



The Population Educator

Teacher Training and Resources from **Population Connection**

U.S. Population Reaches 300,000,000 Million

Free Wall Map and Activities for this Teachable Moment!

2006 marks an historic milestone for our nation – 300 million people. Over the past century, our population has tripled, making the United States the fastest growing developed country in the world, and the third largest overall. Reaching this marker offers an opportunity to reflect on our past, examine current trends, and articulate our hopes for the future of American society.

The story of the American populace, from the first U.S. Census in 1790 to the addition of our 300 millionth resident, is an epic about growth and change. Our demographics have shifted with industrialization, changing gender roles, improvements in health, and waves of immigration from every part of the world. We have transformed our landscapes from wilderness to sprawling metropolitan areas and become the world's largest consumer of most of the Earth's natural resources. Our numbers and lifestyles have far-reaching impacts on local

and global environments, economies, and cultures.

The wall chart provides a glimpse into our national population history, our diversity as a people, and the challenges we face in creating healthy, sustainable communities. To view citations from the wall chart or to request your free copy, visit www.populationeducation.org.

A new collection of hands-on activities complement and expand upon the wall chart. The lessons are designed to broaden students' awareness of population issues and to encourage dialogue about our nation's future while addressing the thematic strands in the Curriculum Standards for Social Studies (www.ncss.org). The user-friendly lesson plans are appropriate for middle and secondary grades and can be downloaded at no cost from the Population Education website at www.populationeducation.org.

Here are some of the free activities that are available for download at our website, www.populationeducation.org:

Connecting the Dots

Students map the changing size and density of the country's population over its history.

A Matter of Timing

Students draw models of family populations and use these to identify trends in population size influenced by family timing.

Mysteries of the U.S. Pyramids

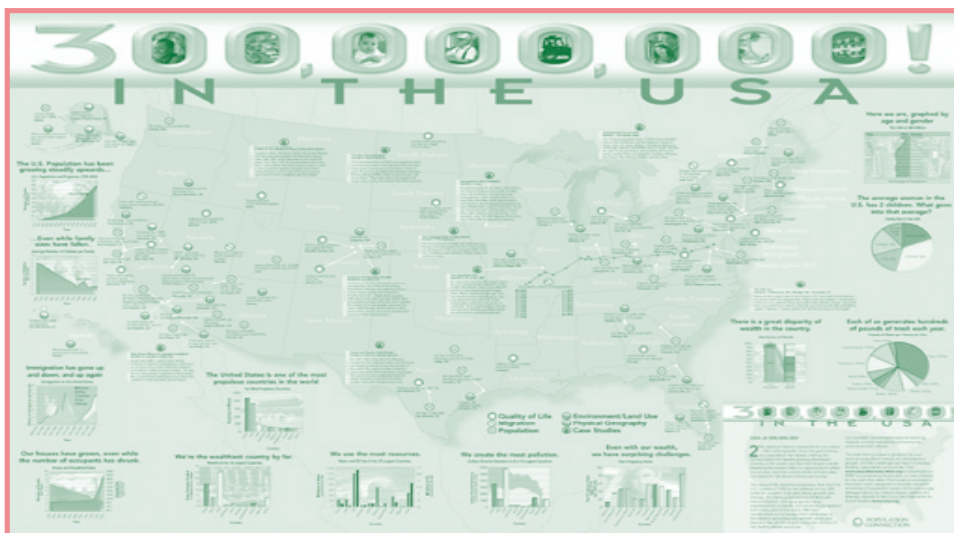
Students construct and interpret population pyramids and discuss differences in population characteristics at different points in U.S. history and make projections for the future.

Watch Your Step

Students will learn about the concept of the ecological footprint, compare their own to those of students in other nations, and explore why it is an important measurement of their impact on the earth's resources.

The Good Old Days

In this lively simulation, U.S. presidents from 1800, 1850, 1900, 1950 and 2006 compare resource use, wealth, health, education and more with some interesting facts and symbols of quality of life.





Resources

New FREE Data Resources On-line!

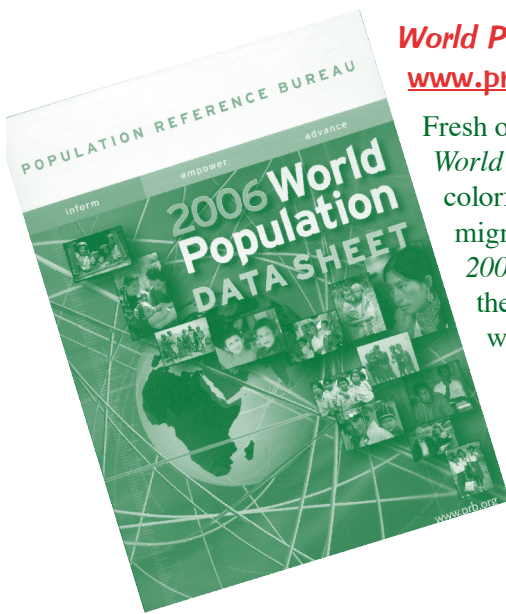
One Planet, Many People: Atlas of Our Changing Environment
<http://na.unep.net/OnePlanetManyPeople>

Proving that a picture is worth a thousand words, the United Nations Environment Programme (UNEP) has published a comprehensive visual presentation to show us our home as it really is and how it has been. *One Planet, Many People: Atlas of Our Changing Environment* uses a combination of ground photographs, satellite images, and scientific narrative to illustrate how humans are making observable and measurable changes on land, in the water, and in the air. The entire book, chapter by chapter, can now be downloaded free of charge. Also free for download are a collection of Powerpoint presentations, posters and printable image files using satellite images taken over 30 years. This huge amount of information and great visuals can be used by students to demonstrate the changes resulting from natural processes and human-induced activities. Although the text is written at a high school level, the graphs and photos are also appropriate for middle school.



World Population Data Sheet
www.prb.org

Fresh off the press! The Population Reference Bureau has released their brand-new 2006 *World Population Data Sheet*. Transforming technical data into an easy-to-understand, colorful wall chart, the PRB data documents the differences in population growth, migration rates and demographic trends among countries from all over the world. The 2006 *World Population Data Sheet* can be downloaded in booklet format for free from the website of the Population Reference Bureau at www.prb.org. Single copies of the wall chart format can be purchased from the site for \$4.50 plus \$1.50 shipping.



***Special Edition* 300 Million**
www.census.gov

Most of the population facts on Population Connection's *300,000,000 in the USA* wall chart and accompanying activities come from the U.S. Census Bureau. Besides the incredible amount of population information on their website, the Census has compiled a fascinating set of facts to mark the U.S. population reaching 300,000,000. This special edition of the Facts for Features series compares data from 1915 (U.S. population at 100,000,000), 1967 (U.S. population at 200,000,000) and 2006 (U.S. population at 300,000,000). Click on Facts for Features from the home page, and then scroll down the list to this special edition, available in both HTML and PDF formats.

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Activities

A Hill of Beans*

Introduction:

People use different amounts of resources over their lifetimes. In the U.S., people use a lot of resources, but how does the typical American compare to the average person in the world today? How does the U.S. compare to the average person in one of the poorest countries of the world? If we actually used beans to compare the amount of resources that different people use over their lifetimes, what would we discover?

Materials:

Dry beans (kidneys or limas work best); 3 Cups; 3 large metal canisters, such as large coffee cans, or clear jars,

Procedure:

1. Label each cup and can with the name of the area it represents: U.S., World, and Malawi.
2. Explain to students that we can use a variety of economic indicators to compare the standard of living from one region to another. One such indicator presently in common use is the Gross Domestic Product, or GDP, at Purchasing Power Parity, or PPP. GDP is a measure of all the goods and services produced in a country in a given year, a good measure of the economy of a country. PPP is a method of converting international currency to show its value in U.S. dollars. The GDP PPP divided by the population of a country shows the dollar amount that an average citizen spends in a given year. In the USA, the per capita GDP PPP is \$41,800. Some Americans spend more than that over the course of a year. Many also spend less, but our average spending is just over \$40,000 per year.

We can estimate the amount of resources we will consume over our lifetimes by multiplying our annual spending by our life expectancy. The average American presently has a life expectancy of 78 years. So, assuming that the trend holds over time, the average American would spend \$48,100 for 78 years, or a total of \$3,260,400 over their lifetime.
3. How do we compare to other regions? Use the beans to make a visual and auditory comparison for students. In three separate cups, place 1, 23, and 121 beans.
4. Ask the students to close their eyes. Tell them that they're going to be listening for the lifetime resource use of the average American. Slowly drop the 121 beans into the canister or jar labeled "United States."
5. Tell students to keep their eyes closed, and that now you want them to listen for the lifetime resource use of an average person alive in the entire world today. Drop the 23 beans into the canister or jar labeled "World."
6. Again, ask the students to keep their eyes closed. Now you're going to compare those people to the average citizen of Malawi. Drop the single bean into the canister or jar labeled "Malawi."

7. Display the cans or jars with the beans in them so students can see the representations of the lifetime resource use of the different regions. Of the three regions, people of Malawi, in Eastern Africa, have the lowest lifetime resource use: \$27,000 over their 45-year lives. If the average person of Malawi gets one bean, how many, proportionately, would a person in the world as a whole or the USA get? (23 and 121, respectively; $1/\$27,000 = x/\$3,260,400$ to determine beans for U.S., for example)

Share the following chart with the class:

Region	Per Capita GDP- PPP (2005)	Life Expectancy (2006 est.)	Lifetime Resource Use
United States	\$41,800	78	\$3,260,400
World	\$9,500	65	\$617,500
Malawi	\$600	45	\$27,000

Discussion Questions:

1. What did you observe as we compared the resource use of Americans, average humans, and citizens of Malawi?
Americans use far more resources than either of the other groups. Citizens of Malawi use far less than the average person in the world as a whole.
2. How would your life be different if you only had the resources of a person in Malawi?
You would not be able to afford many of the luxuries that most Americans enjoy today, such as access to medical care or enough food to lead a healthy life. Many things we take for granted in our lives would not be affordable. For example, only 0.7% of Malawians have telephones. Another 1.7% use cellular phones. In comparison, 89% of Americans have phones and nearly 67% have cell phones.
3. Could the Earth support more people if we all lived like the people of Malawi?
Yes, if people used fewer resources, our environment would support more people.
4. Would we be better off if we all lived like the average person in Malawi?
No. The standard of living for the average person of Malawi is very low, which has many deleterious effects on the health and welfare of the citizens of Malawi. For example, Malawians are at a high risk of contracting infectious diseases such as malaria, typhoid fever, and hepatitis A, and over 14% have HIV. We would also miss some things that are a part of our daily lives, such as toys and computers.

* A Hill of Beans is from our collection of activities designed to complement the 300,000,000 in the USA wall chart. The full text of all of these activities can be downloaded for free at www.populationeducation.org.

300,000,000!

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The Population Educator

Teacher Training and Resources from Population Connection



Workshops

Check Us Out: To see how hands-on population activities can fit into your classroom, attend a workshop! Our staff and volunteer trainers will conduct teacher trainings at the following conferences in the next few months. Visit the website of the sponsoring organization to find out how to attend the conference. To schedule a teacher training workshop for your education methods class, conference or in-service day visit www.populationeducation.org or call (800) 767-1956.

10/12/2006	National Association of Biology Teachers	Albuquerque, NM
10/12/2006	Florida Association of Science Teachers	Gainesville, FL
10/12/2006	Florida Council of Teachers of Mathematics	Orlando, FL
10/13/2006	Western Ohio Educators Association Day	Dayton, OH
10/13/2006	North American Association for Environmental Education	St. Paul, MN
10/13/2006	South Carolina Council of Teachers of Mathematics	Myrtle Beach, SC
10/13/2006	Texas Council for the Social Studies	Fort Worth, TX
10/13/2006	Pacific Northwest Association of Independent Schools	Seattle, WA
10/13/2006	Florida Council for the Social Studies	Miami, FL
10/13/2006	Arizona Science Teachers Association	Mesa, AZ
10/14/2006	Ohio Council of Teachers of Mathematics	Toledo, OH
10/14/2006	Environmental Education Association of Indiana	Muncie, IN
10/14/2006	Washington State Council for the Social Studies	Edmonds, WA
10/18/2006	Iowa Science Teachers Section, Iowa Academy of Science	Cedar Rapids, IA
10/19/2006	National Council of Teachers of Mathematics Eastern Regional	Atlantic City, NJ
10/19/2006	California Science Teachers Association	San Francisco, CA
10/19/2006	Georgia Council for the Social Studies	Athens, GA
10/20/2006	Maryland Council of Teachers of Mathematics	Millersville, MD
10/20/2006	Louisiana Science Teachers Association	Shreveport, LA
10/20/2006	Minnesota Science Teachers Association	Lakeville, MN
10/22/2006	Indiana Council of Teachers of Mathematics	Indianapolis, IN
10/23/2006	New Jersey Council for the Social Studies	East Windsor, NJ
10/23/2006	Mississippi Science Teachers Association	Jackson, MS
10/26/2006	Washington Association for the Education of Young Children	Bellevue, WA
10/27/2006	Alabama Council of Teachers of Mathematics	Montgomery, AL
10/27/2006	Connecticut Council for the Social Studies	New Britain, CT
10/27/2006	Arizona Council for the Social Studies	Glendale, AZ
10/28/2006	Arizona Geographic Alliance — Geofest	Glendale, AZ
11/2/2006	National Science Teachers Association	Baltimore, MD
11/2/2006	National Middle School Association	Nashville, TN
11/2/2006	New Mexico Math and Science Teachers Conference	Albuquerque, NM
11/3/2006	New Jersey Association for the Education of Young Children	Atlantic City, NJ
11/4/2006	Illinois Science Teachers Association	Peoria, IL

*Go to www.populationeducation.org for complete list of fall conferences

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The Population Educator is a publication of the Population Connection Population Education Program, written by Kaylen Jorgensen, Arielle Thibeault, and Melissa Holmes, and edited by Pamela Wasserman.