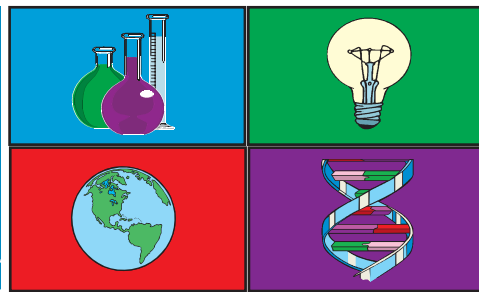
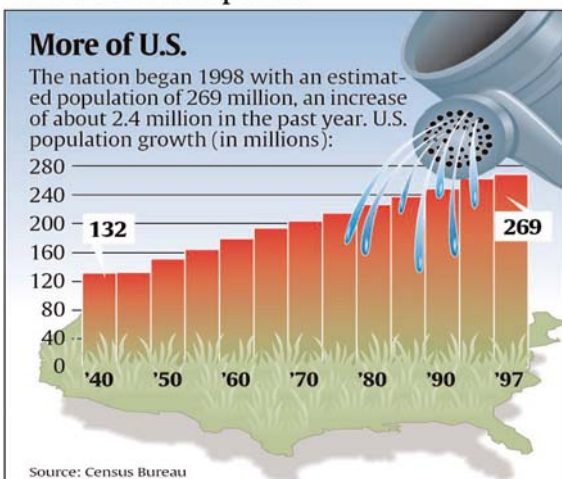


Science TODAY™ Student Edition



More of U.S.

USA TODAY Snapshots



By Cindy Hall and Marcy E. Mullins, USA TODAY

Focus Questions:

- What was the actual population change between successive census years?
- What was the percent change in the population between successive census years?
- What is the mathematical trend in the data?
- Based on a mathematical model, what would be the estimated population for the U.S. in 2025?
- How will we deal with an ever increasing population?

Activity Overview:

The USA TODAY Snapshot™, "More of U.S." shows the growth of the United States population for the last several decades. By examining this data, predictions can be made about future population growth. By understanding these trends, decisions about the future can become more effective.

Which regions of the country are growing the fastest? Which areas have relatively stable populations? Space and resources, both of which once seemed limitless, are precious commodities in many parts of the country. A grasp of population growth issues is necessary in order to plan for future resource management.

In this activity, you will graph and analyze the population change in the United States. You will develop an understanding of actual change and percent change in populations.

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This activity was created for use with
Texas Instruments handheld technology.

More of U.S.

Procedure:

Step 1

From the USA TODAY Snapshot "More of U.S.," enter the remaining "U.S. Populations" in the table below. The population for 2000 was found at the U.S. Census Bureau website (www.census.gov). You will also be predicting the population for 2025, so don't include this information in your calculator lists.

Step 2

Using your graphing calculator and the data table, enter the years (except for 2025) in L1 of the List Editor. Enter the populations in L2.

Step 3

Create a scatterplot for the data.

Step 4

Press (window) and set the appropriate values for the X (independent) variable and for the Y (dependent) variable.

Step 5

Press (graph) and describe the trend you see in the graph of your data.

Step 6

Use the calculator to create a linear regression model.

Data Source:

U.S. Census Bureau

Materials:

- TI-83 Plus Silver Edition or TI-83 Plus
- TI-84 Plus Silver Edition or TI-84 Plus

Additional Information:

The U.S. Census Bureau Web site (www.census.gov) has huge amounts of data that are gathered with each census.

Explore the Census link in the News section of the USA TODAY Web site (www.usatoday.com). You will find many articles related to population, as well as interactive demographic data.

More of U.S.

Assessment and Evaluation:

1. In this activity, which is the independent variable? _____
2. Which is the dependent variable? _____
3. What is the slope of the regression line? _____
4. What would be the appropriate unit label for the slope? _____
5. What do you predict the population would be in 2025? _____
6. Now complete the remaining cells in the data table. As a guide, in the first available cell under "Change in Population," you should calculate the difference between the population in 1940 and 1950. In the "Percent Change" column, you should calculate the percent gain in population from one decade to the next.

Year	U.S. Population (millions)	Change in Population (millions)	Percent Change in Population (millions)
1940	132	XXX	XXX
1950			
1960			
1970			
1980			
1990			
1998			
2000	281		

Student Notes: