

INVESTIGATION 21



Global Population Trends

Project

PURPOSE

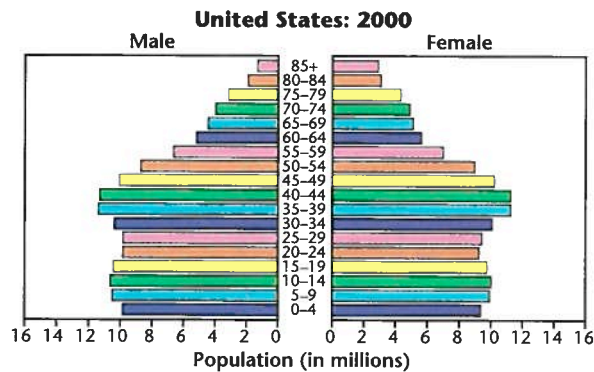
- Analyze and compare human population trends in nations of divergent economic development
- Factor in the impacts of various historic events on populations to predict future growth and social conditions

INTRODUCTION

In Investigations 19 and 20 you developed mathematical and graphic models to represent and project human population growth. In this project you will analyze human populations by sex, age, and economic development to refine your predictions, based on a variety of possible historical events taking place.

Fig. 21-1

Population pyramids, such as this one for the United States in 2000, break down populations by gender (horizontal axes) and by age group (vertical axes).



Materials

- Internet access
- encyclopedias or other sources for global economic and political data

Procedure

Access the U.S. Census Bureau Web site at: www.census.gov/ipc/www/idbpyr.html At this site choose any three nations of the world so that you have one in each of these three categories: Developed, Developing, and Underdeveloped. Use the default settings for the three years 2000, 2025, and 2050, then print out your nine population pyramids.

Analysis

1. Analyzing the pyramids for each of the three countries in turn, discuss why the profile changes as it does over time. Focus on how the pyramid varies in the youngest segments of the population.

2. What patterns do you see in the differences and changes in the male/female ratios?

3. Compare the oldest age group in each of the categories for 2000. Do they change in the same ways for 2025 and 2050? What reasons would you give?

4. Consider how the overall population of each country will fare as time progresses.

- a. Will conditions for the people likely improve or degrade? Explain.

- b. What are the implications for immigration patterns over the 50-year period?

For the remaining questions, make use only of your three pyramids for the year 2000.

5. Using **Fig. 21-2** as a template (see next page), briefly outline how the three total populations, or a certain segment of them, would be impacted by each future event listed in the left column. It would be helpful to research examples of such events in recent history.

Fig. 21-2: Comparison Table for Growth Under Varied Conditions

Event	Developed Country	Developing Country	Underdeveloped Country
Famine			
War			
Lowering of the marital age			
Development of effective birth control			
Outbreak of cholera epidemic			
Severe, chronic air pollution			
Lowering of infant mortality			
Start-up of a social security system			
Economic boom			
Economic depression			
Legislation of child labor laws			
More employment opportunities for women			

Analysis

Analysis

6. Select two events that would have the effect of allowing one nation's population to continue to increase rapidly. Briefly explain why the population would continue to rise.

a.

b.

7. Select two factors that would have a stabilizing effect on the population of the same country. Explain why these factors should work in the way you predicted.

a.

b.
