

Our World of 7 Billion: Population Studies in Today's Social Studies Classroom

Pamela Wasserman

By the time you finish reading this article, our global family will have grown by about 1,000 members. This steady increase in our population will take us to an unprecedented milestone this fall—a world of seven billion people. You may recall earlier “billion” benchmarks because we seem to reach one every dozen or so years (6 billion in 1999, 5 billion in 1987, 4 billion in 1974). In fact, we’ve completely doubled our global population since 1968.¹

The United Nations has announced October 31, 2011, as the “Day of 7 Billion.” This is by no means a climactic event, as demographers expect our population to continue growing through this century. It is, however, a moment to pause and consider how we got to this point in human evolution, where we’re headed, and what the implications are for our global society. The poster you received with this issue, *A Quick Trip to 7 Billion*, can serve to introduce this discussion in your classroom.

The study of world population integrates so many themes and disciplines in the social studies because it encompasses all of human history—the rise of agriculture and civilizations, scientific progress, territorial conflicts, changing gender roles and more. It is also at the heart of human geography and how we came to dominate and alter the land and seas. In our modern age, where we have the ability to control fertility and reduce mortality, population studies involve personal choices, education, economics, social and cultural norms and politics.

What’s in a Number?

When I first started teaching about population issues in the late 1980s, it was easier to impress upon audiences the magnitude of our population’s size—even with 40 percent fewer inhabitants than we have today. A billion still seemed like an unimaginably large number. In recent years, however, we’ve become somewhat desensitized to the idea of “billions,” especially when our economic dialogue includes sums in the hundreds of billions, and even trillions.

In talking about world population, numbers really do matter, because we live in a finite system where our very survival as a species depends on our ability to sustainably use natural resources and protect vital ecosystems. The significance of our population’s size lies in the ability of the Earth and social infrastructures to provide for billions more people. Yet we are already struggling to meet people’s basic needs as a family of seven billion. A third of the world’s population experiences chronic water shortages, 2.5 billion people live on less than \$2 a day and a billion of

those are undernourished.²

Our ecosystems already suffer from the increasing demands for natural resources and the waste that our consumption produces. As our human habitat has expanded, biodiversity has dwindled and our physical geography has changed. Our human activities—from burning fossil fuels to expanding livestock herds—have been altering our climate in significant ways, further compromising our ability to meet the needs of present and future generations. The droughts, flooding and sea level rise brought on by climate change disproportionately affect the most vulnerable people on Earth.

A common misconception is that we have space on Earth for billions more because our present population could fit inside the state of Texas with a 1,000 square foot parcel apiece. But, of course, the challenges of a huge population have little to do with space and everything to do with resources and quality of life.

Teaching Population History

Knowledge of how we grew to seven billion helps us comprehend our present situation and plan for the future. The human population “J curve” is a staple in many history and geography textbooks. Students can observe the long flat part of the graph that represents the centuries of human existence where



Young girls in central Uganda carry water containers on their heads. A third of the world's population already experiences chronic water shortages as competition for the Earth's resources increases. © 2007 Greg Allgood, Courtesy of Photoshare

life expectancy was low everywhere in the world. The start of the steep rise in the curve coincides with the onset of the Industrial Revolution in Europe and then in the United States. Here is an opportunity to ask students to consider what advances in science and technology began to increase longevity at that time and since. This opens discussion to improvements in agriculture, medicine, sanitation, food preservation and nutrition—all significant in lowering death rates. Changes in birth rates then followed in rapidly industrializing regions with increasing urbanization, and eventually universal education, shifting gender roles, and the availability of modern contraception, while in the rest of the world, birth rates remained high even as death rates began to fall.

And so, countries began to move through a “demographic transition” at different rates. Today, the most “developed” countries are characterized by low death and birth rates (some below the replacement level of 2 children per woman), rapidly emerging economies are on a trajectory to stabilize their pop-

ulations, and the least developed countries, especially many in Sub-Saharan Africa, have stagnated in the middle of this transition, with high birth rates and lower death rates creating rapid growth. Although our world population growth rate has declined from a peak of 2.2 percent in 1963 to 1.2 percent today, there are still 37 countries with growth rates of 2.6 percent or higher, placing them on a path to double their populations within the next 30 years.³

Looking Beyond 7 Billion

Every other year, the United Nations Population Division publishes a revision of their *World Population Prospects*, adjusting projections based on current realities and trends. *The 2010 Revision* outlines three scenarios for population growth until 2100, using low, medium and high fertility variants. According to the medium variant, world population is expected to grow to 9.3 billion by 2050 and reach 10.1 billion by 2100.⁴ This assumes an average global fertility reaching replacement level (2 children replacing 2 parents) in short order and

7 BILLION RESOURCES

The myriad issues surrounding population trends relate to all 10 social studies themes outlined in the NCSS National Curriculum Standards and can be addressed in thoughtful lesson plans for middle and high school students. Below are some websites from organizations with ideas for educating students about a world of seven billion.

www.worldof7billion.org

Population Connection's new thematic website offers teachers hands-on classroom and school-wide activities on global demographics, international development, girls' empowerment and human ecology. Classes can examine the enclosed poster, *A Quick Trip to 7 Billion*, in more depth online with discussion questions.

www.7billionactions.org

The United Nations Population Fund established this site to highlight positive actions by individuals and organizations working toward a healthier, more sustainable world.

ngm.nationalgeographic.com/7-billion

National Geographic Magazine has featured a yearlong series of population-related articles. See videos, photos and infographics on fertility trends, biodiversity, food security and climate change at the website. A collection of all the “7 Billion” theme articles will be available as a free iPad app, launching October 31, 2011.

www.prb.org

Population Reference Bureau's site is your destination for demographic data and timely reports to aid students in their research on population trends.

life expectancy growing worldwide. Presented with this information, students can speculate on what variables might affect these projections (desired family size, availability of reproductive health services and education, life expectancy, child mortality rates, access to clean water and sanitation, war, famines, pandemics, etc.).

Where we wind up in the coming decades is largely dependent on the activities of today's youth and the support they receive to make informed decisions. Over a quarter of the world's population is age 10-24 and almost 90 percent live in developing countries. An international commitment to expanding educational and employment opportunities for young people (especially girls) in less developed countries could have the largest impact on family size in the coming years. Making maternal and child health care, and access to voluntary family planning services global funding pri-

orities would also enable young people to live healthier lives, raise healthier children and break the cycle of poverty that limits their potential.

In 2000, the United Nations adopted the Millennium Development Goals, a blueprint to reduce poverty, hunger and disease by 2015, while promoting universal access to education and reproductive healthcare, gender equality, and environmental sustainability. Attaining these goals would advance human dignity and global security, as well as population stabilization. Our own teens here in the United States will be young adults when we reach the eight billion mark. Their individual decisions as voters, leaders, parents and global citizens will undoubtedly influence the human condition throughout this century. This is, perhaps, the most compelling reason to address population issues in the social studies classroom this fall. 🌐

Notes

1. U.S. Bureau of the Census, International Data Base – Total Midyear Population for the World: 1950-2050, www.census.gov/ipc/www/idb/worldpoptotal.php; Population Reference Bureau, *2011 World Population Data Sheet*.
2. M. Kumm, P.J. Ward, H. de Moel, and O. Varis, *Is Physical Water Scarcity a New Phenomenon? Global Assessment of Waters Shortage over the Last Two Millennia*. Environmental Research Letters, (2010), p. 1.; The World Bank, www.worldbank.org; Food and Agriculture Organization of the United Nations, www.fao.org.
3. U.S. Bureau of the Census, International Data Base – Total Midyear Population for the World: 1950-2050, www.census.gov/ipc/www/idb/worldpoptotal.php; Population Reference Bureau, *2011 World Population Data Sheet*.
4. United Nations, Department of Economic and Social Affairs, Population Division (2011): *World Population Prospects the 2010 Revision*. New York.

PAMELA WASSERMAN (pam@popconnect.org) is vice president for Education at Population Connection in Washington, DC.

ACTIVITY IDEAS: 7 Billion Connections

Here are two suggestions for helping students understand and explore how population trends affect so many aspects of our lives.

1. Over the course of a week, ask students to collect current news articles that relate either directly or indirectly to population trends. These could range from local stories about increased traffic or overcrowded schools to international stories on endangered species or migration and refugees. Encourage students to consider articles on a range of themes (environmental, economic, social, political). They can search for the articles online, but they all need to be from the current week. In addition to local news sources, suggest some publications that regularly cover national and international news (e.g., *The New York Times*, *Washington Post*, *Newsweek*, *Time*, CNN online). Have students write a one- or two-sentence summary of each article they bring in, explaining how the article is related to global, national, or local population trends. Create a bulletin board collage of the article headlines.
2. In groups of 3-4, have students create concept maps on large pieces of paper. The middle of their concept map should read "7 Billion and Growing." From that central idea, they should draw arrows out and add their ideas of what the implications are for a growing world population. They may phrase this in terms of what we would have more or less of (e.g., more cars, more competition for water, less habitat), or general ideas about the environment, economy, social structures, health, food production, etc. Explain to students that their group's chart will represent their ideas about cause and effect relationships. There are no "wrong" ideas, but they should be able to frame a logical explanation for anything they add to the chart. Their connections could be positive, negative, or neutral. In addition to extending their arrows out from the center, they should also expand on what others in the group add and draw arrows all around the chart, linking connections. Set a time limit for the activity (20-30 minutes). At the end of the activity, have students tape up their charts on the classroom walls and walk around to compare for similarities and differences. Students should use markers in creating their charts so they are easily visible to the class.