UNIT TWO: POPULATION AND MIGRATION PATTERNS AND PROCESSES

POPULATION DISTRIBUTION

Human populations are not evenly distributed across Earth. The portion of Earth occupied by permanent human settlements is called the **ecumene**. Historically, being close to water—both ocean coasts and rivers—has had the most influence on where people live. Humans will tend to avoid living in places that are too high, wet, dry, or cold. The **carrying capacity,** or ability to support human life, is too small in these areas.

Today, the largest clusters of population can be found in: **South Asia, Southeast Asia, East Asia, Europe, West Africa,** and **Eastern North America**. These regions account for over 70% of Earth's total population. To describe relationships between resource use and population distribution, geographers use **arithmetic density**—the number of people in an area. Geographers will also use **physiological density**—the number of people per unit of arable land. **Arable** land is land suited for agriculture. Lastly, geographers will use **agricultural density**—the number of farmers per unit of arable land.

Humans sort themselves out across Earth in unique ways. The distribution and movement of people has created a mosaic of human activities that dot Earth's landscape.

POPULATION AND MIGRATION

How people live—and where people live—greatly impacts the various economic, social, political, environmental, and demographic patterns and processes of geography.
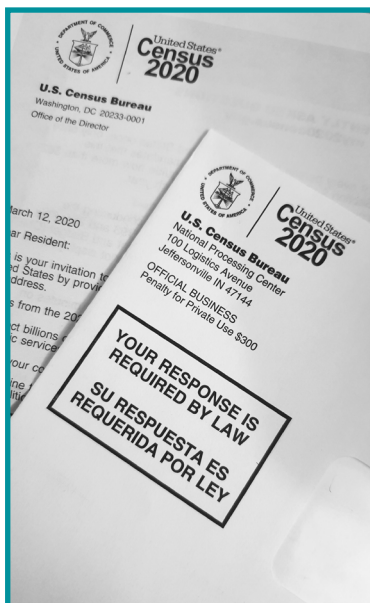
DEMOGRAPHIC DATA

Demography is the statistical study of human populations. Demographers analyze data about human populations—data about gender, age, health, birth and death rates, among others. Populations can change for three reasons: births, deaths, and migration. Geographers use the **natural increase rate (NIR)** to explain population growth; NIR is calculated by subtracting deaths from births.

Important demographic measurements include the **CBR** and **CDR (crude birth** and **death rate)**, which is the number of people who are born or die per 1,000 people. **IMR (infant mortality rate)** is the number of deaths per 1,000 live births. **Sex ratio** is the ratio of males to females in a given population. Geographers use **doubling times**, **J-curves**, and **S-curves** to calculate, predict, and plot population growth trends and data.

POPULATION AND MIGRATION PATTERNS AND PROCESSES

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DEMOGRAPHIC TRANSITION MODEL

Changes in birth and death rates are illustrated on the Demographic Transition Model (DTM). This five-stage model helps explain the causes and consequences of various demographic conditions. As a country progresses from one stage to the next, various social changes occur. For example, as women gain access to eduction, employment, and contraceptives, they will have fewer children. This is typical of the developed world and can be shown in Stages 4 and 5 of the DTM.
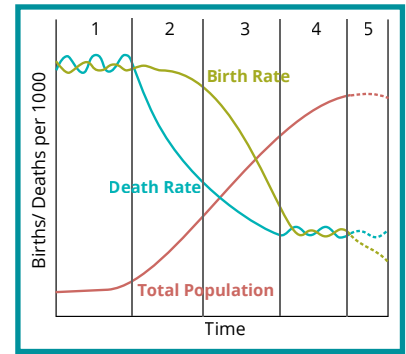

POPULATION PYRAMIDS

An important tool in demography is a population pyramid. These show the age and sex breakdown of a specific population. Population pyramids exist at different scales—one may reveal data for a country, while another may show data for a city. Demographers can use population pyramids to analyze the past and predict future concerns. Population pyramids can be used to identify a country's placement on the DTM. No country is in Stage 1, as its very high birth and death rates are reflective of hunting and gathering societies.
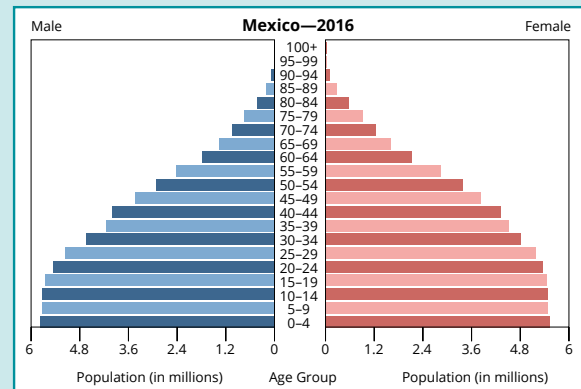
Stage 2: Ethiopia
Large base due to high birth rates. Women lack access to contraceptives and education and employment opportunities.
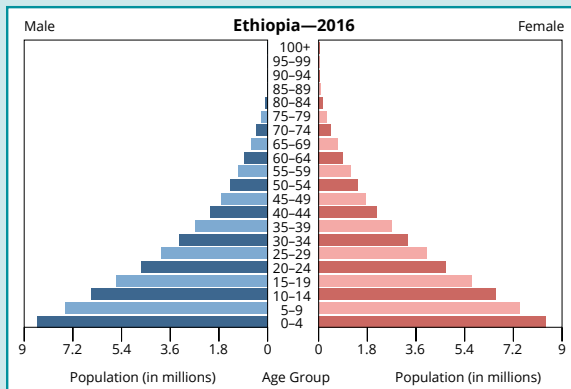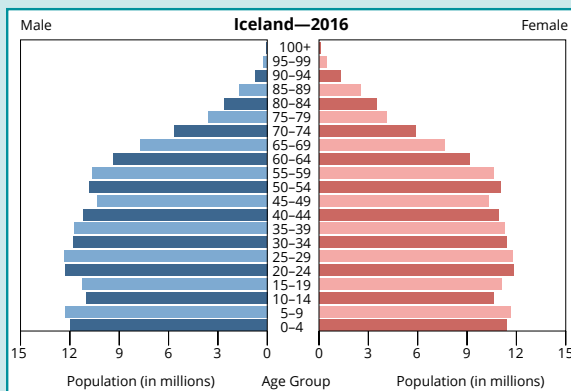

Stage 3: Mexico
Base narrows due to a decrease in fertility and births as more women have access to contraceptives and education and jobs.
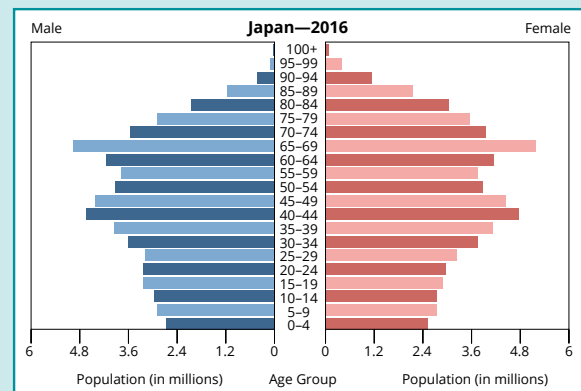

Stage 4: Iceland
Top widens due to people living longer. Fertility rates are low as women are an active part of economic and political decisions.

Stage 5: Japan
Top portion becomes widest as population grays. Deaths outnumber births as most people are beyond their reproductive years.

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DEMOGRAPHIC CONSEQUENCES

Many demographic characteristics are influenced by level of economic development—the developing world has higher rates of natural increase than the developed world. **Dependency ratio** is the ratio of non-workers to workers. The developing world has high dependency ratios due to its large number of people too young to work, whereas the developed world may have high dependency ratios due to the large number of people who are too old to work. Countries may employ natalist policies designed to increase or decrease birth rates. **Pro-natalist policies** encourage more births, while **anti-natalist policies** discourage births. One of the most important theories used to predict and explain population growth is by **Thomas Malthus**. In the late 1700s, he predicted population would grow exponentially if left unchecked and would lead to massive food shortages. Today, **Neo-Malthusians** apply his theory to resources like energy, water, and arable land.

MIGRATION

Migration is a permanent move to a new location. People migrate because of push and pull factors—a **push factor** causes someone to move—or **emigrate**, whereas a **pull factor** attracts someone to a new location—or **immigrate**. An **intervening obstacle** is something that prevents migration. Push and pull factors and intervening obstacles can be economic, social, political, or environmental. There are several types of migration—but most are voluntary. Types of **voluntary migration** include **transhumance, chain, circular,** and **guest worker**. Forced migration occurs when the migrant is forced to leave, fearing loss of life. Examples of **forced migration** include slavery and other events that produce **refugees, internally displaced persons (IDPs),** and **asylum seekers**. Globally, the largest migration flows are from **rural** to **urban** areas and from the **developing world** to the **developed world**. **Ernst Ravenstein** was a geographer whose research served as the "laws" for migration research and theory. He concluded that most migrants are young adults and likely to move shorter distances.