Grade 8 Geography
Chapter 2 - Population Characteristics


2. What is the Human Development Index?

3. Do you think that everyone in Canada rates Canada #1 in terms of quality of life, as did the United Nations did in 1999? Why or why not?

4. One of the primary groups that has been associated with poverty is the First Nations population. Why do you think this is the case? Go to the library and search the Internet to find out why this group has a hard time. In what areas of Canada do First Nations people live?

5. What is meant by the term, population characteristics?

6. What is meant by the term, non-governmental organization? What are some examples?

7. What are some examples of population characteristics?

8. Define: Fertility Rate, Birth Rate, and Death Rate.

9. If the average number of children born in a country is 1.55 per family and there is no immigration, what is the impact on the future population of the country?

10. Why do you think the fertility rate in industrialized countries has declined over time?

11. Besides natural death, what are some of the major causes of death?

12. What is meant by “natural increase” when talking about population? What is meant by the Natural Increase Rate?
13. Calculate the birth rate, death rate, natural increase rate, and the natural increase rate as a percent for each of the following countries (Round the birth and death rates to the nearest whole number). [Note: To get the birth and death rates, you need to divide the number births and deaths respectively by the population and then multiply the value by 1000; then round off. See text for other calculations.

<table>
<thead>
<tr>
<th>Country</th>
<th>Births</th>
<th>Deaths</th>
<th>Population</th>
<th>Birth Rate</th>
<th>Death Rate</th>
<th>Natural Increase Rate</th>
<th>Natural Increase as a %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>50,000</td>
<td>40,000</td>
<td>800,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>70,000</td>
<td>80,000</td>
<td>2,500,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>300,000</td>
<td>250,000</td>
<td>10,000,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>15,000</td>
<td>15,000</td>
<td>150,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>65,000</td>
<td>50,000</td>
<td>2,000,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

14. Go to The World Factbook (see link on course website) and determine the Natural Increase Rate for 10 countries of your choice, but the selected countries must start with at least 7 different letters of the alphabet (i.e., you cannot select 10 countries that start with the letter “A.”. What do your results indicate?

Create a table with the names of the 10 countries and columns for the birth rate, the death rate, the population, and the natural increase rate. [You will notice that The World Factbook lists decimal values for the birth and death rates. Use these actual values when calculating the natural increase rate, but round the resulting natural increase rate to the nearest whole number.

15. In general, what is the nature of the population growth rate for industrialized countries versus developing countries?

16. Define: Immigration, Emigration, and Net Migration

17. Population change for a country is a function of the Net Increase and the Net Migration levels. Explain.

18. What is meant by “doubling time,” as it relates to the change in the level of population?

19. How would birth rate, death rate, immigration, and emigration affect a country’s doubling time?
20. What is a population pyramid? [Note: On page 30 of the text it states that the length of each bar shows the “percentage” of the total population in each group. Figure 2.13 shows the number of people at each age group, not percentage values.]

21. Examine Figure 2.13 on page 30 of the text, why do you think the bar for females is longer than the bar for males in 2050? Explain.

22. What country is the oldest country on Earth?

23. Of what value is it to study population pyramids?

24. By looking at a population pyramid, how can you tell where it applies to a developing or developed country?

25. What is the date of birth of those who fall within the “baby boom” generation?

26. What were two of the major needs of the larger families that resulted during the baby boom period?

27. What is the difference between the fertility rate and the birth rate?

28. Even if the fertility rate goes down, why does population growth continue?

29. How can life expectancy be increased and the death rate be decreased?

30. What happens to the fertility rate when the quality of life improves?

31. What happens to the death rate when the quality of life improves?

32. Compare the population pyramids in Figure 2.15 to the 1997 pyramid in Figure 2.13. Explain whether each of the populations is increasing rapidly, increasing slowly, decreasing, or stable.

33. Why would Kenya and similar cultures have high fertility rates
34.  (a) What factors helped Canada achieve the number one rating as the best place to live from 1994 to 1999?

(b) What is its most recent rating (2006) as listed on the Human Development Index (HDI)?

(c) Why do you think its rating went down?

(d) What are the three primary measures used by the United Nations to determine the HDI values?

35. What is meant by standard of living?

36. What is meant by quality of life?

37. What is meant by life expectancy?

38. What affect does the absence of the requirements for quality of life have on life expectancy? What affect does the presence of a war have on life expectancy?

39. Examine Figure 2.17 (p. 33). Complete the following table by answering the following set of questions.

(a) Which country has the shortest life expectancy? highest life expectancy?
(b) Which country has the lowest per capita income? highest per capita income?
(c) Which country has the shortest doubling time? longest doubling time?
(d) Which country has the lowest literacy rate? highest literacy rate?
(e) Which country has the highest birth rate? lowest birth rate?
(f) Which country has the highest infant mortality rate? lowest infant mortality rate?
(g) Which country has the most persons per automobile? the fewest persons per automobile?

Notice that the list of characteristics in the table on the left are more negative in nature while the list of characteristics in the table on the right are more positive in nature.

continue ...
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(a)</td>
<td>Shortest life expectancy</td>
<td></td>
<td>Longest life expectancy</td>
<td></td>
</tr>
<tr>
<td>(b)</td>
<td>Lowest per capita income</td>
<td></td>
<td>Highest per capita income</td>
<td></td>
</tr>
<tr>
<td>(c)</td>
<td>Shortest doubling time</td>
<td></td>
<td>Highest doubling time</td>
<td></td>
</tr>
<tr>
<td>(d)</td>
<td>Lowest literacy rate</td>
<td></td>
<td>Highest literacy rate</td>
<td></td>
</tr>
<tr>
<td>(e)</td>
<td>Highest birth rate</td>
<td></td>
<td>Lowest birth rate</td>
<td></td>
</tr>
<tr>
<td>(f)</td>
<td>Highest mortality rate</td>
<td></td>
<td>Lowest mortality rate</td>
<td></td>
</tr>
<tr>
<td>(g)</td>
<td>Most persons per automobile</td>
<td></td>
<td>Fewest persons per automobile</td>
<td></td>
</tr>
</tbody>
</table>

40. Examine your answers for Question 39. Does any one country appear more often than the other countries in terms of being the “worst” off? Does any one country appear more often than the other countries in terms of being “better” off? In general, based on the results of your analysis, what can you conclude about the consistency (i.e., similarity) of the results in each column?

41. For each country listed in Figure 2.17, plot the combined values for per capita income and birth rate. Draw a straight line through the series of dots that best indicates the nature of the scatter (pattern) of the dots.

Place the Birth rate along the horizontal axis, starting at “0" and incrementing by 5 (i.e., go from 0 to 5 to 10, etc.). Place the Per Capita Income along the vertical axis, starting at “0" and incrementing 5000 (i.e., go from 0 to 5000 to 10000, etc.). Minor ticks indicating increments of 1000 can also be added.

After plotting the data and drawing the straight line, what can you say about the nature of the relationship between the birth rate and the per capita income? [What you are actually doing is trying to determine the nature of the correlation between birth rate and per capita income (i.e., as one of these variables changes, how does the other one change).]
42. What was the life expectancy in Canada in 1999 for men? for women? What two countries had longer life expectancies than Canada at this time?

43. How many years longer is the life expectancy of women vs. men? Why do men die earlier?

44. What is the highest recorded age to which one has lived?

45. If the life expectancies of 1999 for Canada apply today, to what year would a baby born in Canada today live?

46. What is the relationship between the level of education and the number of children borne (i.e., fertility rate) in Brazil? How would the level of education influence the fertility rate?

47. Define: Literacy rate; literate.

48. What is the nature of the fertility rate for women who have received a basic education and are literate?

49. Define: Per capita income.

50. The country of BonBon shows total earnings for the year from the production and sale of goods and services to be equal to $500,000,000,000. There are 10,000,000 people in the country. What is the per capita income?

51. What is the meaning of GDP (Gross Domestic Product)? GNP (Gross National Product)? Which value is higher?

52. What is the distinction between a product and service? Provide some examples of each.

53. What is the meaning of GDP per capita? How is it calculated.

54. What can a less developed country do to erase poverty and increase the GDP per capita of the country?

55. What is a statistical indicator? What example is provided in the text (see p. 36)?

56. What is a scatter graph? What is meant by correlation?
57. Explain what is meant by:

(a) a strong correlation
(b) a weak correlation
(c) a positive correlation
(d) a negative correlation
(e) “the line of best fit”
(f) trend

58. Create a scatter graph of the birth rate and the life expectancy values shown on page 37 of the text. Draw the “the line of best fit” for the data. Examine the “line of best fit,” what is then nature of the correlation between the two variables.

To plot a value, position the value along the horizontal axis and the along the vertical value; draw a little circle to represent the point where the two values for a given country meet.

59. Examine the graph you created in Question 58. Do you think that the relationship where high life expectancy is associated with low birth rates is reflective of what happens in a developed or developing country?

60. In the scatter graph that you created above, identify the location of Japan, Bulgaria, Rwanda, and Ethiopia. Which two countries would be considered developed countries and which two countries would be considered developing countries? What is the nature of the life expectancy values and the birth rates for each pair of countries?

61. Implementation of family planning programs has been proposed as one means by which to slow down the increasing population size on Earth so as to reduce the consumption of the Earth’s resources. What is a family planning program? What is the nature of the government-imposed family planning program implemented in China? Why what such a plan implemented?

62. Why can averages be misleading? Alternative values that can be used, instead of averages (means) are the mode and the median. The mode is the most common value appearing in the set of data. The median is the mid-point between the highest and lowest values in the set of data, where 50% of the values are above and 50% of the values are below the median value.

63. Draw the general shape of a population pyramid for a typical developed country and for a developing country. Explain the nature of the general shapes.
64. Why do you think men die younger than women (i.e., why do men tend to have more heart disease, work in more dangerous jobs which often lead to accidents, develop cancer more often, and commit suicide more often)?

65. Complete the following assignment:

   (1) Click on the “U.S. and World Population Clock” link on the course website.
   (2) Click on the “World POP Clock” link.
   (3) Scroll down and click on the “World Population Information” link.
   (4) Scroll down to the “World Population by Age and Sex” section.
   (5) Select the year 2006 and submit query.

A. In 2006, what was the first age group where the number of females exceeded the number of males? How many males were there for every 100 females?

B. In 2006, how many males were there for every 100 females for the 80+ age group?


67. Define: Demographics.

68. Define: Epidemic.