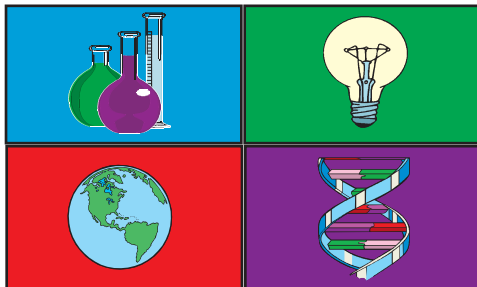


# Science TODAY™

## Student Edition

# USA TODAY

NO. 1 IN THE USA



## Growing bigger by the decade

### USA TODAY Snapshots

**Growing bigger by the decade**

A new Census report projects that the USA will remain the world's third-most-populous country in 2050. The current and projected top five in 2050:

2002 rank	Population	2050 rank	Population
1	China	1	India
	1.3 billion		1.6 billion
2	India	2	China
	1 billion		1.4 billion
3	USA	3	USA
	<b>288 million</b>		<b>420 million</b>
4	Indonesia	4	Indonesia
	231 million		336 million
5	Brazil	5	Nigeria
	180 million		307 million

Source: U.S. Census Bureau

By Shannon Reilly and Julie Snider, USA TODAY

### Activity Overview:

In this activity, you will examine the current and predicted population data from the countries included in the USA TODAY Snapshot "Growing bigger by the decade." Using this data, you will calculate the percent change in the number of people in each country, and determine which of the countries is growing at the fastest rate. What would be the predicted impact of an increase in the population of these countries? Are there other countries where population growth is close to zero? Which countries have a population that is decreasing? You will explore these questions in this activity, and make predictions about the future impact of increased populations in various parts of the world.

### Focus Questions:

- By what percent is each country listed in the USA TODAY Snapshot projected to grow?
- What factors affect the population of any country?
- What could happen in the next few decades to cause the populations to be different from what the USA TODAY Snapshot projects?
- What is the approximate number of people per square mile in each of the countries in the USA TODAY Snapshot?

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

## Growing bigger by the decade

### Procedure:

#### Step 1

Use the USA TODAY Snapshot “Growing bigger by the decade” to complete the following table. The populations should be entered in millions of people. (1 billion = 1000 million)

Country	2002 Population (millions)	2050 Population (millions)
China		
India		
USA		
Indonesia		
Brazil		288
Nigeria	131	

#### Step 2

In L1 of the calculator, enter the 2002 populations, in millions of people, for each of the six countries in the USA TODAY Snapshot.

#### Step 3

In L2, enter the projected 2050 populations for each country. Be careful to enter each country's population on the same line as in L1.

#### Step 4

Calculate the projected change in population from 2002 to 2050. To do this, move to L3, and then place the cursor at the list heading — highlighting “L3”. Now enter the following formula: L2-L1. Then press **ENTER**. The change in population for each country should now appear in L3.

#### Step 5

Next, you will calculate the projected **percent change** in population for each country. Move the cursor to the list heading in L4 and enter the following formula: L3/L1 x 100.

### Data Source:

U.S. Census Bureau

### Materials:

- TI-83 Plus family or TI-84 Plus family

### Additional Information:

- U.S. Census Bureau website:

[www.census.gov/ipc/www/idbrank.html](http://www.census.gov/ipc/www/idbrank.html)

## Growing bigger by the decade

### Assessment and Evaluation:

1. What is the projected change in millions of people for each of the countries listed in the USA TODAY Snapshot?  
Brazil's projected 2050 population will be 228 million.  
Nigeria's 2002 population was 131 million.
2. Which country is projected to have the largest change in population from 2002 to 2050?
3. What is the projected percent change in population for each of the countries in the USA TODAY Snapshot?
4. Which country is projected to have the largest percent change in population from 2002 to the predicted 2050 population?
5. What are some reasons a country would have a change in population that appears small, but actually have a percent change in population that is large?
6. Each of the countries in the USA TODAY Snapshot is listed below with its land area. Use your calculator in any way you wish to calculate the number of people per square kilometer for each country in 2002. This is called the "population density". Fill in the data table with these values. Next, calculate the projected number of people per square kilometer in 2050. Again, fill in the data table.

China 9,596,960 km<sup>2</sup>  
 India 3,287,590 km<sup>2</sup>  
 USA 9,631,418 km<sup>2</sup>  
 Indonesia 1,919,440 km<sup>2</sup>  
 Brazil 8,511,965 km<sup>2</sup>  
 Nigeria 923,768 km<sup>2</sup>

Country	People/km <sup>2</sup> in 2002	People/km <sup>2</sup> in 2050
China		
India		
USA		
Indonesia		
Brazil		
Nigeria		

7. Which country is projected to have the greatest increase in population density?
8. Which country is projected to have the greatest percent increase in population density?

### Student Notes: