Activity 1: Use the World Population Data Sheet to complete YOUR country profile

Activity 2: The World Population Data Sheet at a Glance

With your partners, find answers to the following questions using the current World Population Data Sheet. If you want your own copy then you can print one from http://www.prb.org/

1. What is the population of the world?

2. Rank the ten countries with the largest population (from largest to smallest).

3. Instead of absolute numbers, rates are often used to tell how frequently a population or demographic event is occurring — rates show how common an event is. List the type of information on the data sheet reported by a rate.

4. The crude death rate (CDR) is the annual number of deaths per 1,000 population. Which country has the highest CDR? Which country has the lowest?

5. The infant mortality rate measures the number of deaths each year to infants under one year of age per 1,000 live births. Which country has the highest infant mortality rate and what is that rate? Which country has the lowest and what is that rate?

6. The total fertility rate (TFR) is the average number of children women would have if they maintained the current level of childbearing throughout their reproductive years. Which countries share the highest TFR and what is it? Several countries share the lowest TFR. What is it?

7. Which country has the "youngest" population, that is, the highest proportion of population under age 15? Which country has the "oldest" population, that is, the highest proportion of population over age 64?

8. In which country are people expected to live the longest? Which country has the lowest life expectancy?

9. In which African country does the highest proportion of people live in urban areas? In Asia? In Latin America? In Europe? In Oceania?

10. Gross national income in purchasing power parity per capita (GNI PPP) converts income into "international dollars" and indicates the amount of goods and services one could buy in the United States with a given amount of money. Which country is the wealthiest in terms of GNI PPP? Which is the second wealthiest?

11. A population grows because there are more births than deaths or more people are moving in than moving out. The difference between births and deaths is expressed as a percentage called the rate of natural increase.

   a. Which region is growing the fastest through natural increase? Which region is growing at the slowest rate?

   b. Which country is growing the fastest through natural increase? Which country is growing at the slowest rate?

12. A population projection is a computation of future changes in population numbers based on assumptions about future trends in fertility, mortality, and migration. Which categories on the data sheet are shown as projections?

13. Rank the ten countries with the largest projected populations for both 2025 and 2050.
Which country's/countries' population is projected to drop out of the top ten by 2050? Which country/countries is projected to be added to the top ten?

Look back to the rankings for the current year. What are the major shifts in this ranking from now to 2050?

Activity 3: Figure It Out

Use the current World Population Data Sheet to complete the following:

1. China and India have the largest populations in the world. Which of these two countries adds more people to its population annually? [Calculate numbers added by applying the rate of natural increase to the population of the country.] How many people does each country add annually? How many people would India add if it shared this country's rate of natural increase?

2. What proportion of the world's people live in Africa? In Asia? In North America? In Latin America? In Europe? In Oceania? What are the projected proportions? Draw a bar chart showing the regional distributions of the world's population for this year, 2025 and 2050.

3. What proportion of the world's people live in less developed countries (LDCs) in the current year? In more developed countries (MDCs)? What proportion of the world's people is projected to live in LDCs in 2025? In 2050? What proportion is projected to live in MDCs in 2025? In 2050?

4. Examine the crude birth rate, crude death rate, and rate of natural increase of any three countries listed on the World Population Data Sheet. Devise a formula to calculate the rate of natural increase based on the relationships observed.

FRQ: Based on the information gathered from the current World Population Data Sheet, write an essay discussing current patterns and trends in population at the global, regional and national scales. Be sure to support any generalizations with specific examples from the Data Sheet.

Activity 4: Mapping the Data

Mapping data is often a good method for analysis. Most of the demographic characteristics on the World Population Data Sheet lend themselves to mapping. A map that uses color to represent quantitative data is called a choropleth map. Areas are distinguished from one another using different colors or different shades of the same color based on the values they represent. Brighter colors or dark shades of the same color indicate greater values and dimmer colors or lighter shades indicate lesser values.

Choose one of the following demographic variables using the World Population Data Sheet and an atlas, map the world or regional distribution of that indicator:

<table>
<thead>
<tr>
<th>Infant Mortality</th>
<th>Crude Birth Rate</th>
<th>Crude Death Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Fertility Rate</td>
<td>Percent 65 and Over</td>
<td>Percent Under Age 15</td>
</tr>
<tr>
<td>Per Capita GNI PPP</td>
<td>Life Expectancy</td>
<td>Rate of Natural Increase</td>
</tr>
</tbody>
</table>

Create a choropleth map:
1. Determine the mapping categories by finding the range of values for that indicator. It is usually possible to use regional data except for certain countries that are very different than those in the region—for example Israel. Determine the number of categories to be used for your map and the interval of each category. For example:

   a. After choosing the variable, determine the highest and lowest values for that measure.
   
   b. Subtract these two numbers in order to calculate the range for the data.
   
   c. Divide the range by the number of mapping categories planned for the map. Four to five categories will be adequate for most measures. The number produced by the division will indicate how many numbers to include in each category interval.
   
   d. Always construct categories so that the numbers in one category do not overlap those in adjacent categories.

2. Arrange a color code or shading pattern for each category. Colors or patterns should increase from light to dark, from lowest to highest category.

3. Determine the proper mapping category for each country and color or shade the country on an outline map. Title the map, place a legend on the page, and indicate the source.

Interpret the map

After the map has been drawn, consider the following to guide interpretation:

1. Describe the patterns observed on the map.
2. What accounts for the variation?
3. Discuss the factors that could lead to the range of outcomes within this distribution.

Find partners to compare your map

With your partner, examine the relationships that may exist between two variables. Possible pairs of variables to compare:

   Infant Mortality — Life Expectancy
   Natural Increase — Total Fertility
   Crude Death Rate — Percent of Population Under Age 15
   Crude Birth Rate — Percent of Population Over 64
   Infant Mortality — Per Capita GNI PPP

Again, with your partner, answer the following: Does there appear to be a relationship between the two variables? If so, is the relationship positive or negative? For example, are the countries with the highest rates of one variable the same countries with the highest rates of the other variable? If so, then the relationship is positive. If the countries with the highest rate of one variable also have the lowest rates in another, then the relationship is negative. Be sure to discuss whether or not the factors that contribute to the patterns in one variable affect the patterns in another. Yes—one paper may be handed in for both of you!