

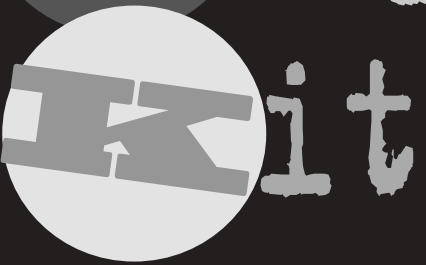
# POPULATION



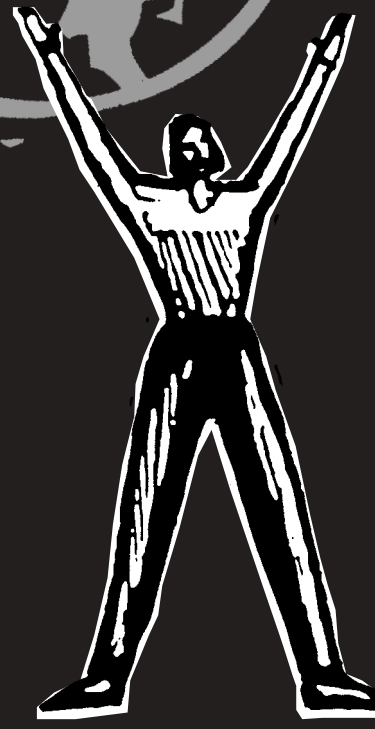
Population

Awareness

Campaign



it part 1



# People Count: Facing the

## Chao

It is a warm morning in Shanghai, China, as 15-year old Chao bikes to school. She pedals slowly, careful not to run into any of the thousands of other bicyclists riding down the street. Only one in 200 Chinese citizens owns a car. Most, like Chao and her parents, rely on their bicycles to get around the city.

The bell begins to ring as Chao pulls into the schoolyard. She runs to meet her friends, Lee and Vu, with whom she spends a great deal of time. Like Chao, neither Lee nor Vu has any brothers or sisters. Chinese couples who pledge to have only one child receive better homes, jobs, education and health care from the government.

Chao's parents and grandparents often remind her of the devastation of the great famine in China in the 1950s, which prompted the government to institute policies encouraging couples to have fewer children, so that people would never go hungry again. China, like other countries in the world, has experienced a great population explosion. Today, 1.3 billion people (a little over 1/5 of the world's population) live in China, straining the country's natural resource base.

Although Chao has a boyfriend, she knows it will be many years before she considers marriage. In an effort to keep the birth rate down, the government will not allow young people to marry before their early twenties.

## Nisa

Nisa's day begins early in her Kenyan village. She wakes at dawn to get a fire started to prepare breakfast for her three children. Yesterday, she had to walk over an hour to find any kindling wood, as the forests have all but disappeared from the region. Though only 18, Nisa has been married for four years and has had a child each year since her wedding day. Now her husband has gone to the city to look for work, since they can't feed all of them on their small farm.

Childrearing is nothing new for Nisa. As the oldest of seven children, she often watched over her younger brothers and sisters instead of attending school. She hopes her children will have the opportunity to finish school, but she doesn't know how they'll be able to pay the tuition for secondary schools. Besides, she'll need the help on the farm just to grow the subsistence crops and to gather the wood and water.

# Population Challenge

## **Roland**

Roland sometimes wonders what life must be like in other parts of the world, beyond his island home in Barbados. As a lifeguard on weekends, he sometimes chats with tourists from the U.S., Canada and Europe about their cosmopolitan cities filled with theaters, art museums and stores. He also asks them about the crime in their cities which he hears so much about in the newspapers and on TV.

At 16, Roland is considering attending college and doesn't know whether he should stay in Barbados. There are certainly a lot of reasons to stay, aside from just the terrific climate and ocean breezes. Barbados is one of the more prosperous nations in the Caribbean with one of the highest literacy rates in the Western Hemisphere. The population of the island hasn't grown much since Roland was young. Most of his friends only have one brother or sister and people are very concerned about the island's environment. A typical soda bottle might get washed and refilled by the bottling company dozens of times, since there is little room for landfills on a small island. He gets very annoyed when he sees tourists leaving litter on the beach because he feels that it shows disrespect for the Bajan people and the beauty of the country.

## **Ricky**

Ricky had been counting the days until he got his driver's license. Living in the San Fernando Valley without a car meant having to depend on his mom or older friends to get around. Now, he and his friends are sitting in an overheated car on the 405 Freeway listening to the Lakers game on the radio instead of from the stands because the traffic jam has held them up for two hours. Although frustrated, Ricky and his friends know that such traffic problems are a fact of life in Los Angeles.

They talk in the car about heading for the beach the following weekend. As much as Ricky loves to swim, his mom has warned him about the oil-soaked water and the debris that's been washing up on the sand. He remembers his grandmother once telling him that when her family moved to Southern California from Mexico, there were orange groves as far as the eye could see and that no one ever locked their doors to their homes, because crime was rare. Ricky barely recognizes the place she described.

CHAO

NISA

Roland

Ricky

# Teens

throughout the world like Chao, Roland, Nisa and Ricky have very different lifestyles, but are all affected in some way by population pressures. For Chao this is obvious. Her country's population boom has forced the people to have small families, marry later and adapt to crowded conditions in the cities. Roland is proud of the fact that his island, though home to 277,000 people, isn't growing very much and that people have adopted sustainable practices, such as recycling, to keep his home beautiful and welcoming to visitors.

Nisa might not be able to relate to either Chao or Roland. She doesn't even know what it is to be a teenager in much of the world. One day she was a child and now she's a mother with lots of responsibilities. Population growth in her country has decimated some of the forests and eroded the land, making it hard for her to feed her family. Now her husband has gone off to the city, only to compete for jobs with millions of other young men from the villages. And for Ricky, population pressures are present on the overcrowded freeways and in the environmental degradation he sees in the natural landscape.

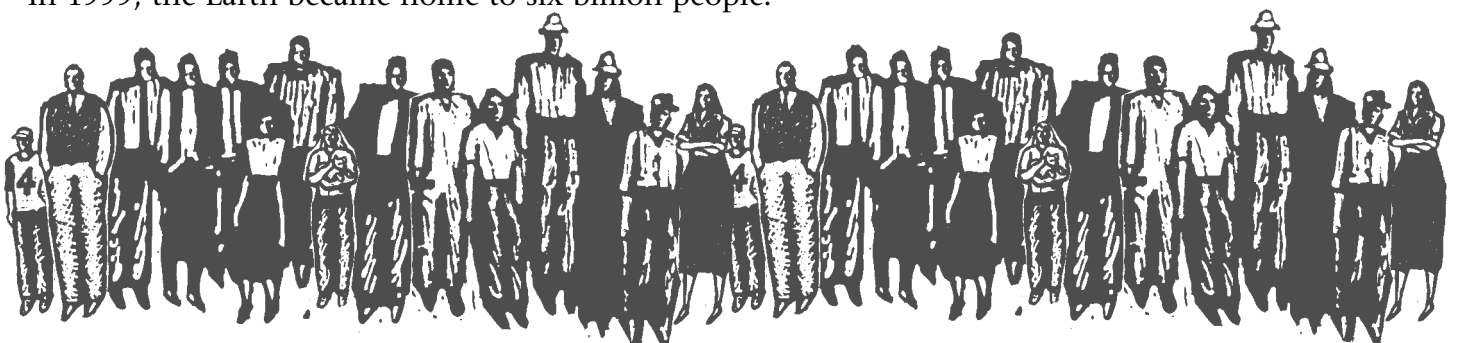
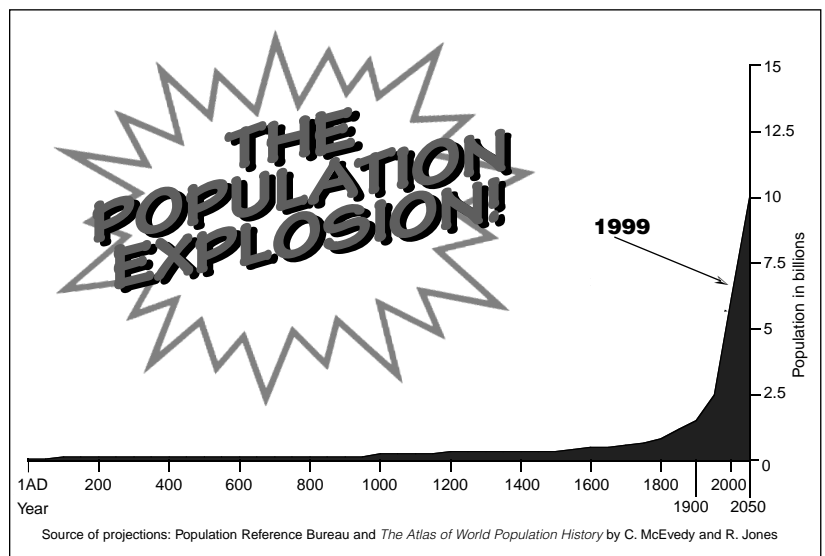
Population growth is sometimes referred to as the "silent explosion." It happens at such a steady, gradual pace that people may not realize that their surroundings are changing as a result of more people all trying to do the same activities and share the same resources. Today our world population of over six billion grows by almost 80 million people every year — the equivalent of adding another Germany to the globe annually. All of these people require food, fuel and homes, straining our planet's natural resource supply. In richer countries like ours, we demand even more from our Earth to provide us with numerous comforts such as air conditioning, stereos and hot showers. But our planet is a finite system and can only sustain so many people. If the population grows unchecked and people consume more than their share of resources, the quality of life diminishes for everyone.

# What Ignited the Population Explosion?

**T**he population explosion has been very recent in the scope of human history. People lived on Earth for about three million years before the world population reached 500 million at about 1600. Until then, birth rates and death rates were about the same, keeping the population stable. People had many children, but a vast number of them died before age five. Without modern medicine, vaccines, and clean, healthy living conditions, many children did not survive common diseases.

The late 1700s and 1800s in Europe and North America was a time of great advances in science and technology. This Industrial Revolution produced many inventions which promoted longer life, such as improvements in farming, nutrition, medicine and sanitation. By 1930, the world population reached two billion.

As people in Europe and North America moved to the cities to live and work, families became smaller. It was no longer necessary to have many children to farm the land in these countries. By the mid-twentieth century, death rates throughout the rest of the world also began to drop as medical technologies from the industrialized world spread across the globe. But birth rates remained high in less developed countries, since their economies were based largely on farming, demanding larger families to work the land. In 1960, the world population reached three billion. Just 15 years later, in 1975, the population soared to four billion and topped five billion in 1987. In 1999, the Earth became home to six billion people.



# AMAZING

# ECO FACTS AND FIGURES

**1** ■ Americans make up less than 5% of the world's population, but use 25% of the world's energy.



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



**6** ■ Each American produces about 4.6 pounds of garbage each day.

**8** ■ Although water covers 3/4 of the Earth's surface, less than 1% of it is readily available for us to use.

**9** ■ Each day, livestock in the U.S. consume enough grain and soybeans to feed every American for five days.

**2** ■ Each American's energy use is equal to that of 2 Germans, 7 Iraqis, 12 Columbians, 29 Indians, 127 Haitians or 395 Ethiopians.

**3** ■ There are more shopping centers than high schools in the United States.

**5** ■ Tropical rainforests cover only 6% (1/14) of the earth's land surface, but house over half of all the plant and animal species in the world.



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



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

**11** ■ 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.



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

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

**17** ■ Three billion people around the globe are surviving on less than \$2.00 a day.

**18** ■ At the current rate of growth, the world population would double in just 54 years.

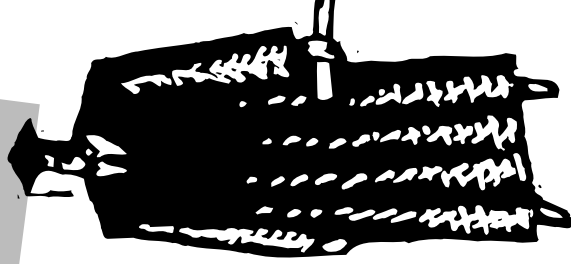
**19** ■ The United States has one of the highest adolescent pregnancy, birth, and abortion rates among affluent countries.

**20** ■ For a child born in 1997, it will cost parents over \$231,680 to raise that child to age 18, and that just includes the basic expenses of food, clothing, housing, medical care, education and transportation. College costs can tack on another \$80,000 - \$180,000!

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

**14** ■ Americans use 35 million paper clips a year.

**16** ■ The energy generated from one recycled six-pack of aluminum cans will operate a television set for 18 hours.



# Why Should You Care?

**W**ill we ever reach a point where there are too many people on Earth? Yes. Every environment has a carrying capacity — the point at which there are not enough natural resources (food and fuel) to support any more members of a given species.

Only a small amount, 11 percent, of all the land in the world is arable (able to be farmed). The rest is built up into cities and towns or is too cold, wet, rocky or dry to grow crops. While the number of people continues to grow, the small portion of land which must support these people remains the same, or becomes smaller as cities expand. Already one billion people suffer from malnutrition because they do not have enough to eat.

Many countries have tried to grow more food to meet the increasing demand and to save their people from starvation. Each year, 33-34 million acres of forests (an area equal to the size of Florida) are cut down to create more farm and grazing land and to obtain wood for fuel and other uses. The loss of these forests affects the entire Earth.

We all depend on forests, especially the tropical rainforests of Asia, Africa and Latin America, to control the world's weather patterns. And we rely on forests to absorb the excess carbon dioxide (CO<sub>2</sub>) released from burning fuels in our cars, homes and businesses to prevent global warming. The rainforests are also home to half of the world's animal and plant species, some of which may contain the ingredients for medical breakthroughs.

The forest is not the only natural resource affected by overpopulation. Soil, too, is destroyed. In search of food, growing numbers of people have expanded their livestock herds. These billions of animals are now grazing the world's grasslands to dust. Croplands have been destroyed as the rich topsoil blows away after being overworked and misused.

This devastation of the land has created millions of environmental refugees worldwide, people forced to migrate from their homes in search of more fertile land, cleaner water and a better quality of life.

*“Each year, 33-34 million acres of forests (an area equal to the size of Florida) are cut down to create more farm and grazing land.”*



# Does the U.S. Have a Population Problem?

**Y**ou might associate overpopulation with the teeming masses of people in countries like India and China. Surely, a huge, wealthy country like the United States doesn't have a problem, or does it? Every year, our country's population grows by almost three million people. That's like adding another city the size of Houston every year. Some of this increase is due to immigration, but most U.S. population growth results from having one of the highest birth rates among industrialized countries. Births to teenage mothers, alone, total a half million each year.

Some argue that population growth in the U.S. may have more serious environmental impacts than growth in any other part of the world because of the "typical American lifestyle." Each American uses more energy, more water and produces more garbage than a person living anywhere else in the world. In one year, the average American uses energy equal to 63 barrels of oil, almost 11 times as much as the average Chinese. Aside from using up energy sources at such a fast pace, Americans greatly add to the world's air and water pollution by burning fossil fuels, such as oil and coal. All of the carbon dioxide released from burning these fuels makes the U.S. one of the leading contributors to global warming.

*"Each American uses more energy, more water and produces more garbage than a person living anywhere else in the world."*



# What Can Be Done?

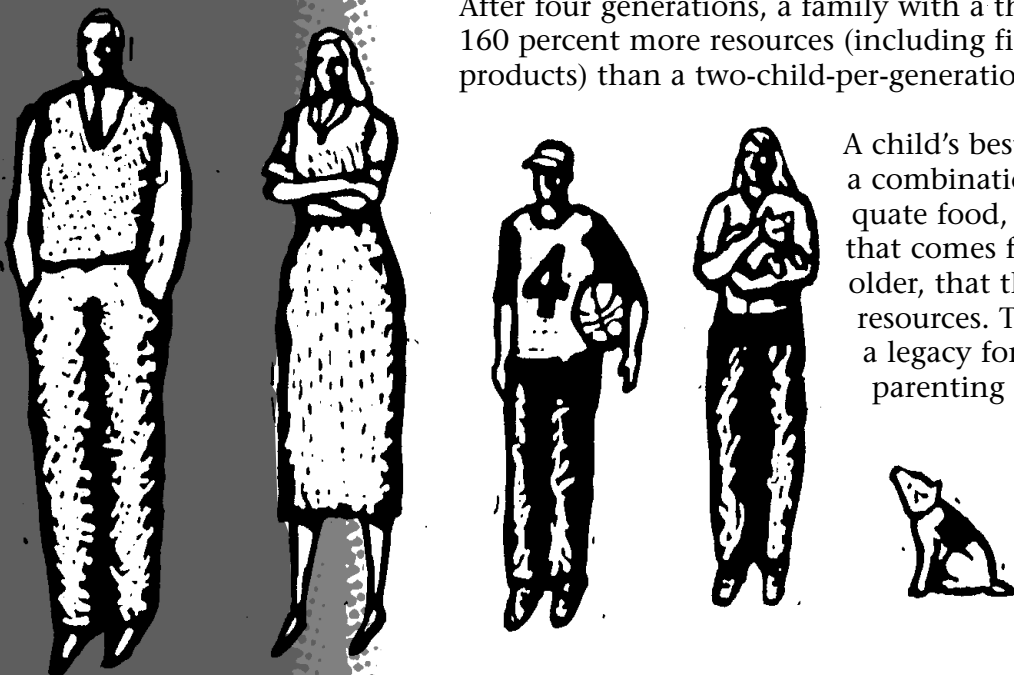
**W**hat can be done? There are better alternatives than competing with one another for the last best space or the only remaining clean water. Certainly, we can encourage our government to help us and other nations deal with population and environmental problems. But there are also things we can do as individuals, choices we can make in our lifestyle and in how we raise our families, that will significantly reduce the stress on our resources and environment.

**Lifestyle:** We can protect our environment by making thoughtful choices about where we live, how we use energy in our homes, what we eat, how we travel and whether and how we use “throw-aways.” By making such choices, we can have a collective, healing impact on the biological systems that sustain us.

**Family Size:** Many American parents already limit their families to one or two children (a number that would lead to population stabilization). Young couples recognize the benefits of waiting until they’re older to have children and then spacing their births by several years — two factors that slow the growth rate. Your parents and teachers are the best sources of information on how to plan a family. This may even be covered in your school’s family life or sex education classes.

Do such choices really make a difference? Compare two families: After four generations, a family with a three-child tradition will consume 160 percent more resources (including fish, meat, wood and vegetable products) than a two-child-per-generation family.

A child’s best chance for a happy life flows from a combination of things: parental love, adequate food, water and space; and the security that comes from finding as he or she grows older, that the next generation will have these resources. Two commitments can protect such a legacy for the world’s children: responsible parenting and caring for the environment.



# PENNING

## the Perfect Pop Paper



**T**he next time one of your teachers asks you to write a paper or to give a speech, consider using an issue related to population or the environment as a theme. You could use one of the following sample ideas as a topic, or think of one related to an issue that affects you locally.

- Endangered species
- Rainforests
- General population information  
(history of growth worldwide, in the U.S., or in your area)
- Recycling (landfill space, plastic vs. cloth diapers)
- Government's role  
(in environmental protection, family planning, international aid)
- Schools and sex education
- Health care (prenatal, birth control)
- Compare different countries' policies toward population (Mexico vs. China, Indonesia vs. United States, Columbia vs. Nigeria)
- Food crisis (Green revolution, Sudan, Somalia)
- Immigration (refugees, laws and restrictions, reasons why people migrate)

Your local or school library is full of information on these topics, and librarians are excellent sources for ideas and places to find information. In addition to encyclopedias and almanacs, atlases have good maps of the environment. General books on population and the environment include:

*Earth in the Balance: Ecology and the Human Spirit* (Al Gore, 1992)  
*The Population Explosion* (Paul R. Ehrlich and Anne H. Ehrlich, 1990)  
*State of the World* (Worldwatch Institute, annual)  
*Beyond the Limits* (Donella Meadows, 1992)  
*How Many People Can the Earth Support?* (Joel E. Cohen, 1995)

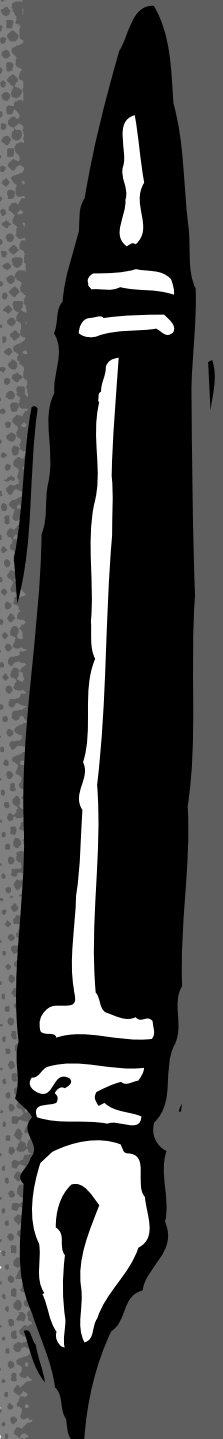
**I**n addition to using facts provided by this kit and other sources, you may wish to speak with people of different age groups who have lived in your area. Consider interviewing individuals at a local retirement home for an oral history of your community. You also may want to include a quote or use one to "jump-start" your brain. These statements may help give you an idea:

***"In wildness is the preservation of the world."*** (Henry David Thoreau)

***"What is man without the beasts? If all the beasts were gone, men would die from a great loneliness of the spirit. For whatever happens to the beasts soon happens to man."*** (attributed to Chief Seattle)

***"We do not inherit the Earth from our ancestors, we borrow it from our children."*** (Native American saying)

***"Issuing fewer invitations to the next generation will insure that all those invited have a better time."*** (Margaret Mead)



TEEN PACK PART 2

FOOD

Info for  
thought



a global simulation

# Food For Thought: A Global Simulation



**H**ere's a population activity that's perfect to do with any group you may be a part of: a class at school, Scouts, 4-H, youth group at your church or temple, or an environmental club. It demonstrates how the demographics and lifestyles in different regions of the world affect the quality of life for the people in each of those regions. It's fun to do, and is a great way to get people thinking and talking about population!

## Materials:

Yarn or String  
108 toothpicks  
154 individually wrapped candies (Hershey's Chocolate Kisses™ work well)  
10 plastic sandwich-sized resealable bags  
Ambassador's Cards (included)  
Masking tape

## Preparation:

1. Measure the yarn or string in the lengths indicated on the chart (on the back cover) for each region. Tie the two ends of each length of yarn together and mark it in some way so you'll know which region it represents. Wind each one into a bundle to keep them from getting tangled.
2. Count out the candies that will represent the wealth for each region. Put them in individual labeled bags, using the information from the chart (for example, the label for North America's bag should read: "North America—GNP: \$34,351—98 candies").
3. Count out, bag and label the toothpicks for the energy consumption for each region as you did with the candies.
4. Make a photocopy of the "Ambassador Cards" page, and cut out the cards for each region.

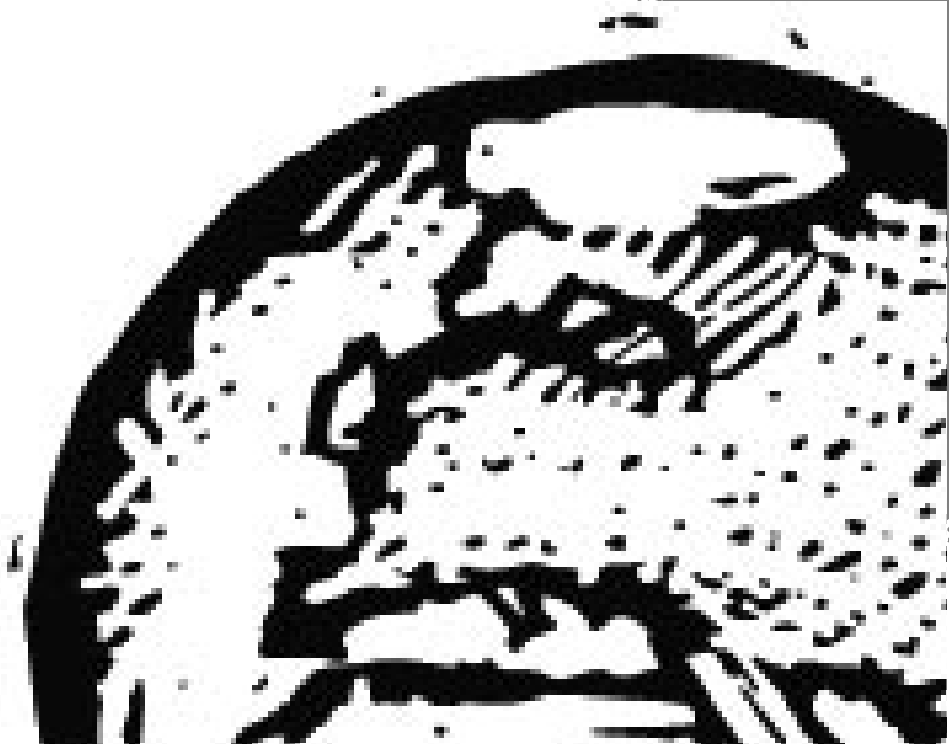
5. Familiarize yourself with the activity steps so you'll be comfortable with it during the presentation.
6. Before the group arrives, lay out the yarn on the floor. Make each area roughly the shape and position it is in relation to the other regions.
7. Explain the activity to the participants, using the suggested introduction, or in your own words. Remember to make lots of eye contact.

**Introduction (Script):**

"This activity is designed to demonstrate how differences in population and resource use in five regions of the world combine to impact the quality of life for the people who live in each area. As you can see, I've used string to mark off space to represent each region. There's North America, Latin America, Europe, Asia and Africa."

"We need five people to serve as 'ambassadors' for the regions. Each one gets one of these cards and stands in the corresponding region." [Hand out the cards to five people and direct each one to his or her area.]

"Now we need to populate these regions with the appropriate number of people. Each one of you represents 100 million people." [This is true for 60 participants. Quickly direct the proper number of people to each region as dictated by the chart. If you have far fewer than you expected, put all of the non-ambassadors in Asia. Then go to each region and explain how many people would be in it if you had the proper number of people for this exercise. Conveying the density of each region's population is important.]



# Regional Statistics:

“

**N**

ow I'm going to ask that each ambassador read aloud the information on the card I gave you. Please start out by explaining which region you represent. Then we'll go around the room and hear the same statistic from each ambassador. So, each ambassador will read statistic number one, their estimated population, then each will read statistic number two, their birth rate, and so on." A few of the statistics will require a brief clarification by you before the ambassadors start reading them, just to make sure everyone understands what they mean. You should jump in before the ambassadors read the statistics for the following items with this information:

*Rate of Natural Increase* is the percentage of growth caused by having more births than deaths in a year (does not include immigration or emigration).

*Infant mortality rate* is the yearly number of children who die before reaching the age of one year per 1,000 live births.

*Life expectancy* is the average number of years a person born today could expect to live in the region under current mortality rates.

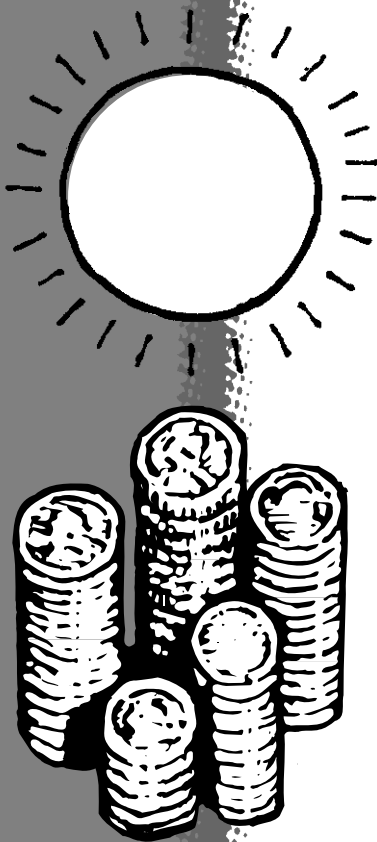
*Arable land* is farmland, or land capable of growing crops.

## **Energy Consumption:**

"The bags I'm handing out illustrate each region's per capita energy consumption, which is the amount of energy used by the entire region divided by the number of people in that region. The energy is represented as barrels of oil; each toothpick in these bags represents one barrel of oil. So Europe, with its annual energy consumption per person equivalent to the use of about 27 barrels of oil gets a bag with 27 toothpicks." [Hold the bag up so the whole room can see how many toothpicks are in it, then hand it to the European ambassador. Distribute the other bags of toothpicks the same way.]

## **Wealth:**

"These bags illustrate each region's gross national product (GNP), which is the value of all goods and services produced by a country's citizens. These bags represent the amount of money each citizen would get if that region's GNP were distributed equally among them. Each candy in these bags represents \$350. So Africa, with its per capita GNP of \$664, gets 2 candies." [Hold the bag up so the whole room can see how full the bag is, then pass it to the African ambassador. Distribute the other bags of candies the same way.]



# Follow-up:

**T**hese questions and answers, as well as the conclusion below, are meant to shape discussion after all the data has been presented to help the group make important connections. Remember that each group may react a little differently.

**Question:** How do the people in Asia, Africa and Latin America feel about getting a few Kisses per person, while the North Americans get 90 Kisses per person? What would you like to do about it?

**Answer:** [Possibilities include] Move to North America; get some foreign aid from the northern countries.

**Question:** Do those things happen in the real world?

**Answer:** Yes—many people are immigrating to North America in search of opportunity. [Ask the ambassadors to hold up their bags of toothpicks again.]

**Question:** What would happen if we lit all of these toothpicks right now?

**Answer:** [Possibilities include] We'd set off the smoke alarms; it would smell awful in here, etc.

**Question:** Who would have to breathe all that smoke?

**Answer:** We all would. Similarly, real air pollution doesn't just affect the area in which it's produced; it gets into the atmosphere and has an impact on the whole globe.

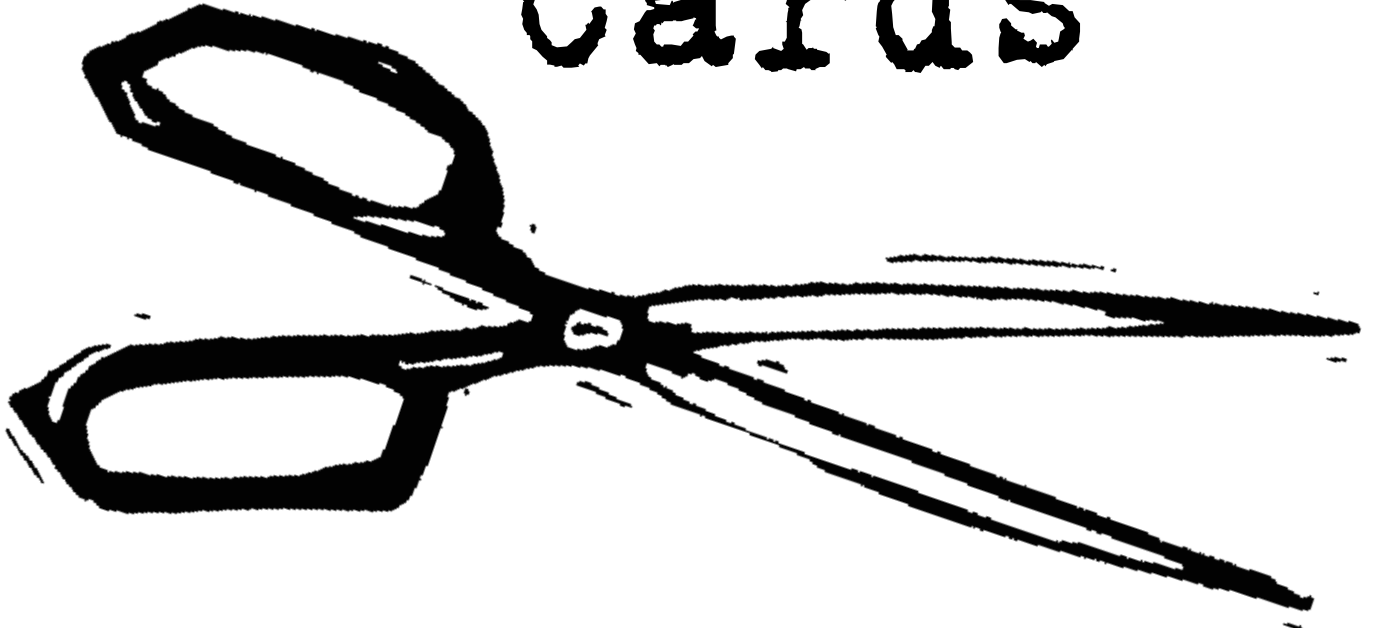
**Question:** Asia's population is expected to double in 54 years. If we came back here in 54 years and did this activity again, would we be able to fit twice the number of people in Asia as we have now?

**Answer:** No way.

## **Conclusion:**

There are many cause and effect relationships at work among these statistics. For example, let's look at Africa's infant mortality rate (86 per 1000) and the average number of children per woman (5.2). Is there a correlation there? Think about what life is like for most people in Africa. The economy is very different, as we can see by comparing their 2 candies to, say, North America's 98 candies. Most people farm to support themselves. They don't have retirement plans or Social Security to count on when they become too old to work. They depend on their children to take care of them then. Given the extremely high rate of infant mortality, African couples are likely to have a lot of children to improve the odds that some of them will survive to adulthood. The point is that all of these indicators combined can tell us a lot about the quality of life in these different regions.

# Ambassador Cards



I represent **North America.**

1. Our population is estimated at: **319 million**
2. Our population's annual growth rate due to natural increase is: **0.6%**
3. At this rate our population will double in: **116 years**
4. Our infant mortality rate is: **6 per 1000**
5. Our life expectancy at birth: **77 years**
6. Amount of arable land per person: **1.8 acres**
7. North American women bear an average of: **2.1 children**

I represent **Latin America.**

1. Our population is estimated at: **531 million**
2. Our population's annual growth rate due to natural increase is: **1.7%**
3. At this rate our population will double in: **41 years**
4. Our infant mortality rate is: **30 per 1000**
5. Our life expectancy at birth: **71 years**
6. Amount of arable land per person: **0.6 acres**
7. Latin American women bear an average of: **2.7 children**

I represent **Europe.**

1. Our population is estimated at: **728 million**
2. Our population's annual growth rate due to natural increase is: **-0.1%**
3. At this rate our population will not double.
4. Our infant mortality rate is: **8 per 1000**
5. Our life expectancy at birth: **74 years**
6. Amount of arable land per person: **1.0 acres**
7. Western European women bear an average of: **1.4 children**

I represent **Asia.**

1. Our population is estimated at: **3 billion, 766 million**
2. Our population's annual growth rate due to natural increase is: **1.3%**
3. At this rate our population will double in: **54 years**
4. Our infant mortality rate is: **53 per 1000**
5. Our life expectancy at birth: **67 years**
6. Amount of arable land per person: **0.3 acres**
7. Asian women bear an average of: **2.6 children**

I represent **Africa.**

1. Our population is estimated at: **840 million**
2. Our population's annual growth rate due to natural increase is: **2.4%**
3. At this rate our population will double in: **29 years**
4. Our infant mortality rate is: **86 per 1000**
5. Our life expectancy at birth: **53 years**
6. Amount of arable land per person: **0.6 acres**
7. African women bear an average of: **5.2 children**

# Food for Thought Distribution Chart

	North America	Latin America	Europe*	Asia**	Africa
Land Area (sq. miles)	7,099,448	7,922,197	8,782,320	11,927,208	11,443,826
Length of Yarn (with 60 participants)	35 ft.	36 ft.	38 ft.	44 ft.	43 ft.
2002 Population (with 60 participants) (with 30 participants)	319 million 3 1	531 million 5 3	728 million 7 4	3,766 million 37 18	763 million 8 4
Percent of Region's Land That is Arable	15%	16%	18%	25%	24%
Per Capita GNP Number of Candies (\$350 = 1 Candy)	\$34,351 98 Candies	\$3,882 11 Candies	\$12,539 36 Candies	\$2,416 7 Candies	\$664 2 Candies
Per Capita Energy Consumption (1 barrel of oil = 1 toothpick)	63 barrels of oil	9 barrels of oil	27 barrels of oil	6 barrels of oil	3 barrels of oil

\* Europe also includes the former Soviet republics of Belarus, Russia and the Ukraine.

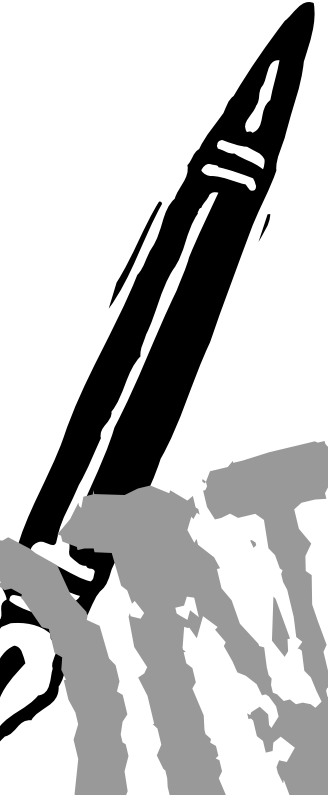
\*\* Asia also includes the former Soviet republics of Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan.

Sources: "2002 World Population Data Sheet." Population Reference Bureau, Washington, DC.; Food and Agriculture Organization of the United Nations. FAOSTAT Online Database, 2002. <http://apps.fao.org>; Energy Information Administration, U.S. Department of Energy, 2002. <http://www.eia.doe.gov>; 2002 World Development Indicators. The World Bank. 2002.

# TALKING



# ACTION



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# P for the PLANET

# Be An Eco-Hero!

**G**etting involved in your community is not as hard as it may seem. With a little research, motivation, and hard work you can see your efforts pay off towards a better environment! All you have to do is look around your community, see what needs to be done, and go to it! Many teens just like you have started working to improve their environment. Some began their projects on their own, while others are working within their classes at school. Regardless of how they got started, the important thing to know is that teens 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 public places near your house or school that need to be cleaned up, or turned into a park or garden. Maybe you can start environmental projects in your school, such as recycling or petitioning for environmental science courses. Decide on one thing you would like to see transformed, and think about ways to change it. In some cases you will need an adult to help you put your ideas into motion. If you do find you need assistance, good people to ask are parents, teachers, librarians, counselors, or friends.

Sarah Melton got involved with the environment when she was working on an award for the Girl Scouts. Believing that “without a healthy environment we have no future,” Sarah made posters depicting various ecological themes and asked her troop leader for help in contacting the local librarian. The library agreed to display the posters and to publish information about her “Ecology Corner” in its newsletters. A local restaurant then agreed to display older posters once the library took them down. Posters, skits, and presentations are easy ways to get your fellow classmates and local businesses working within the community to improve the environment. Encouraged that she received as much response from adults as from kids, Sarah helped to further spread environmental awareness through public speaking at schools and churches. “We’re not asking kids to change the world,” she explains, “just to do their part.”

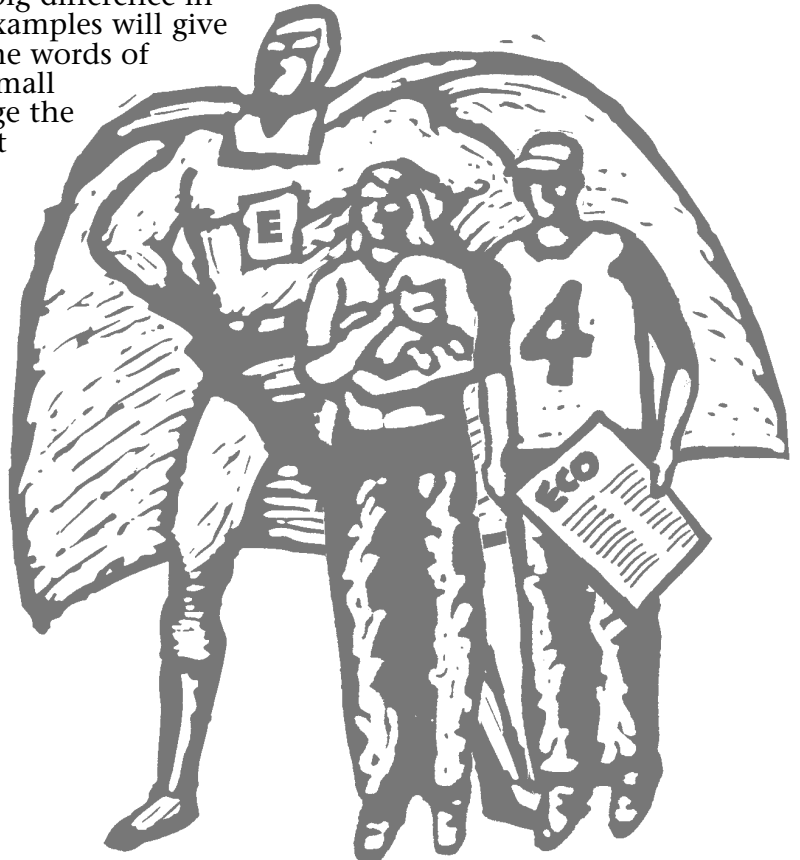
Raising awareness was also a central theme of Mrs. Robin Ellenbecker’s math class in Cheyenne, Wyoming. Interested in the environmental records of local fast-food restaurants, the students asked questions about what the restaurants were doing to reduce waste. After analyzing the responses, the class chose the restaurant with the best environmental track record and picketed the front. Instead of using negative signs, students held signs with messages such as “Buy Pizza Here” and “This Restaurant Makes a Difference.” Their efforts raised

environmental awareness in their community and promoted eco-friendly practices among other restaurants. Positive reinforcement can often be as effective as criticism! Look for organizations in your area that are doing good things and highlight them through letters to your local newspaper or TV station as positive role models.

Ocean Robbins agrees that encouraging awareness is the first step to initiating change. "We need everyone. There's plenty of work to do, and we all need to be a part of the transformation." Since the age of seven, Ocean has been involved in a variety of environmental activities, including founding Youth for Environmental Sanity (YES). YES, made up of teens and young adults, advocates reducing population growth, boycotting companies with bad environmental records, and eating organic foods. Emphasizing that students need to take an active role in their future, Ocean stresses that "Grassroots activism has enormous power to create change in the world."

Each project you undertake to preserve your environment will bring a healthy future for all a step closer. No matter what your interests are, your efforts can make a big difference in your environment. Hopefully, these examples will give you some ideas of where to start. In the words of Margaret Mead, "Never doubt that a small group of concerned citizens can change the world. Indeed, it is the only thing that ever has."

*For more ideas, check out Kid Heroes of the Environment published by The Earthworks Group and The Kid's Guide to Social Action by Barbara A. Lewis from free spirit Publishing*



# How Do You Make a Difference?

There are numerous books available at bookstores and libraries with suggestions for environmental stewardship. Here are just a few ways to get started:

## **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 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. Fix a leaky faucet. Steady drops of water can add up to as much as 9 gallons during a day, enough to fill a big fish tank!

## **Wildlife:**

1. Be respectful of wildlife habitat when you're in a park, on the beach or any other natural area. Never leave litter behind. 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 that species' habitat.

2. Do not buy products made from any animals which are considered endangered or threatened (ex., alligator skin boots or ivory jewelry).

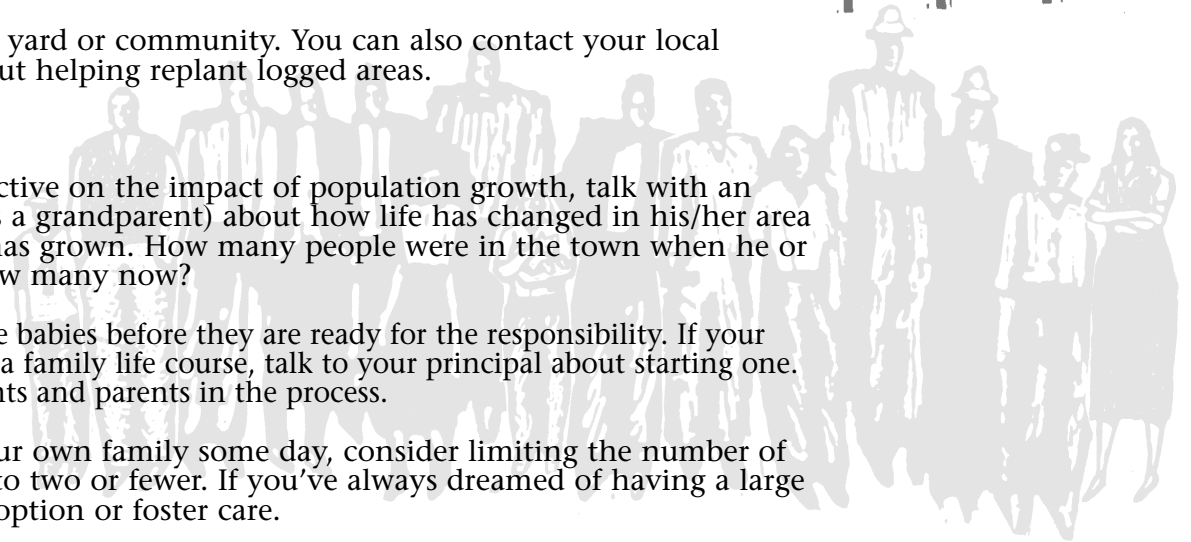
### **Forests:**

1. Recycle your newspaper, magazines, telephone books and other paper and make sure your family and school are doing the same.
2. Plant a tree in your yard or community. You can also contact your local forestry service about helping replant logged areas.



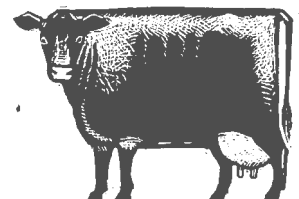
### **Population:**

1. To get some perspective on the impact of population growth, talk with an older adult (such as a grandparent) about how life has changed in his/her area as the population has grown. How many people were in the town when he or she was young? How many now?
2. Many teenagers have babies before they are ready for the responsibility. If your school doesn't have a family life course, talk to your principal about starting one. Involve other students and parents in the process.
3. When planning your own family some day, consider limiting the number of children you have to two or fewer. If you've always dreamed of having a large family, consider adoption or foster care.



### **Food:**

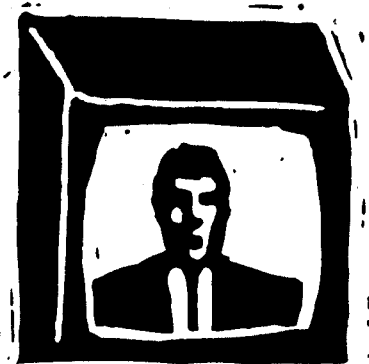
1. One-fifth of all people don't get enough food to eat. Farmland is often used to graze cows for beef, but could be used to produce other crops which could feed many more people than the beef from the cows could. One acre of land can grow 20,000 potatoes, or, if used to grow cattlefeed, can produce less than 165 pounds of beef. 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.



# Find Your Media Targets

**O**ne way to get involved in an issue you care about is to write letters to newspapers and magazines so that you can influence readers and editors. These might be printed as op-ed pieces (opinion essays) or letters to the editor, responding to how the publication has covered (or not covered) the issue you think is important.

There are a variety of issues related to population growth, as you noticed in the reading, "People Count: Facing the Population Challenge." The high teenage pregnancy rate in the U.S. is among the contributors to our nation's population growth and sustained poverty rates. Yet many teens do not know how to prevent pregnancy. The following essay endorses the inclusion of comprehensive sexuality education in the secondary school curriculum as a means of promoting reproductive health and helping teens make important choices. The sample letter shows you how to take the information you collect on an important issue and try to educate and persuade others.



# Speak Up For School Sex Education

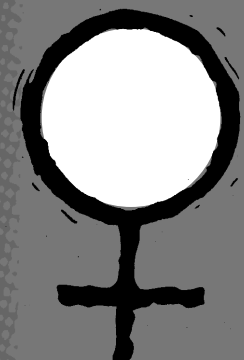
**I**f academic and career plans seem overwhelming, try envisioning your future with a baby...or AIDS. Today, while you are sitting in class or hanging out with your friends, an average of 3,000 American teenage girls will become pregnant. More than 42,000 Americans under the age of 25 already have AIDS and about 20% of newly diagnosed AIDS patients were infected when they were teenagers. Every year, about 1 in 4 sexually experienced teens acquire a sexually transmitted disease (STD). Tragically, these are the cold, hard consequences of unprotected sexual activity.

According to a report by the Centers for Disease Control and Prevention, 61 percent of high school seniors have had sexual intercourse. For these sexually active students, responsible personal sexual behavior is the only way to avoid unwanted pregnancy or disease. Of course, postponing sexual involvement is the best way to avoid unwanted pregnancy and sexually transmitted diseases (STDs). But if you decide to have sex, you need to know how to protect yourself.

Some of you may be lucky enough to have parents who are willing and able to give you the information and skills needed to make informed and responsible decisions about sexual behavior. But many of you will turn to your peers or your schools for sex education. Unfortunately, your peers don't always have the answers and schools often fail to offer the programs you need. Only 45% of U.S. schools teach about contraceptive effectiveness in preventing STDs and unintended pregnancy. This does not meet the needs of the 64% of teenagers who wish they were getting more information about both abstinence and contraceptives.

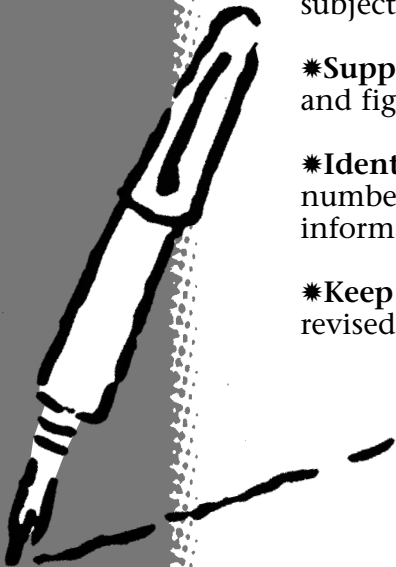
Despite these startling statistics, some members of Congress want to cut or eliminate funding for sex education in schools. Under this proposal, schools would receive federal money only if they promised to teach an "abstinence only" approach to sex education, leaving out any information on ways to prevent pregnancy and STDs for students who choose to be sexually active. But this approach denies students their right to comprehensive sexuality education and could result in increased rates of teen pregnancy and HIV infection...along with school dropout rates and abortions.

If you believe that schools should provide students with comprehensive sex education, speak up! Use the media to tell others what you think. Write an editorial and put it in your school newspaper. Send a letter to your school board with a copy to the editor of your local paper. If you agree or disagree with an article addressing teenage sexuality issues in your favorite magazine, let the editor know.



# Letter Writing Tips

- \***Quality writing** — Read the letter aloud and slowly to make sure it makes sense. Don't forget to check for spelling and grammatical mistakes.
- \***Timing** — This is crucial to getting your message in the news. Make sure your letter has what is called "a relevant media hook," i.e., a particular reference to something in the news or a catchy twist.
- \***Be solution-oriented** — Don't be too pessimistic. Your letter needs more than doom and gloom. Tell the reader what actions are needed and give positive examples of how people are working to correct the problem.
- \***Keep it simple** — Most people only spend 20 minutes a day on the newspaper. Providing too much information can confuse and frustrate the reader.
- \***Shorten it** — Editors work under tight deadlines. The more time they must spend editing your letter, the less likely they are to print it. Keep your letter to 500 words or less.
- \***Localize it** — Readers and editors want to know what is going on around them. Use an example of how population pressures affect your own town to help readers understand its importance in their own lives.
- \***React** — Responding with a different view to a previously published article is often a good approach.
- \***Don't preach** — Step away from the pulpit. Inform the reader about the subject but avoid acting like a "know-it-all."
- \***Support your ideas** — Numbers never lie. Explain the issue using a few facts and figures to support your position.
- \***Identify yourself** — Include your full name, address and daytime telephone number. Most publications will not print your letter unless you include this information.
- \***Keep trying** — If your letter does not get published, try again later with a revised letter and a different approach to the issue.



### **Sample Letter to Newspapers**

This letter may be used to write to newspaper editors in your town. The “opinions” or editorial (op-ed) page often features persuasive letters submitted by residents. By localizing this letter, and perhaps adding your own experiences, it may result in convincing adult readers to act on the issue.

*Editor* \_\_\_\_\_ *Date* \_\_\_\_\_  
*Name of Publication* \_\_\_\_\_  
*Address* \_\_\_\_\_  
*City, State, Zip* \_\_\_\_\_

*Dear Editor,*

*Many lawmakers are attempting to undermine or abolish education about sexuality and reproduction in our public schools. As a teenager, I feel a crucial element of my education, as essential as English or algebra, is being neglected. My friends and I deserve the opportunity to gain reliable information that would help us make decisions about sexual behavior.*

*Some politicians and school board members believe that sexuality education encourages sexual activity and promiscuity, but research does not support that belief. Let's look at the facts. In 35 studies by the World Health Organization, almost half found that "sex education led to a delay in starting sexual activity" and the others showed that neither sexuality education nor access to counseling and contraceptive services encouraged earlier, or increased, sexual activity.*

*The Centers for Disease Control and Prevention report that well over half of my peers choose to become sexually active by 12th grade. About 3,000 teenagers will become pregnant today — that adds up to 1 million pregnant teens this year. How can adults turn their backs on these young people and deny them information they need?*

*In order to make significant decisions about my life, I need accurate up-to-date information through comprehensive sex education programs. I urge your readers to voice support for these programs in their local schools and to their elected representatives.*

*Sincerely,*

*Your Name* \_\_\_\_\_  
*Address* \_\_\_\_\_  
*City, State, Zip* \_\_\_\_\_  
*Phone Number* \_\_\_\_\_

### **Letters to Magazines**

Writing to your favorite magazines also may influence opinions about sex education. Editors are eager to know what their audience is thinking, so send them your ideas. After reading articles you disagree with, present another side of the story. It may be a viewpoint the editors had not considered. Also respond to articles you liked. By showing your support, it establishes the importance of the issue and prompts writers to continue covering it.

You can find the addresses of your favorite magazines inside their front covers. Some magazines to consider include *Jane*, *Sassy*, *Rolling Stone*, *Seventeen*, *Teen*, *Teen People*, *Teen Vogue*, *YM*, *VIBE*, *SPIN*, *New Moon*, and *FLY!*. If you do send a letter, let us know about it. Send a copy of your letter to: Population Education, Population Connection, 1400 16th St. NW, Suite 320, Washington, DC 20036.

# Writing to Lawmakers: A Capital Idea

**I**t is the job of lawmakers to address the concerns of their communities. Writing to your legislators is an opportunity make a difference by informing and influencing them on population and environmental issues.

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

In addition to the letter writing tips given for the Media Targets section, remember to:

- ✦ **Never write a rude letter.** Be polite and to the point, but keep in mind that your members of Congress work for you.
- ✦ **Make sure to include a return address,** so your legislator can write back to you.
- ✦ **Be patient.** You should get a response from your legislators, but they are busy and it may take up to four weeks.
- ✦ **If possible, mention specific legislation** that you support or oppose. Identify the bill by name and number. Ask what your member of Congress' position is on the legislation and why.
- ✦ **You may also write to Population Connection and join our "Legislative Activist" list.** Population Connection will send you monthly alerts and sample letters designed to inform you about pending legislation and what you can do to help. To join, write to: Population Connection, 1400 16th St., NW, Washington, DC 20036, Attn: Government Relations Department, or e-mail to [Activist@populationconnection.org](mailto:Activist@populationconnection.org).

## *Some Issues to Consider:*

Federal, state and local laws directly shape environmental policies, access and availability of family planning services, sex education and teen pregnancy prevention, development and population programs overseas (foreign aid), and a host of other issues linked to population.

Monitoring (or keeping track of) legislation is not an easy task. Newspapers, national magazines such as *Newsweek* or *Time*, or news programs on television examine major policies being discussed at the local, state and national level. Some specific issues you can look for include:

- legislation about environmental protection in the U.S. (clean air and water, endangered species, wilderness protection...etc.)
- laws about family planning services (often known as Title X) in the U.S.
- sex education and teen pregnancy prevention
- foreign aid
- recycling laws/programs



## Sample Letter to Congress

The Honorable \_\_\_\_\_  
U.S. Senate  
Washington, DC 20510

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

Dear Senator \_\_\_\_\_: Dear Representative \_\_\_\_\_:

I am \_\_\_ years old and a student at (your school) in (town/state). I am writing to you because I am concerned about global population growth and its impact on the natural environment and quality of life.

The world population, now over 6 billion, is growing by almost 80 million people per year. We are adding more people each day than at any other time in human history. This rapid population growth makes it increasingly difficult for us to protect the environment and provide enough food, clean water, shelter and resources for everyone. And as our demands for resources increase, forests, streams, wetlands, and wildlife habitat are paved over, built on, polluted, lumbered or mined.

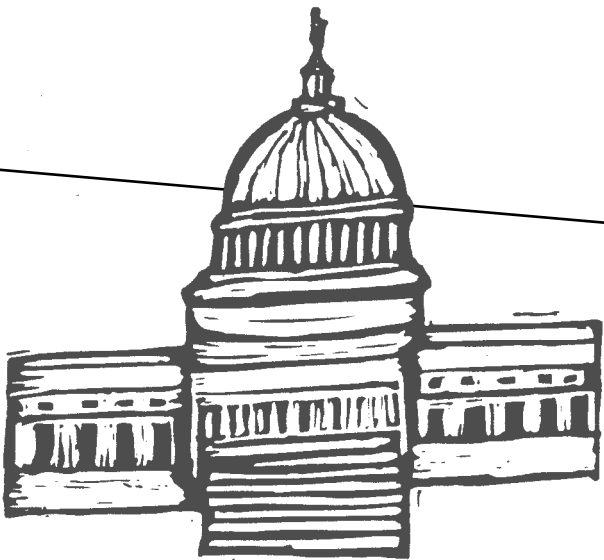
Population pressures are threatening to rob present and future generations of healthy communities and a decent quality of life.

The United States has no systematic way of addressing population growth. I want to urge Congress to hold hearings on the impacts of U.S. population pressures on the environment. In addition Congress needs to take steps to strengthen environmental laws. Providing clean air and water, protecting valuable ecosystems and wildlife, and conserving resources for future generations should be a priority for local, state and federal governments.

Thank you for your time. I look forward to hearing your views on these important issues.

Sincerely,

Your Name  
Address



# People Power Through Petitions

**A** petition is a statement regarding a particular issue that many people can sign to prove that they share the same concerns or agree with your position. Petitions are a demonstration of group strength. They are also a very effective way to gain the attention you need from lawmakers to effect change. Here's 10 easy steps:

1. What is the message you want to deliver or what do you want to accomplish with your petition? Some ideas may include: urging lawmakers to declare one day of the year as "Clean Up Our Town Day", getting schools to offer population and environmental education, building a new park in your neighborhood, establishing a no-meat day in the cafeteria once a week...etc.
2. Give your petition a title. Then write a brief statement (a few sentences) outlining the reason for your petition or the idea you are proposing. This statement should appear at the top of every page of signatures, so that people know what they are signing.
3. Identify the official or agency who will receive your petition.
4. Leave enough space for names, signatures and addresses. Number the lines so you can easily total the number of signatures you have.
5. Brainstorm with others to find people to sign your petition: schoolmates, friends, neighbors, teachers, relatives, etc.
6. Distribute copies of your petition to helpers. Make sure everyone is prepared to explain your petition and answer questions.
7. Ask people to sign your petition. Be polite! Remember, some people will not agree with you and will not want to sign your petition. Just move on to the next person. Remember: If you take your petition door-to-door, NEVER go alone. It's always better to go in pairs .
8. When you are done collecting signatures, photocopy all of the pages of your petition. Put the copies away for safekeeping. You may need it later if your petition is lost, or needs to be verified.
9. You may want to contact or call your local television station or newspaper and tell them about your petition. Many local newspapers like to do stories on young people making a difference. Let the media know when and where you plan to deliver your petition.
10. Deliver or present your petition to an official who has power to act on your ideas.

## SAMPLE PETITION

*(Title of Petition)*

The world population, now over 6 billion, is growing by almost 80 million people per year. We are adding more people each day than at any other time in human history. This rapid population growth makes it increasingly difficult for us to protect the human environment and provide enough food, clean water, shelter, and resources for everyone. Environmental and population education programs which teach students about these critical issues are an important component to school curricula.

We, the undersigned, urge our principal, teachers and local school board to include environmental and population education in our school curriculum.

Name	Address/School	Phone
1. _____	_____	_____
2. _____	_____	_____
3. _____	_____	_____
4. _____	_____	_____
5. _____	_____	_____
6. _____	_____	_____
7. _____	_____	_____

For more specific or current facts, you can contact organizations which specialize in population and the environment. At Population Connection, we receive hundreds of requests from students wanting information or ideas for research papers. Be sure to call for information as soon as possible because it may take several weeks for a mailed response. Some groups you may want to consider include:

**Population Connection**, 1400 16th Street, NW, Suite 320, Washington, DC 20036; (202) 332-2200; (800) 767-1956; [www.populationconnection.org](http://www.populationconnection.org); [PopEd@populationconnection.org](mailto:PopEd@populationconnection.org).

**Population Reference Bureau**, 1875 Connecticut Avenue, NW, Suite 520, Washington, DC 20009; (800) 877-9881; [www.prb.org](http://www.prb.org); [popref@prb.org](mailto:popref@prb.org).

**World Resources Institute**, 10 G Street, NE, Washington, DC 20002; (202) 729-7600; [www.wri.org](http://www.wri.org).

**Sierra Club**, 85 2nd Street, Second Floor, San Francisco, CA 94105; (415) 977-5500; [www.sierraclub.org](http://www.sierraclub.org); [information@sierraclub.org](mailto:information@sierraclub.org).

**National Wildlife Federation**, 1400 16th Street, NW, Washington, DC 20036; (800) 822-9919; [www.nwf.org](http://www.nwf.org).

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