

Pyramid Building

Demographers look at many characteristics of populations to predict future changes in size. Many population predictions are based on age structure, which can be graphed in a population pyramid. Depending on the shape of the population pyramid, demographers can predict whether the population is going to undergo rapid growth, slow growth, or no growth. Forecasts of population size and characteristics allow scientists, economists, environmentalists, and public agencies to plan for the changing needs of different countries.

In this exploration, you will create populations pyramids from the population data provided. This process will help you to understand the meaning of different shaped pyramids and the impact of these different growth patterns.

OBJECTIVES

Interpret graphic information.

Create a modified population pyramid.

Interpret and compare modified population pyramids of selected countries.

Identify countries by their population pyramids and locate them on a map.

MATERIALS

- colored pencils
- copies of the Modified Population Pyramid grid
- removable sticker circles, in three colors
- wall map of the world showing the countries being studied

Procedure

1. Review the population pyramids in Figure 2 in this chapter of your textbook. These graphs show the typical shape for populations with different growth rates. Why would the leaders of a country want to know the age-structure of the population? What difference does the age of the people in a population make?

2. Graph the population data for the United States shown in Table 1 onto a Modified Population Pyramid grid. Use a different colored pencil for males and females. Your population pyramid will have only four age categories instead of 17 like the ones in your textbook. Compare your pyramid of the United States population with the diagrams in your textbook. Which diagram does your pyramid most closely resemble?

Pyramid Building *continued***TABLE 1: UNITED STATES POPULATION BY AGE (PERCENTAGE) FOR 2000**

AGES	MALES	FEMALES	AGES	MALES	FEMALES
0–19	15%	14%	40–59	13%	13%
20–39	15%	14%	60+	7%	9%

3. Your teacher will assign each person in your group a set of population data from Table 2. Using the Modified Population Pyramid grid, graph the data for your assigned country, using different colored pencils for males and females.

Analysis

- Analyzing Data** From the list of possible country names that your teacher has given your group, try to guess which country each of the other pyramids represents. Confirm your guess with your teacher, then write the name of your country at the top of your group's pyramid.
- Classifying** Using population pyramids in your textbook as a guide, determine whether your country is less developed, transitional, or more developed. Obtain the appropriate color sticker from your teacher, find your country on the world map, and place the sticker over your country.
- Identifying/Recognizing Patterns** Look for patterns within geographical regions of least-developed, transitional, and most-developed countries. What areas of the world have the highest number of least-developed nations? Transitional nations? Most-developed nations?

Conclusions

- Drawing Conclusions** Explain why the age-structures of transitional countries have some properties of a least-developed nation (e.g., largest percentage of population in the lowest age brackets) and some properties of a most-developed nation (e.g., higher percentage of population in its child-bearing years).

Pyramid Building *continued***TABLE 2: POPULATION PYRAMID DATA (PERCENTAGES OF POPULATION)**

Country	Males				Females			
	0–19	20–39	40–50	60+	0–19	20–39	40–50	60+
1. Poland	14	15	13	7	14	14	14	10
2. Haiti	27	14	6	2	26	15	7	3
3. Thailand	17	19	10	4	17	18	10	5
4. Italy	10	15	13	10	9	15	13	14
5. Saudi Arabia	26	15	12	2	25	12	5	2
6. Brazil	20	17	9	3	19	17	10	4
7. Australia	14	15	13	7	14	15	13	9
8. Ethiopia	28	14	6	2	28	13	6	2
9. Japan	11	14	14	10	10	14	14	13
10. Canada	13	15	14	7	12	15	14	9
11. Argentina	19	15	10	6	18	15	11	8
12. Kenya	28	15	5	2	27	15	5	2
13. Germany	11	15	14	10	10	14	13	14
14. South Korea	16	18	12	4	14	17	12	6
15. India	22	16	9	4	21	15	9	4
16. Nigeria	27	14	6	2	27	14	6	3
17. Cuba	14	18	11	7	14	18	12	7
18. Lithuania	14	15	12	7	13	15	13	12
19. Egypt	24	16	9	3	23	15	9	3
20. UK	13	14	13	9	12	14	13	12
21. China	17	18	11	5	16	17	11	5
22. Mexico	22	16	8	3	21	17	8	4
23. Dem. Rep. Congo	30	13	5	2	29	13	6	2
24. France	13	14	13	9	12	14	13	12
25. Bangladesh	25	16	8	3	23	16	7	3
26. Iran	25	16	7	3	24	16	7	3
27. Indonesia	21	17	19	3	20	17	9	4
28. Ireland	15	15	12	7	15	15	12	8
29. Cyprus	16	14	12	7	15	14	12	9
30. Pakistan	27	15	7	2	25	14	7	2
31. Sri Lanka	19	16	10	5	18	17	11	5
32. Vietnam	23	17	7	3	21	17	8	4
33. Romania	13	16	12	8	12	15	13	11
34. Honduras	27	15	6	2	26	15	6	3
35. Hungary	12	15	13	8	11	14	14	12
36. Turkey	20	18	9	4	19	17	9	5

Pyramid Building *continued*

FIGURE 1: MODIFIED POPULATION PYRAMID

