Globalization – Population Change

Essential Question: What are the key challenges facing the world in the 21st Century?

SECTION 1: CHANGES IN WORLD POPULATION

By 2011, world population had soared to 7 billion. Here, London commuters make their way through the Liverpool Street railway station. In 2010, the population of the metropolitan area of London was nearly 8 million people.

In 1960, the world's population reached 3 billion. By 2011, it had soared to about 7 billion. How high will it go? Some demographers, or experts in the study of human populations, believe that the number of people on planet Earth will level off sometime in the 21st century. The population will continue to rise in some countries as it falls in others. In either case, changes in world population will likely have profound effects.

Population Change   The world population will continue to rise as long as more people are born each year than die. It will fall when, and if, the reverse becomes true. The rise or fall of the population in any one country, city, or other defined area has a somewhat different basis. Four factors determine how a population changes in a given area. They are births, deaths, immigration (migration into), and emigration (migration out of). Births and immigration add to the population. Deaths and emigration subtract from it.

Countries with a high birthrate can gain population quickly, especially if the death rate is low. **Birthrate** is the number of births divided by the population during a given period. It is often expressed as births per 1,000 people in a year. **Death rate** is the number of deaths per 1,000 people in a year.

Related to the death rate is another concept, life expectancy. **Life expectancy** is the average number of years people live within a given population. Like the birth and death rates, this figure varies from country to country. In Afghanistan in 2010 a newborn baby had a life expectancy of around 47 years. A baby born in France had a life expectancy of around 80 years. Factors that affect life expectancy include disease, nutrition, sanitation, and access to medical care.

Related to the birthrate is the **total fertility rate** (TFR). The TFR is the average number of children women would give birth to in their lifetimes if the current birthrate did not change. In many of the countries of Europe, East Asia, and North America the fertility rate has remained fairly low for decades. Generally, women in those countries give birth, on average, to two or fewer children in their lifetimes. In some of those countries, such as the United States, immigration keeps the population higher than it would otherwise be.

Population Distribution   Demographers also study population distribution, or how a population breaks down into categories. One category a demographer may analyze is population distribution by geography. More people may live in one area of a country than in another. Demographers determine

differences by measuring how densely various areas are populated. The number of people in a given land area is that area's **population density**.

The population of urban areas is much denser than that of rural areas. Today, urbanization—the process of forming and expanding towns and cities—is increasing. In 2008, for the first time, most of the world's people lived in cities. The percentage of people living in urban areas could grow to 70 percent by 2050.

Rural-to-urban migration has been a fact of life since the Industrial Revolution. Industries tend to locate in urban areas, where they have ready access to supplies, transportation, and labor. People migrate to cities, in large part, because that is where the jobs are. This is true in India, where some of the most densely populated cities in the world are located. One Indian city, Mumbai, has about 11,500 people per square mile. The American city of Chicago, in contrast, has a density of about 585 people per square mile.

Population distribution can also be examined in terms of gender. At its simplest, this involves counting how much of a country's population is male and how much is female. But demographers study gender statistics for many other reasons. They can use gender statistics to measure the status of men and women in a society. They look for unfairness in jobs, education, health care, politics, and other spheres of life. Where they find a lack of equality, demographers can urge the government to search for ways to close the gender gap.

Another way that population is distributed is by age. Age data can reveal the size of a country's youth population, its working-age population, and its elderly population. Too many young people can place a burden on parents and schools. Too few young people might lead to a future shortage of workers, which could limit economic growth. Too many elderly might place a strain on health-care and other social support systems.

Population Challenges   In the late 1960s, the world experienced a population explosion. Between 1960 and 1999, the population doubled, from 3 billion to 6 billion. Demographers thought that dealing with this enormous growth would be the main population challenge facing humans in the future. In the 1990s, however, the growth rate began to slow. The population was still expanding, but at a less extreme pace.

In 2010, the world's birthrate was 20 and the death rate was 8. That gap explains why the population of the world continues to increase. What it fails to show, however, is that the birthrate has been declining for several decades, as has the fertility rate. The death rate has also been falling, but not as rapidly. If these trends continue, annual births and deaths will one day be equal. The world's population will stabilize. Nevertheless, today, individual countries still face serious population challenges.

One basic challenge some nations face is simply having too many people. Birth and fertility rates remain high in many **developing**
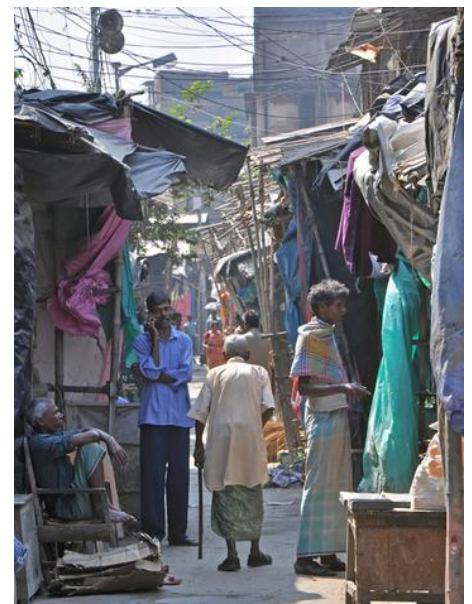
India has some of the most densely populated cities in the world. In some Indian cities, many people live in crowded slums, such as this Mumbai neighborhood.

countries. The nations of the developing world have less industrialized economies than those of highly developed regions such as Europe. Their people, in general, have lower incomes and lower standards of living.

Developing countries often lack the resources to support their growing populations. China faced this problem as early as the 1950s. It could not grow enough food to feed its people. In 1979, China instituted a one-child policy to try to limit the population. This drastic program of birth control required Chinese couples to limit their families to a single child. The one-child policy has slowed China's growth rate, but it has created another problem. The one child in a family may be the sole caregiver of his or her aging parents and grandparents.

The problem of taking care of an aging population may, in fact, be the main demographic challenge of the 21st century. Over the past 50 years, women have been giving birth to fewer children on average, and improvements in agriculture and public health have allowed people to live longer. These trends have created an increasingly elderly population in many developed countries, such as Japan and Germany. Meanwhile, many developing countries, such as Rwanda, are still dealing with the challenges of a growing population.

Rwanda   The recent history of Rwanda has made it difficult to limit population growth. In 1990, tensions between this Central African nation's two main ethnic groups, the Hutus and the Tutsis, sparked a civil war. In 1994, the governing Hutus perpetrated a **genocide**—the systematic killing of people from a particular ethnic, racial, or religious group—wiping out three quarters of the Tutsi population.
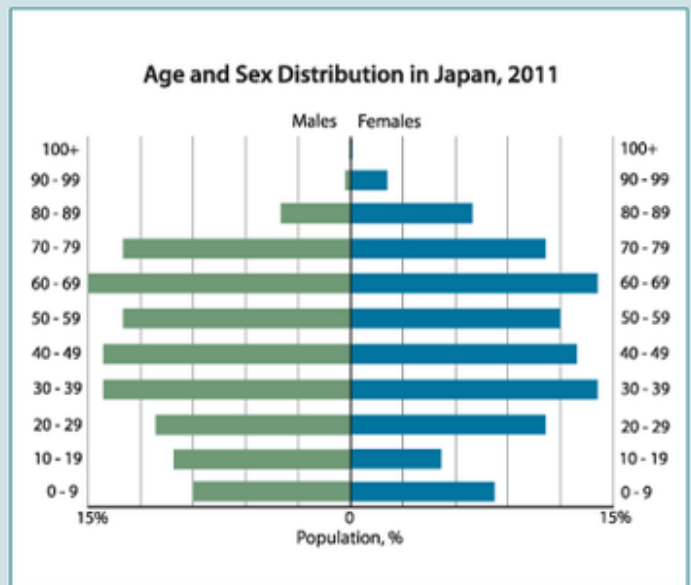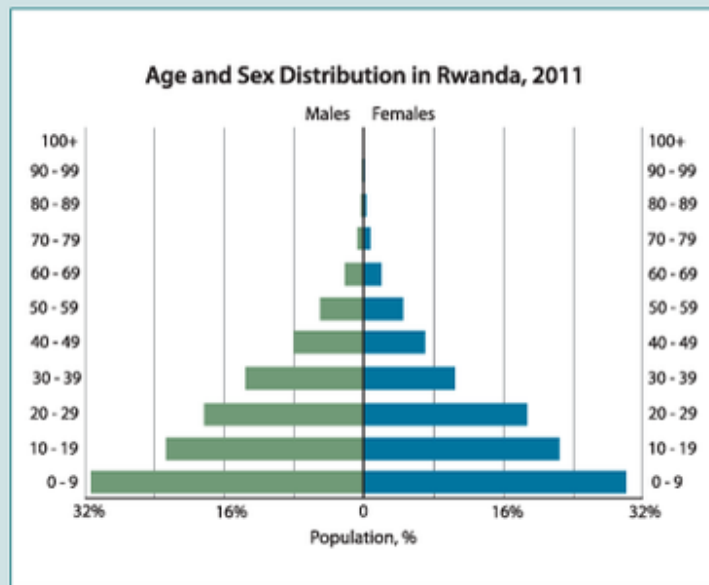
Because so many Rwandans had died in the war, many parents felt a need to have many children. But despite the death toll of the recent conflict, Rwanda still had too many people. Its limited natural resources could not support them all. For this reason, Rwanda's government made family planning a priority in an attempt to control the number of children in a family. It recognized that limiting population growth was a key to ending poverty and to developing the economy. It instituted programs aimed at helping parents freely and responsibly determine the number of children that they could support and limit their family size.

Efforts to limit population growth in Rwanda have been largely unsuccessful. In 2011, the population was increasing at one of the fastest rates in the world. As a result, Rwanda is a very youthful country.

Rwanda's population density in 2011 was the highest of any country on the sub-Saharan African continent. The rate at which Rwanda's population was increasing was among the highest in the world.

Population Pyramids for Rwanda and Japan

Age and Sex Distribution in Rwanda, 2011

Males   Females

100+	100+
90 - 99	90 - 99
80 - 89	80 - 89
70 - 79	70 - 79
60 - 69	60 - 69
50 - 59	50 - 59
40 - 49	40 - 49
30 - 39	30 - 39
20 - 29	20 - 29
10 - 19	10 - 19
0 - 9	0 - 9

32%   16%   0   16%   32%

Population, %

Age and Sex Distribution in Japan, 2011

Males   Females

100+	100+
90 - 99	90 - 99
80 - 89	80 - 89
70 - 79	70 - 79
60 - 69	60 - 69
50 - 59	50 - 59
40 - 49	40 - 49
30 - 39	30 - 39
20 - 29	20 - 29
10 - 19	10 - 19
0 - 9	0 - 9

15%   0   15%

Population, %

Source: U.S. Census Bureau, International Programs

An age-sex graph, also known as a population pyramid, displays a population's age and sex composition. These pyramids show the populations of Rwanda and Japan in 2011. The graph for Rwanda, with its wide base and narrow top, is typical of a young population. In contrast, the shape of Japan's graph reflects an aging population. The birthrate in Japan is low, and a larger percentage of people survive into old age.

Japan and Germany   Two developed countries, Japan and Germany, face a different kind of demographic challenge. The people of Japan and Germany are not producing enough children to support an expanding elderly population. Children, in time, become workers. By paying taxes, workers contribute to the social programs upon which many retired people depend. Children also become parents and have children of their own. Countries with very low birthrates face the challenge of an aging—and even a falling—population. Demographers have projected that Japan's population will drop from 127 million in 2010 to 95 million in 2050. Germany faces the same situation.

The Germans and the Japanese have considered ways of dealing with their aging populations. They include encouraging people to have more children, raising the retirement age to keep people working, and adding more women to the work force. But the most controversial answer is immigration. Plenty of young workers from developing countries are willing to move to Germany or Japan. However, many Germans and Japanese have opposed immigration. One reason is national identity. Immigrants, they fear, might alter what it means to be "German" or "Japanese." A further barrier in Japan is the language, which is difficult for foreign workers to learn.