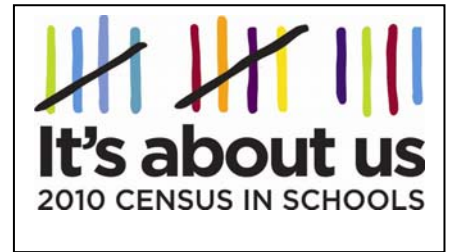


World Statistics Day

Celebrating the Many Achievements of Official Statistics



Skills and Objectives

Students will:

Collect, organize, and analyze census data about various cities.

Standards:

Math – Numbers and operations; data analysis and probability

Social Studies – People, places, and environments

Geography – The world in spatial terms, places and regions, and human systems

Background

This lesson introduces World Statistics Day, Federal statistics, and statistics to students as they collect, organize, and analyze a variety of statistics from the U.S. Census Bureau’s American Community Survey. Students will have the opportunity to examine data about educational attainment and median household income.

Words to Know

Statistics - The mathematics of collecting, organizing, and interpreting data

Median Income - The amount that divides the income distribution into two equal groups with half having incomes above the median and half having incomes below the median.

American Community Survey - An ongoing survey conducted by the U.S. Census Bureau that provides annual demographic data

World Statistics Day – October 20, 2010

Materials:

Student worksheet “BUSINESS DECISION: WHERE TO BUILD? 1-A

Student worksheet “BUSINESS DECISION: WHERE TO BUILD? 1-B

Time Required: One class session

Getting Started

1. Explain to students that on October 20, 2010, countries around the world will celebrate the first World Statistics Day to raise awareness of its importance and the increasing role of statistics in societies and governments around the world. Also, government agencies, businesses, and community leaders use statistics to make educated decisions for their communities.
2. Explain that there are 14 Federal statistical organizations in the United States doing vital work for our nation. One of these organizations is the U.S. Census Bureau
3. Explain that the U.S. Census Bureau is best known for its complete count of the United States population known as the decennial census, which has been conducted every 10 years since 1790. Engage the students in a conversation about the 2010 Census. Ask: **An important civic**

event happened in 2010. Do you know what it was? Explain that the 2010 Census was taken this past spring and summer. The goal of the 2010 Census was to find out how many people live in the United States by counting each man, woman, and child using a short set of questions. It is a law that the government must count the number of people living in this country every 10 years, and it is our responsibility to make sure that we are counted. Ask the students if they remember participating or hearing about the 2010 Census.

4. Explain that the U.S. Census Bureau also conducts numerous other surveys and censuses that are constantly measuring the changing population, social, and economic information for the nation and reports these data to state, local, and tribal governments.

Using the Data

5. Help students think about how census data can be used to make a specific decision for their community. Write the following on the board:

Site 1: School-age children within walking distance: 837

Site 2: School-age children within walking distance: 1,500

Site 3: School-age children within walking distance: 10

6. Ask: **If the local authorities were going to build a new school, what would be the best site according to these populations?** Discuss students' reasoning, and ask them to share other factors that might contribute to the decision, such as roads, type of community, and location of existing schools.

Using the Student Worksheets

7. Explain to the students that they will play the role of a company that is looking to expand by building a second manufacturing plant. To select the new location, the company decides to use data from the Census Bureau's American Community Survey to identify cities that would be the best fit for the company.

8. Distribute Student Worksheet BUSINESS DECISION: WHERE TO BUILD? 1-A and Student Worksheet BUSINESS DECISION: WHERE TO BUILD? 1-B and read the introduction together. Review vocabulary and assign students to work individually or in a group to complete the student worksheet.

Wrap-up

9. Invite students to "unveil" their final choice and share their reasons for their choice for the second manufacturing plant with the rest of the class. They might write the locations on slips of paper and place them in envelopes for an awards-style presentation.

10. As a class, discuss how else students might use census data to benefit their community. Are there community services that they think their town or city needs?

BUSINESS DECISION: WHERE TO BUILD?

Businesses, nonprofit groups, government planners, and community planners use census data to help them make decisions. Your company is a company that specializes in the design and manufacturing of diagnostic machines used in hospitals around the world. Your company is so successful that it has outgrown its current facility and has decided to build a second plant. The company needs to decide where to build the new plant. Many cities want the company, because wherever it goes it will create lots of new highly paid jobs. However, the company can not go just anywhere; its employees must be well educated. Your company's research department decided to use census data to identify cities that could be the best fit for the company. To select the new location, your company's research department has narrowed their search to the 10 cities below.

Using data from the U.S. Census Bureau's American Community Survey you will narrow your search to the location for the manufacturing plant. Use the table to answer the questions below and as a guide in your research for a city for the new manufacturing plant. Consider the geographic location and the other industries that might be in the area. You may also want to consult maps to help with you decide.

	Total Population	Population 18 Years and Over	Median Household Income	Total Housing Units	Percent of Population 25 Years and Over with a Bachelor's Degree or Higher
Washington, DC	588,373	475,427	\$56,428	284,164	47.2%
Los Angeles, CA	3,749,058	2,818,645	\$48,610	1,361,786	29.2%
Houston, TX	2,024,379	1,483,329	\$42,624	870,308	27.6%
Chicago , IL	2,725,206	2,065,028	\$46,767	1,182,326	30.2%
Boston, MA	613,086	497,092	\$51,849	255,082	41.3%
Detroit, MI	808,398	578,347	\$29,423	367,789	11.3%
Denver, CO	584,563	442,182	\$45,002	274,215	38.0%
Salt Lake City, UT	184,881	140,959	\$44,552	80,040	38.9%
Phoenix, AZ	1,468,633	1,042,498	\$49,933	554,468	23.7%
Miami, FL	349,856	279,762	\$29,151	163,123	22.6%

1. Why is the percent of population 25 years and over with a bachelor's degree or higher useful to know?

3. Why is the population 18 years and over useful to know?

2. Why is the median household income useful to know?

1-B

BUSINESS DECISION: WHERE TO BUILD?

4. Based on the data, which do you think are the top three cities for the manufacturing plant?

City-A:

Why?

City-B:

Why?

City-C:

Why?

5. What are the pros and cons of your top three cities?

City-A:

Pros:

Cons:

City-B:

Pros:

Cons:

City-C:

Pros:

Cons:

6. Is there anything else you think you should consider before making your final decision? If so, what and why?

7. If you've visited the cities in person, is there anything that influences your decision? If so, what?

8. Which site is your final choice?

Why?

8. Did you see any relationship between the percent of people over 25 with a bachelor's degree and median income? If so, what?
