers.

3. When you are buying items in the store, pick ones with less packaging, so there's not as much to throw away when you get home. About 1/3 of all garbage we throw away is packaging.



ENERGY:

1. Turn off lights and appliances when you leave a room. Remember, whenever electricity is being used at home, fuel is being burned in power plants, polluting the air.

2. Try to cut down on the number of car trips you take by running as many errands as you can in one trip. If you're only going a short distance, think about walking or riding a bicycle instead of getting a ride in a car.

WATER:

1. In some parts of the country there are water shortages. You can conserve the amount of water you use by not letting the water run while you're brushing your teeth. That would save 5 gallons of water each time. In a year, you would save enough water to fill up a swimming pool.

2. Let an adult in your home know when you have a leaky faucet. Steady drops of water add up to 9 gallons during a day, enough to fill a big fish tank!

otect Our Home (Earth)

WILDLIFE:

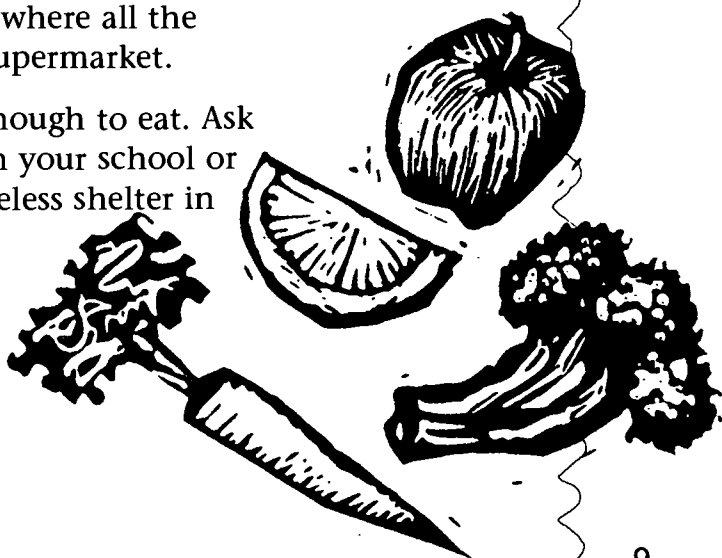
1. Plants give us oxygen which we need to breathe. Talk to your parents and teacher about planting trees and other plants at home and in the schoolyard.
2. Sometimes when we use or pollute the land and water, we destroy the homes of different plants and animals. It's important not to litter. Also, if you know of species that might be endangered in your area, write letters to your local paper or local leaders, urging them to protect the species' habitat.

POPULATION:

1. Talk with older adults (such as grandparents) about how life has changed in their area as the population has grown. How many people were in their town or city when they were young? How many now?
2. Fill in the blanks in the activity, "My Place on the Planet" to find out more about the people that live around you.

FOOD:

1. One-fifth of all people don't get enough food to eat. Farmland is often used to graze cows for beef, but could be used to produce much more wheat and corn which could feed many more people than the beef from the cows could. Try eating one or more meals a week which don't contain meat, and think about where all the food you eat comes from before it arrives in the supermarket.
2. Some people in your community may not have enough to eat. Ask your teacher about starting a canned food drive in your school or preparing meals which can be delivered to a homeless shelter in your area.

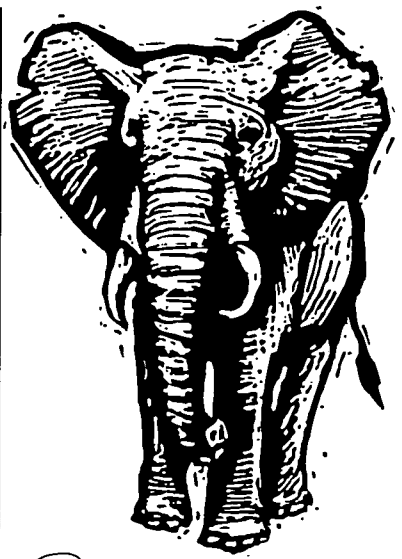


POPULATION WORD SEARCH

The human population is connected with many other things. How many can you find in this word search? Words go down, up, across, backwards and diagonally. Use the word list for help.

Population	**Resources**	**Topsoil**	**Conserve**	**Habitat**
Births	**Climate**	**Wetlands**	**Oceans**	**Wildlife**
Deaths	**Forest**	**People**	**Freshwater**	**Plants**
Environment	**Animals**	**Landfill**	**Air**	

A W R O X P E N V I R O N M E N T D C T A Y
N Z E S E C R U O S E R O B E P O W L U P S
I R T T W I L D L I F E I M V C P E O P L E
M I A N L Q U K M S U R T B R L S H V W A T
A R W S N A E C O R T X A Y E I O A M I N P
L O H E X B N I A H E L L U S M I B U X T Y
S P S H T A E D S I V Y U D N A L I Y C S O
C H E V I W T A S R I M P X O T Y T A R K P
O P R W L A N D F I L L O M C E X A K I L T
E U F O R E S T R X T E P O Q K U T E H R Y



REBUS RESOLUTION

There's a message hidden in the code below. Sound out the letters and pictures to find out what it says.

MORE + LIVE ON 2 + DAY
THAN AT N + O IN HIS +
BUT THE IS N +
BIG + THAN IT U'S 2
TR + R PLA + .

Message: _____

BREAK THE CODE

What word means the same thing as each definition below? See if you can guess. Then use the decoder below to translate the funny-looking answer at the right.

A place where people or animals live	8 1 2 9 20 1 20
Something every living thing needs to survive	23 1 20 5 18
What we need to breathe, in order to stay healthy	3 12 5 1 14 1 9 18
Plants and animals in nature	23 9 12 4 12 9 6 5
A place where there are many trees	6 15 18 5 19 20
These contain most of the water on Earth	15 3 5 1 14 19
The top layer of the Earth, where we grow our food	20 15 16 19 15 9 12
A place where trash is buried under layers of earth	12 1 14 4 6 9 12 12
Resources taken from the ground, such as gold and iron	13 9 14 5 18 1 12 12
The ones who make up the human population	16 5 15 16 12 5

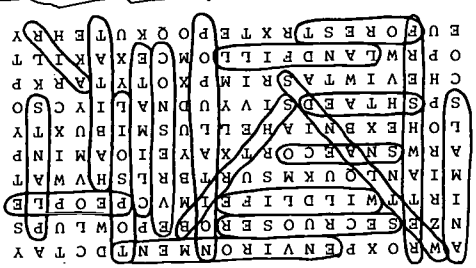
Decoder:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q

18	19	20	21	22	23	24	25	26
R	S	T	U	V	W	X	Y	Z

ANSWERS TO WORD GAMES

Population Word Search



Break the Code!

Habitat, Water, Clean Air, Wildlife, Forest, Oceans, Topsoil, Landfill, Minerals, People

Rebus Resolution

More people live on Earth today than at any time in history. Let's treat our planet well!

Kids' PACK Coordinator: Pamela Wasserman

Design: Raue & Associates, Sanny Hooper

Contributors: Susan Bryant, Anne Scullard, Martha Decker, Heather Vandervelden, Erica Maniez, Jay Keller, Susan Kohn, Sharon Pickett, Mira Shah and Pamela Strother.

Many thanks to author Ellen Jackson from Santa Barbara for granting us permission to include an excerpt from her story, *Birthquake.*

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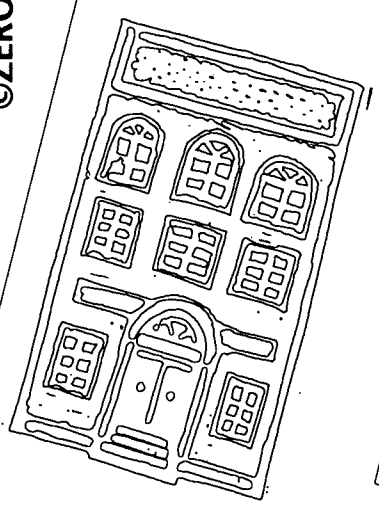
My place on the planet

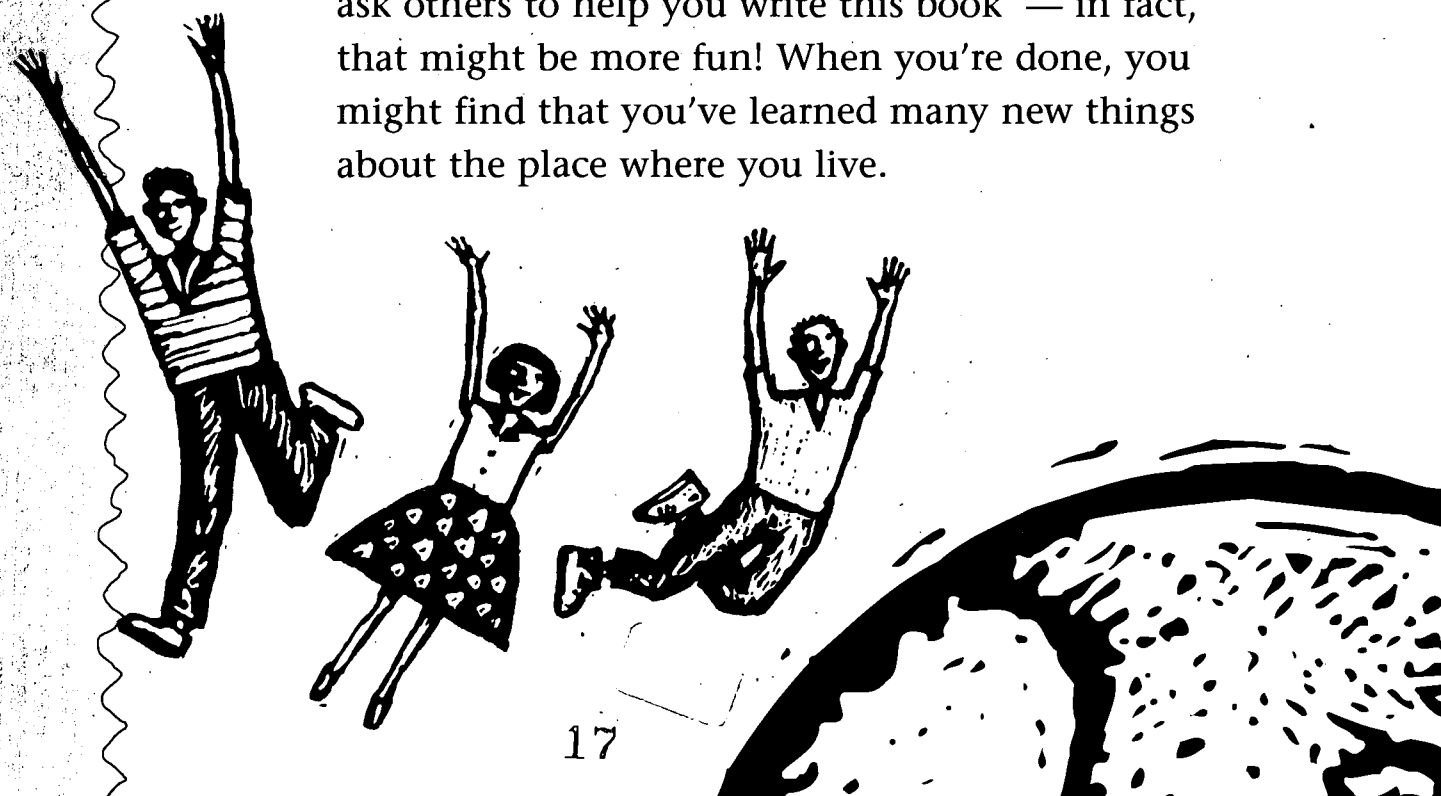


Kid's PACK part 2

My Place on the Planet

After reading "Albert's House" you can see that living in a global family of nearly six billion people takes a lot of cooperation. What you may not realize is that each of us has the power to help make the world the kind of place where you want to live. The best place to start is in your own home and community. A community can be a neighborhood, town or city.

By filling in the blanks on the next few pages, you'll be writing your own booklet about your relationship to others and the environment. It's not cheating to ask others to help you write this book — in fact, that might be more fun! When you're done, you might find that you've learned many new things about the place where you live.



My name is _____.

I am _____ years old. I live with (list people and pets): _____

_____

_____.

If we had one more person living in the house, he or she would have to sleep in the _____.

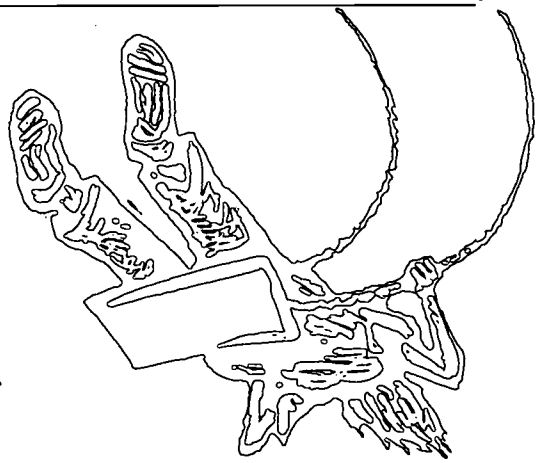
If there were more people in my household, there would be more: *(Make a list)*

_____

_____

_____

_____.



These are the things I wouldn't mind sharing:

_____

_____

_____

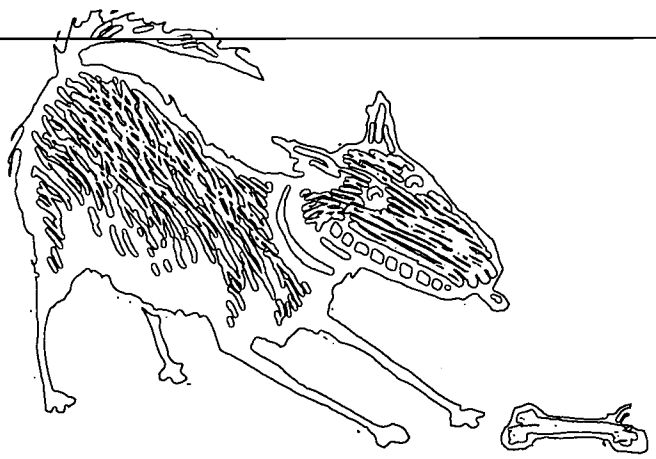
_____.

These are some things I don't like to share:

_____

_____

_____.



ENERGY

We use energy to power lots of things in my house including: *(Make a list)*

_____

_____

_____

_____.

This energy comes from: _____.

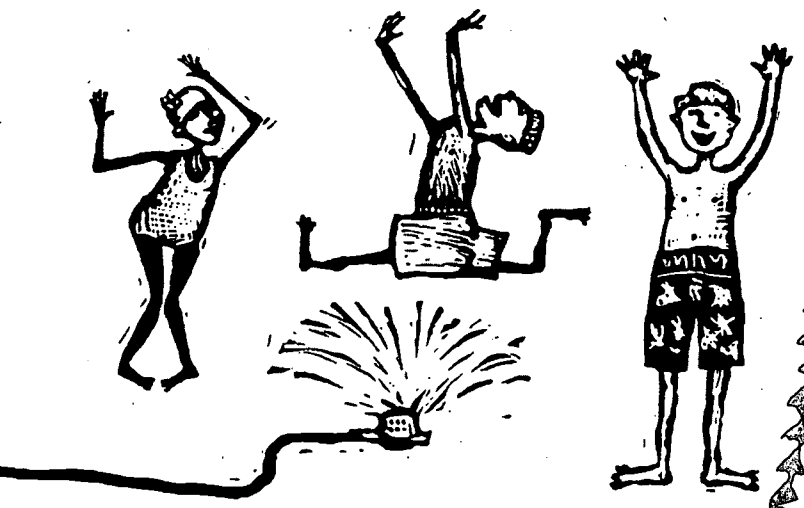
In our place, we have rules to make sure that we don't waste energy. They are:

_____

_____

_____.

When it is too hot we cool off by: (check as many as you like)



- ☐ opening windows,
- ☐ eating ice cream,
- ☐ jumping in lakes,
- ☐ swimming,
- ☐ using air conditioners,
- ☐ turning on a ceiling fan,
- ☐ fanning each other,
- ☐ taking cold showers,
- ☐ having squirt gun fights,
- ☐ playing in sprinklers,
- ☐ playing in fire hydrants,
- ☐ leaving town.

I counted the lightbulbs in my house. There are ☐.
The one that is probably on the most is:

_____.

WATER

The closest body of water to my house is a:

- ☐ creek,
- ☐ stream,
- ☐ lake,
- ☐ reservoir,
- ☐ ocean,
- ☐ river,
- ☐ pond,
- ☐ marsh,
- ☐ swamp *(A swamp is actually a marsh with trees).*

There are _____ toilets in my house and ____ showers.
There is a line for the bathrooms about ____ times per week.
We probably flush our toilet ____ time(s) each morning.
I know/don't know (circle one) where it goes when we flush it.

I use water to :

- ☐ water the lawn,
- ☐ hose down my brother,
- ☐ wash my dog,
- ☐ make cocoa,
- ☐ make soup,
- ☐ cook vegetables,
- ☐ wash dishes *(dishwashers use about 11 gallons per load),*
- ☐ wash floors,
- ☐ paint,
- ☐ do laundry *(35 gallons per load),*
- ☐ water plants,
- ☐ make ice-cubes,
- ☐ wash my hands,
- ☐ wash cars *(an average hose puts out 7 gallons per minute).*

☐ I would/☐ I would not want to drink from it.
You would have to pay me $_____ to take a swim in it.
☐ I wish we could swim in it on hot days.

Here's a list of 3 things I want to start doing around the house to conserve energy and water:

1. _____
2. _____
3. _____

TRASH

The trash that comes out of our house goes to:

_____

_____

_____

_____

In our community, we recycle these things (check all that apply):

- ☐ Newspapers
- ☐ Tin cans *(soup, tuna, etc.)*
- ☐ Glass bottles & jars
- ☐ Plastic containers
- ☐ Soda pop cans
- ☐ Magazines
- ☐ Phone books
- ☐ Other _____

The garbage we have after a week weighs ☐ more ☐ less than I do.

Here's a list of 3 things I want to do to reduce the amount of garbage we throw away at home:

1. _____

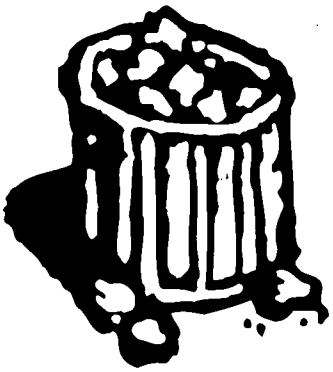
_____

2. _____

_____

3. _____

_____



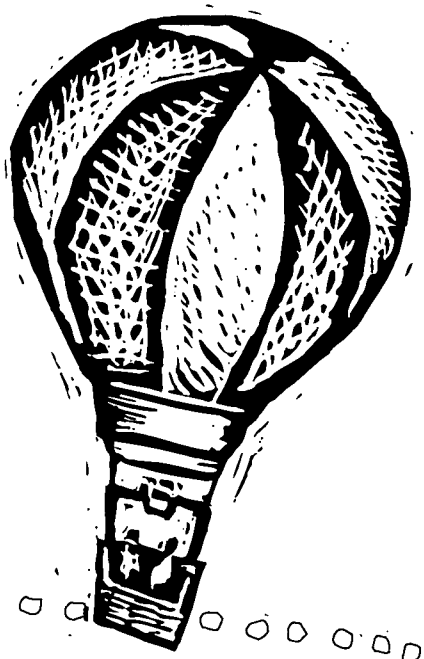
TRANSPORTATION

Without using a car, the best places I can get to from my house are:

_____

_____

_____.



I walk someplace about _____ times a week.

The farthest I have ever walked is: _____.

The nearest bus stop is _____ steps from my front door.

I take the bus about ___ times a week.

I can bus to: _____.

A grown-up drives me someplace about _____ times a week.

I also get around by: ☐ *bus,* ☐ *hot air balloon,* ☐ *train,* ☐ *subway,* ☐ *airplane,* ☐ *bicycle,* ☐ *ferry boat,* ☐ *cross-country skis,* ☐ *water-skis,* ☐ *foot,* ☐ *skateboard,* ☐ *scooter,* ☐ *snowshoes,* ☐ *wheelchair,* ☐ *wagon,* ☐ *surfboard,* ☐ *horse,* ☐ *sailboat,* ☐ *donkey,* ☐ *bumper-car,* ☐ *tractor,* ☐ *go-cart,* ☐ *sled,* ☐ *camel,* ☐ *jet-ski,* ☐ *elephant,* ☐ *helicopter.*

Of the ways I get around, the one that takes the most energy is:

_____

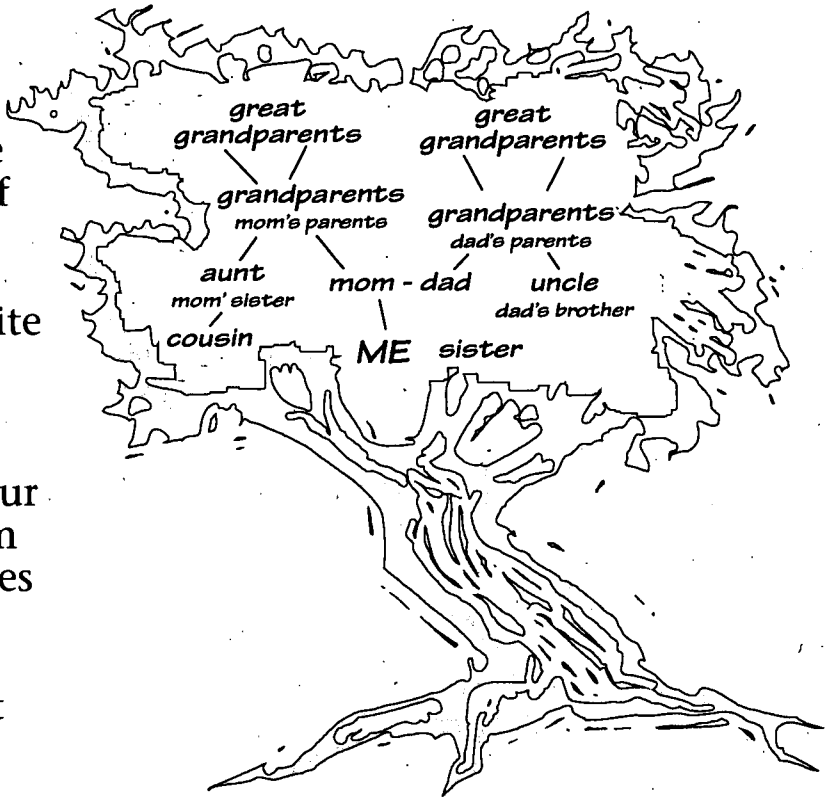
The ones that use no energy are: _____

_____.

I have noticed that _____ makes really nasty exhaust (smoke).

PEOPLE

Draw a family tree on a separate piece of paper. Start with yourself and any brothers or sisters, and write the name of your parents and step-parents above. Then write the names of their parents (your grandparents) above them. How many generations back can you go? Next to your parents, add your aunts and uncles and below them their children (your cousins). Does the oldest person in your family know how many descendants he or she has? What was the biggest generation?



I was born in the year _____.

Then, the world population was _____.

Today the world's population is _____.

When my folks were born the population was only _____.

Year	Population
1930's	2.1 billion +
1940's	2.3 billion +
1950's	2.5 billion +
1960's	3.0 billion +
early 70's	3.7 billion +
late 70's	4.1 billion +
1980	4.4 billion
1981	4.5 billion
1982	4.6 billion
1983	4.7 billion
1984	4.8 billion

Year	Population
1985	4.9 billion
1986	4.9 billion
1987	5.0 billion
1988	5.1 billion
1989	5.2 billion
1990	5.3 billion
1991	5.4 billion
1992	5.5 billion
1993	5.6 billion
1994	5.6 billion
1995	5.7 billion

I live in the community or town of _____.

My family has lived here for __ years and I have lived here for __ years.

I know ☐ a lot of people ☐ all the people ☐ some people
☐ hardly anybody in my community. *(check one).*

If there were more people in my community we might need more: *(Make a list)*

_____
_____
_____
_____.

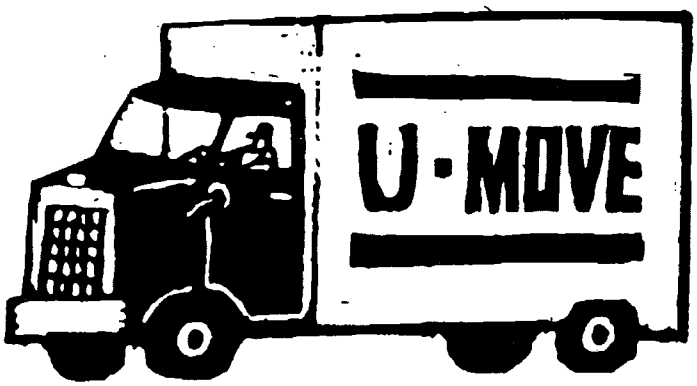
The very best things about living in my community are:

_____
_____
_____
_____.

These are the things about my community that aren't so great:

_____
_____
_____
_____.

When I grow up, I want to: *(check one)*
☐ live here my whole life,
☐ move away, but not too far,
☐ live someplace completely different.



Wherever I live, I want to make sure that the area is: *(check the ones you want)*

☐ sunny, ☐ safe, ☐ pretty, ☐ affordable, ☐ warm, ☐ rainy,
☐ cold, ☐ clean, ☐ near the ocean, ☐ near a museum,
☐ near mountains, ☐ near farms, ☐ near family

and has:

- ☐ good schools
- ☐ fast roads
- ☐ buses
- ☐ bike paths
- ☐ nature areas
- ☐ basketball courts
- ☐ nice lawns
- ☐ great sports teams
- ☐ nice teachers
- ☐ a speedy fire dept.
- ☐ a good hospital
- ☐ good doctors
- ☐ brick houses
- ☐ cute houses
- ☐ tall buildings
- ☐ rose bushes
- ☐ recycling service
- ☐ playgrounds
- ☐ a good view
- ☐ good mud puddles
- ☐ fresh water
- ☐ a tall smokestack
- ☐ pretty crops
- ☐ friendly animals
- ☐ friendly people
- ☐ a skating rink
- ☐ a store clerk that knows me
- ☐ a baseball diamond
- ☐ a 24-hour pizza place
- ☐ cable TV
- ☐ hills
- ☐ a mall
- ☐ a fountain
- ☐ a duck pond
- ☐ a jungle gym
- ☐ _____
- ☐ _____
- ☐ _____

When I grow up I want my family to look like this: *(draw them)*

We will need _____ rooms in our place.

another color add these people on to your family tree underneath your name.)

If I were in charge, I would do some things to make my community even nicer. Here's what I would do:

_____

_____

_____

_____

_____.

Even though I'm not in charge yet, my friends and I can start doing stuff now to help make things better for the future:

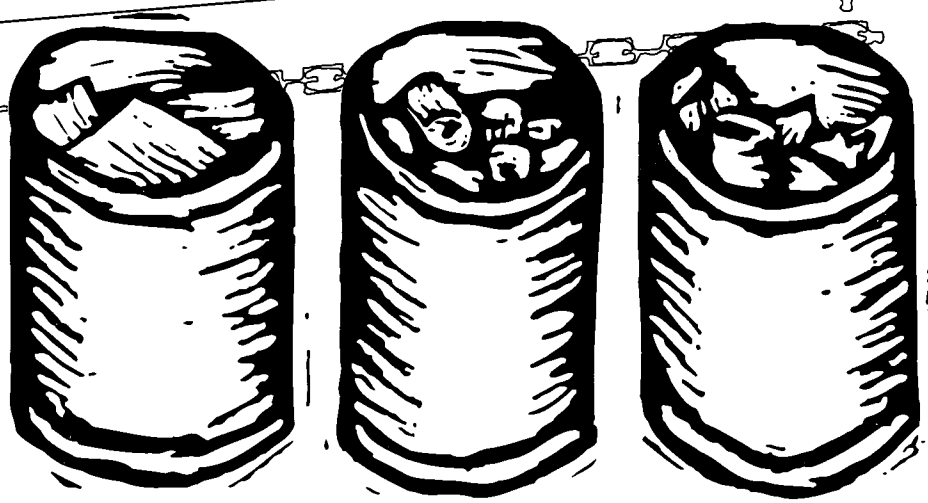
1. _____

2. _____

3. _____

4. _____

5. _____



Taking action for the planet

Kid's PACK part 3

BE AN ECO

Getting involved in your community is not as hard as it may seem. With a little research, drive and hard work you can see your efforts pay off towards a better environment. All you have to do is look around, see what needs to be done, and go to it! Many kids just like you have started working to improve the environment. Some began their projects on their own, while others are working within their classes at school. However you get started, the important thing to know is that kids can make a difference!

The first step is deciding what you want to do. Is there something you see outside your window that you would like to change? Perhaps there are places near your house or school that are cluttered with trash, or maybe it isn't safe to play outside because the air is so dirty. Decide on one thing you would like to change, and think about ways to do it. In most cases, you will need an adult to help you put your ideas into motion. If you do find you need help, good people to ask are parents, teachers, librarians, counselors or friends.

With the aid of his teacher, 9-year old Daniel Perry got his classmates together to help him raise money to build a school and fix water supply problems in war-torn Somalia in Africa. Daniel also wanted to create a garden where students could learn to care for vegetables and other plants. He and his fellow students raised over $14,000 through muffin sales, read-a-thons, and by going door-to-door asking for donations. Such fundraisers can easily be used with other environmental projects. Another great fundraising idea packs a double punch: hold a recycled invention fair, featuring homemade recycled items for sale.

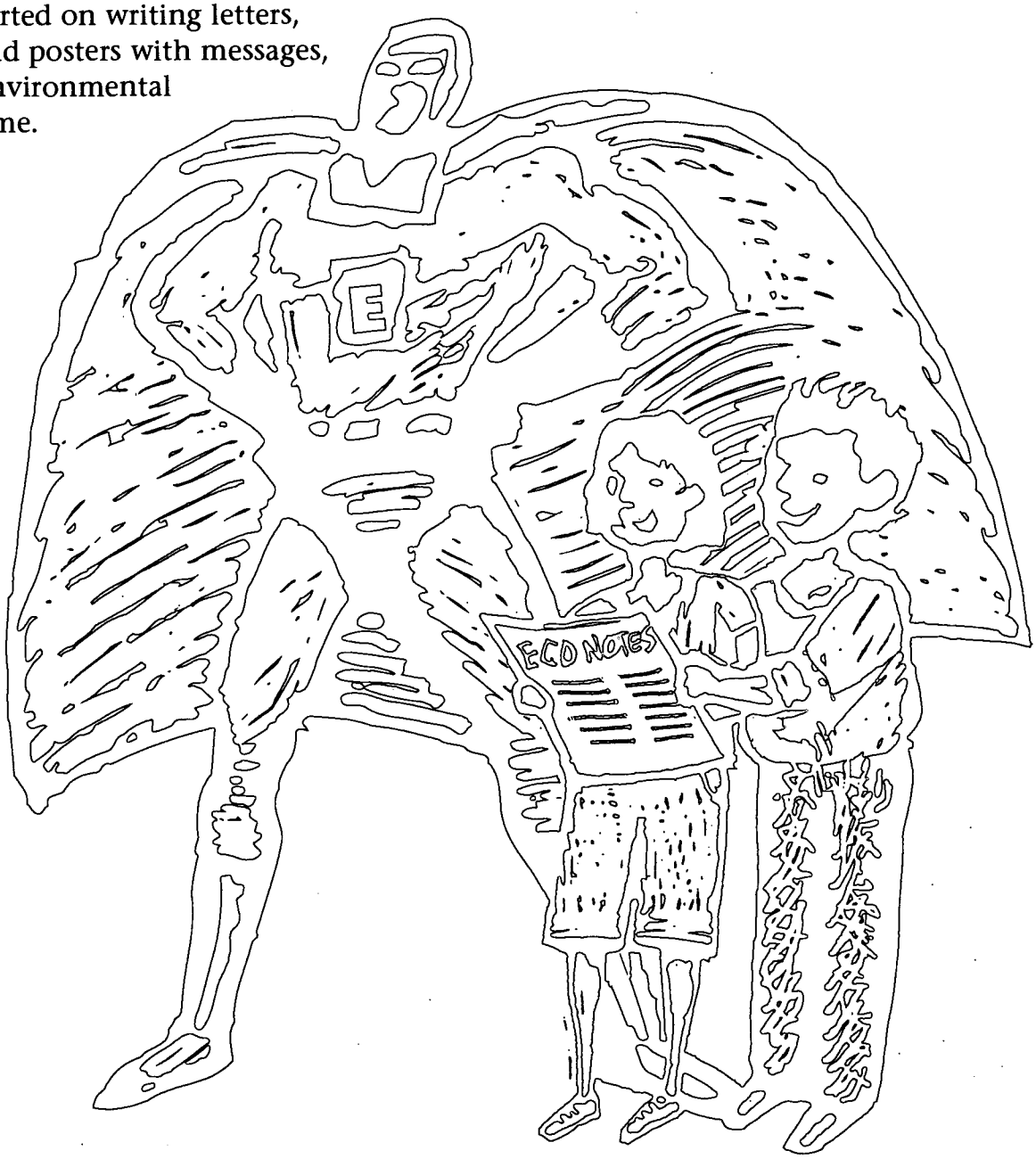
Some companies will donate time and materials to you if you clearly explain to them the purpose of your project. A few years ago, Melissa Poe, at age 9, was concerned about pollution in her community, so she wrote a letter to the president. Angered by the form letter she got in response, Melissa decided to put a copy of her letter on a billboard in her town. She was able to convince the sign company to provide the sign at a much lower price than usual. Soon reporters were calling Melissa to hear her story, and she even appeared on *The Today Show,* broadcast around the country. Melissa's efforts raised community awareness about pollution in her area.

Teenager John Hegestrand agrees. For him, the most important part is to "get the word out to learn about environmental issues." John became interested in the reduction of greenhouse gases, such as carbon dioxide and methane, which build up when people burn fuels. In sixth grade, John helped launch the *CO_2 Challenge*, an effort to collect one million kids' signatures nationwide. Each signer promised to

-HERO!

voluntarily reduce his or her own impact on the planet by conserving energy. John stresses, "Never let parents or anyone else tell you that you don't have power. There's so much out there to do!"

No matter what your interests are, your efforts can make a big difference for your environment. For more ideas, look through the activities enclosed in this PACK. They'll get you started on writing letters, making stickers and posters with messages, or becoming an environmental investigator at home.



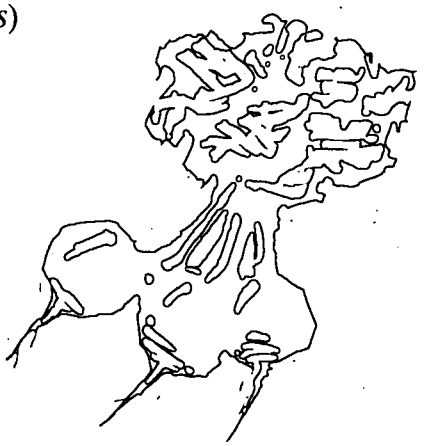
See for Yourself

Crowding Can Be Seedy

Here are some experiments you can try to see for yourself what a difference the number of people —or anything else—makes to a group or an area.

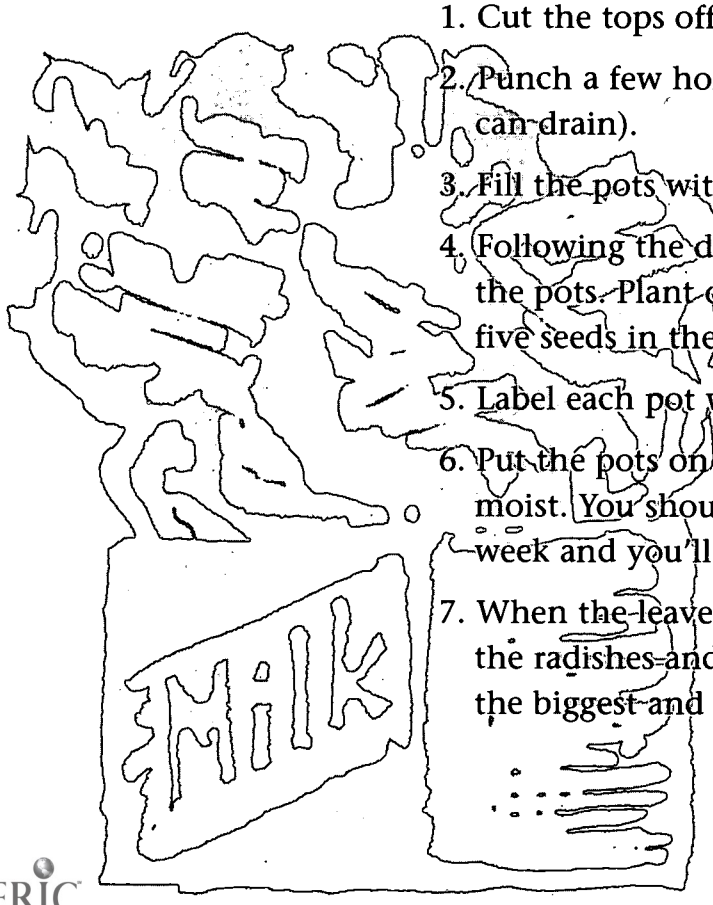
Different plants and animals need different amounts of space to themselves to be healthy and grow properly. This experiment tests how much space radishes need to grow to be big and healthy. For this experiment, you'll need...

- 1 package of radish seeds (*you can find these at a garden center and some supermarkets and hardware stores*)
- Potting soil
- Scissors
- 4 half-pint milk cartons
- 1 cookie sheet
- Masking tape (*or something else you can use to label the cartons*)
- Marker
- Sunlight



Once you have all the stuff together...

1. Cut the tops off the milk cartons to make planting pots.
2. Punch a few holes in the bottoms of the cartons (so extra water can drain).
3. Fill the pots with soil to about 1/4 of an inch below the rim.
4. Following the directions on the seed package, plant the seeds in the pots. Plant one seed in the first pot, two seeds in the second, five seeds in the third, and ten seeds in the fourth.
5. Label each pot with the number of seeds in it and the date.
6. Put the pots on the cookie sheet in a sunny spot and keep them moist. You should see the tops poking through the soil in about a week and you'll have radishes within a month.
7. When the leaves of the plants look thick and full-grown, pull up the radishes and compare the sizes. Which radishes grew up to be the biggest and most healthy-looking? Why do you think that is?



See for Yourself

Catching Pollution

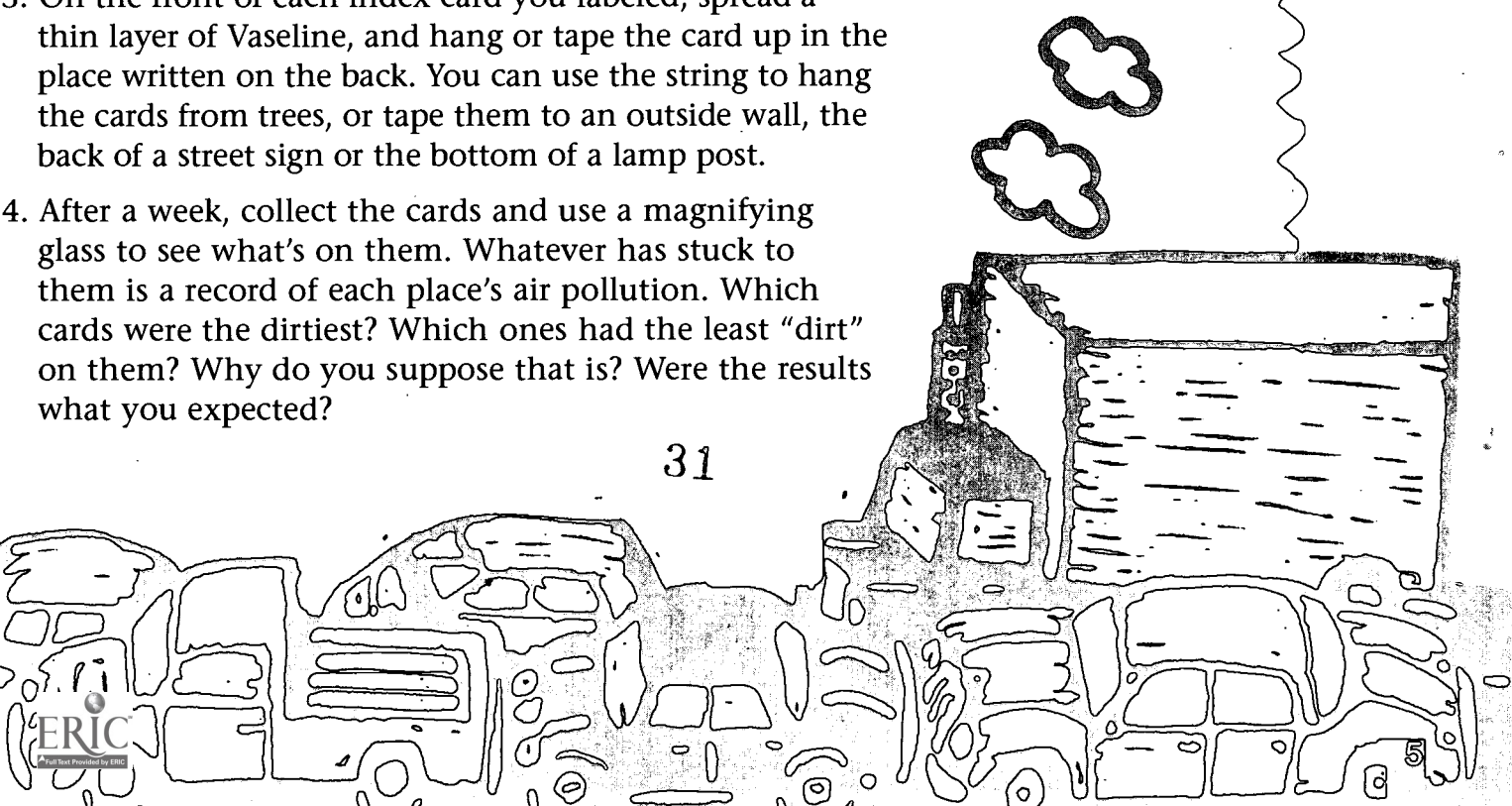
Many kinds of pollution, like litter or dirty water, are easy to notice. But there are other sorts of pollution that you can't even see, such as air pollution. This experiment shows you how much air pollution there is in different areas of your neighborhood.

For this experiment you'll need...

- Some 3" x 5" index cards
- A hole punch
- String
- Tape
- Vaseline
- A magnifying glass

Once you've got everything you need...

1. Punch holes at the ends of some of the cards, so you can hang them up with a piece of string. You can use tape for the rest of the cards.
2. Think of some places around your home or school that might have different amounts of air pollution. Think especially about which places have different numbers of cars or other vehicles driving by, but don't forget that there can be air pollution indoors, too. Write the name of each place you want to test on the back of one of the index cards. (Some places you might be curious about are: your yard, your garage, your bus stop, the bus loop, an intersection near your house and/or a busier one in town, etc.)
3. On the front of each index card you labeled, spread a thin layer of Vaseline, and hang or tape the card up in the place written on the back. You can use the string to hang the cards from trees, or tape them to an outside wall, the back of a street sign or the bottom of a lamp post.
4. After a week, collect the cards and use a magnifying glass to see what's on them. Whatever has stuck to them is a record of each place's air pollution. Which cards were the dirtiest? Which ones had the least "dirt" on them? Why do you suppose that is? Were the results what you expected?



The Power of the Pen

Kids can educate a lot of people about the environment by using the "power of the pen." Writing letters to newspapers, magazines, and government leaders can show adults that kids want to learn more about taking care of our world. What's more, editors at newspapers and magazines like to hear from kids. By getting your letter printed, your ideas can influence many readers. In your letter, you might ask the editor to include more articles on the environment or to print your guest essay, poem or artwork. You can also respond to articles which you liked or didn't like.

Here are some tips to help you get started...

Use good writing skills — Read the letter aloud and slowly to make sure it's clear. Don't forget to check for spelling errors.

Localize it — Add your own experiences to the letter. Editors want to know how environmental issues affect you and your town. Also, it will help the reader understand how important these issues are to you.

Identify yourself — Include your full name, address, phone number and age.

Here's a sample letter to give you some ideas on what you might say. Write a letter of your own and let us know if you get it published.

Date

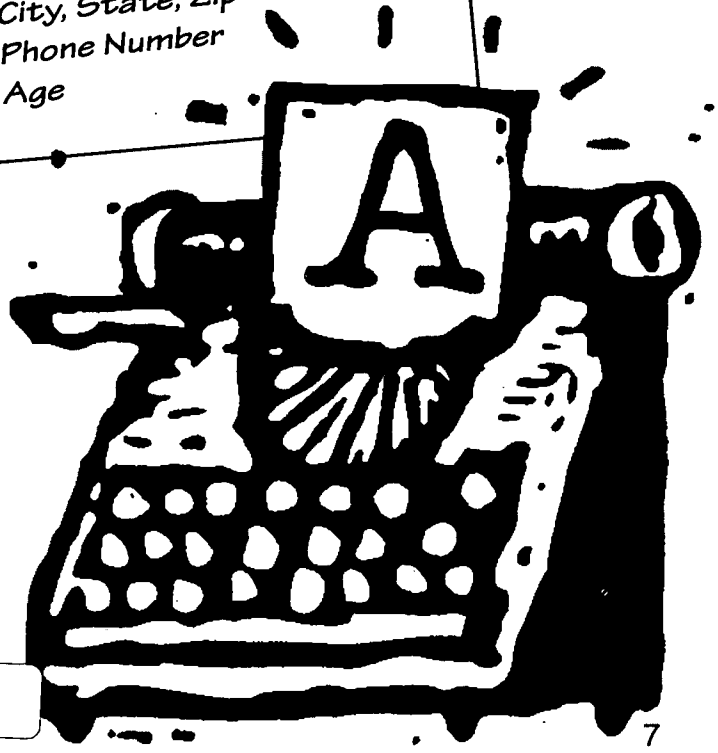
Editor
Name of Publication
Street Address
City, State, Zip

Dear Editor,

I see garbage floating down streams in our town. Cars in traffic jams are polluting the air. I know more people on the planet will only make these problems worse. I want to make sure there is clean air so future generations can go outside at recess, play basketball after school and climb trees near rivers and streams. Kids care about the environment. My friends and I want to learn more about cleaning up our town and planet. Please help by writing more articles about saving the environment. Also, encourage parents to support school programs that teach kids how to improve the planet. If we start now, everyone can make a difference.

Sincerely,

Your Name
Street Address
City, State, Zip
Phone Number
Age



For addresses of your favorite magazines, check inside their front covers. Some magazines to consider include: *Highlights, American Girl, Boy's Life, Cricket, Junior Scholastic, Metrokids, Ranger Rick, Scouting, Seventeen, Sports Illustrated for Kids, YM, 3-2-1 Contact, US Kids, National Geographic World* and *Zillions: Consumer Report for Kids.*

Environmental Art:

Washington D.C., the capital of the United States is the home of the President, Vice-President, and the two houses of Congress (the Senate and House of Representatives). They are all elected by voters like your parents to represent them. These men and women make the laws and rules that govern everyday life. All adults and children are affected by the laws passed by Congress and the President.

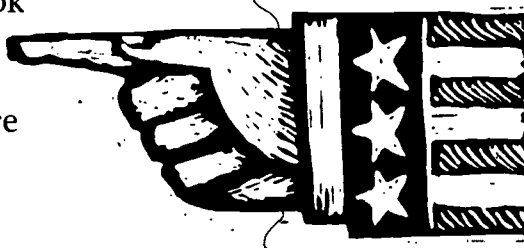
An old proverb says "a picture is worth a thousand words." So why not send a strong, clear message to your lawmakers about how you want the future to look for people and the environment? Use your imagination and some creativity. Many legislators display such artwork in their offices.

Some Things to Consider:

- What kind of materials do you want to use? Ask an adult to help you gather supplies: paper, crayons, paint, glue, markers, magazines (for a collage), etc. Remember that you want to be able to put your artwork in the mail, so you should be able to roll it in a tube or place it in a large envelope.
- What do you want to tell your Congressperson about population and the environment? Do you want to include a short message or a slogan?

A Capital Idea

Picture Ideas



- Draw a picture of your ideal community. What do the people look like? What kinds of houses do people live in? What does the neighborhood look like? Is there space to play? Is there clean air and water? Are there trees, lakes, mountains and animals? Is there enough space, clean water, food, homes and resources, for everyone?

- Portray an image of people living in balance and harmony with the environment. What does their environment look like? What can be done to help people live in balance with the Earth? What would you like to see the Earth look like in 20 years? In 50 years? In 100 years?

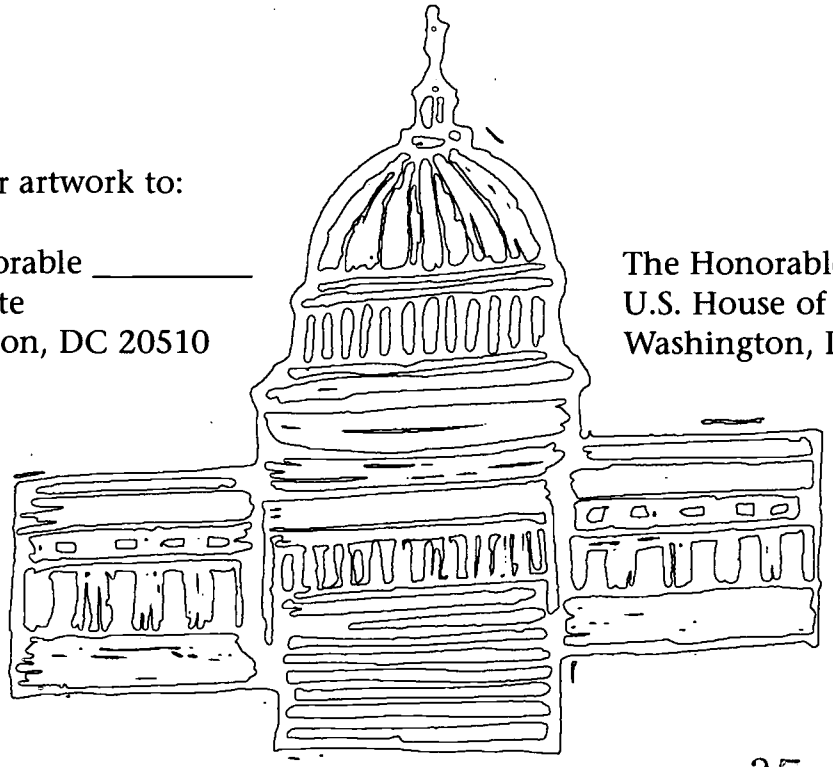
- You may also want to include a short note explaining your artwork and what it means to you.

If you do not know the names of your Senators and Representative, you can call your local Board of Elections (listed in the phone book blue pages), or the League of Women Voters (listed in the phone book's white pages).

Send your artwork to:

The Honorable _____
U.S. Senate
Washington, DC 20510

The Honorable _____
U.S. House of Representatives
Washington, DC 20515



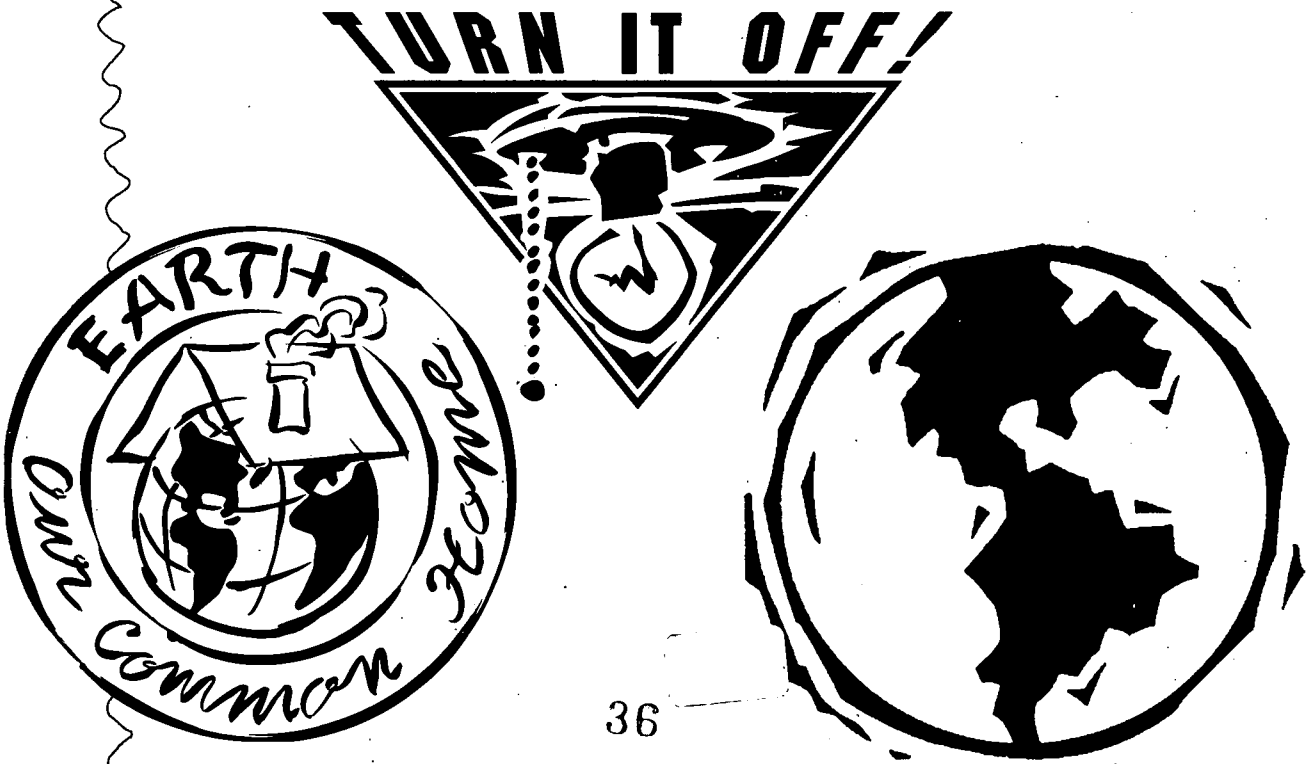
STICK TO IT!

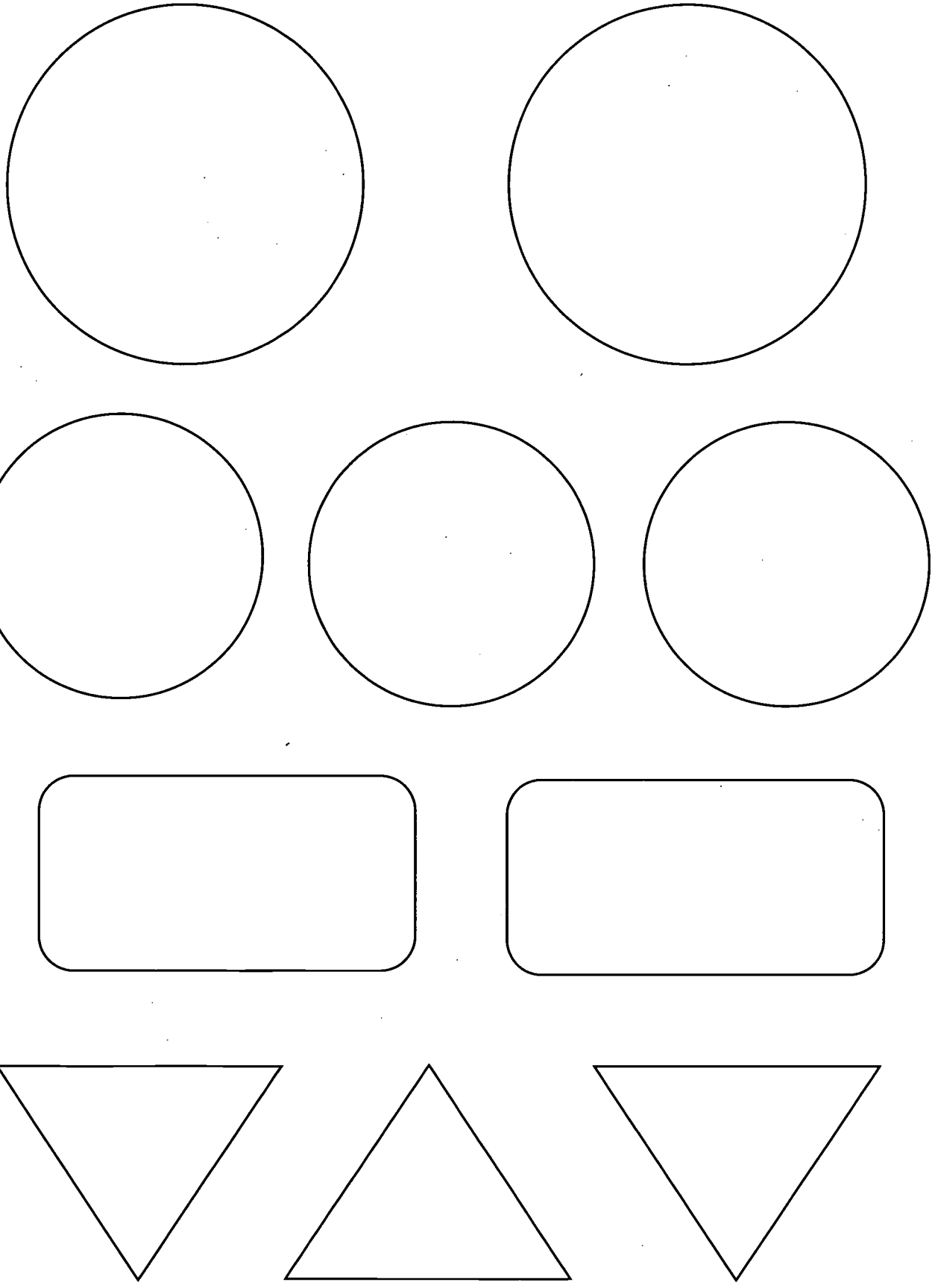
Stickers are everywhere. They let people know where we go to school, what sports teams we root for, and what slogans we think are funny. Stickers also let the world know what we think about certain issues. What's more, stickers are easy to make. Here's how:

Materials:

- Large mailing labels (one is enclosed in the "Kids PACK" for you)
- Pencil
- Different color markers
- Scissors

1. Select one of the shapes from the next page. With your pencil, shade the back of the shape. Place the shape page (shaded side down) on top of the label and trace the outline of the shape you choose. You should now have an outline of the shape of your label.
2. Use your markers to write words and drawings inside of the shapes.
3. Cut out your sticker from label paper. Peel off the backing. Now you have stickers to put on your notebook or any other place that stickers are allowed!





Kid's PACK Evaluation

We hope you have enjoyed this PACK. We would really like to know how you have used it, and what parts you liked and didn't like. Please answer as many of the questions below as you can and send it back to us by stapling it shut and putting a stamp on the other side. Put your return address in the corner so we can send you a gift.

How old are you? _____ Are you a boy or a girl? _____

How did you get or find out about this PACK?

[ ] parent [ ] teacher [ ] club [ ] nature center
[ ] I ordered it myself
[ ] I saw it in _____
[ ] other_____

What was your favorite part of the PACK?

Were there any parts you didn't like? If so, what were they?

Did you have any trouble understanding the readings? [ ] yes [ ] no

Before this PACK, had you ever learned about population growth in school? [ ] yes [ ] no

Did you grow radishes for the "Crowding Can Be Seedy" activity?

[ ] yes at home, [ ] I did it at school, [ ] I did it at _____,
[ ] no, but I plan to, [ ] no, I don't want to.

Did you put up an index card to catch pollution? [ ] yes, near my house, [ ] yes, near my school, [ ] it was gross, [ ] it was clean, [ ] I didn't put any up.

How many of the questions for "*My Place on the Planet*" did you fill in?

[ ] 0, [ ] 1-3, [ ] 4-10, [ ] 11-15, [ ] All of them

Did you write any letters?

[ ] yes I wrote to _____, and [ ] a copy of my letter is attached, [ ] I already sent ZPG a copy, [ ] I can't find it now.
[ ] I plan to write to_____.
[ ] I don't plan to because _____.

If you wrote a letter, did you get any responses? [ ] yes [ ] no

Did you send any art work to your members of Congress in Washington, DC? [ ] yes [ ] no

Do you know who your senators and representative are?
[ ] I already knew them, [ ] I didn't before, but I found out from _____, [ ] I don't know who they are.

Do you think population growth will affect you? If yes, how?

What do you expect to do to improve things in your community in the coming years?

Please use the following space to make any other comments.

Name:_____ _____

Address:_____ stamp

_____

City:_____State_____

Zip:_____ _____

ZPG Population Education Program
1400 16th St., NW, Suite 320
Washington, DC 20036

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