

**Lesson Title:** Obesity Trends in the United States

**Brief Description:** The lesson requires students to collect data from the Internet, create a database, and report the trends found within the data. Students will research two states and the obesity trend changes for each state from 1991-2001. Students will analyze the data, and determine whether the trends have increased, decreased, or stayed the same. Students will compare the data to other states in the same region, and other states in the U.S. Students will not only analyze the trends, they will also make predictions on why changes have or have not occurred, and provide three solutions to reducing the percentage of obese individuals in the United States. Students will organize their information and give a presentation to the class on their findings.

**Subject Area:** Health, Mathematics, and Technology

**Intended Grade Level(s):** 5<sup>th</sup> grade

**Duration:** "three 45-minute sessions"

**Goals:**

1. For students to have a better understanding of how trends change over time.
2. For students to use previous statistical trends to predict future statistics

**Objectives:**

1. Given access to a computer and the Internet, fifth grade students will research information on state obesity trends in the United States.
2. Given access to a computer, the Internet, and Excel, fifth grade students will organize and analyze the statistics of two states in the United States.
3. Given access to a computer, the Internet, and Excel, fifth grade students will compare their researched data to other states in the United States.
4. After analyzing data, fifth grade students will explain and predict causes and solutions of obesity in the United States.
5. After collecting and analyzing the data, fifth grade students, will present their information to the class, while fulfilling the assessment requirements.

**Teacher Materials/Resources:**

Computer with Internet access, examples of databases, hat with names of states inside, presentation software for direction and instruction

**Student Materials/Resources:**

Computer with Internet access, database software (Excel), word processing software for final report

**Vocabulary:**

Obesity- An excess amount of body weight that includes muscle, bone, fat, and water.  
"Obesity" specifically refers to an excess amount of body fat.  
Trend- The general direction in which something tends to move.

**Procedures:**

Introduce the lesson by asking students what they know about obesity. Give the definition of obesity and explain some of the health risks associated with obesity (example: cardiovascular disease). Inform the students of the goals and objectives they will be required to fulfill and show examples of finished products. Relate lesson to nutrition and physical activity unit(s).

Have each child draw two states from a hat. After drawing states, have the students predict their states' percentage of obese people. Have students begin researching their states using the Nutrition & Physical Activity website [www.cdc.gov/nccdphp/dnpa/obesity/trend/](http://www.cdc.gov/nccdphp/dnpa/obesity/trend/) (this site provides state by state obesity percentage rates from 1991-2001, as well as other interesting obesity trend breakdowns). After the students record their information, have them reflect on the accuracy of their earlier prediction.

Have the students analyze and organize the data in other ways by transferring the Internet spreadsheet to Excel (or any other database software). In order to analyze the data more effectively, students may need to add additional fields (example: regions). Have the students hypothesize potential causes of obesity in the states they researched. Are there similarities or differences within regions? Among other states in the U.S.?

After students research their states, and make predictions of obesity causes, have each student research 3 solutions to overcoming the increasing obesity trend in the United States. Once students have completed their research, have the students prepare a 1-page, double-spaced paper on their research process, as well as a summary of their results, region similarities/differences, causes, and solutions to obesity in the United States.

**Assessment:**

Evaluate students' databases and presentations for fulfillment of learning goals and objectives. Observe students' participation and behavior during the information gathering and analyzing process. Each student will hand in a 1-page, double-spaced paper on his/her research process, and a summary of their results, region similarities/differences, causes, and solutions to obesity in the United States.

**Useful Internet Resources:**

Nutrition & Physical Activity  
[www.cdc.gov/nccdphp/dnpa/obesity/trend/](http://www.cdc.gov/nccdphp/dnpa/obesity/trend/)

Medline Plus  
<http://www.nlm.nih.gov/medlineplus/obesity.html>

**Other References:**

Mokdad AH, Serdula M, Dietz W, et al. The spread of the obesity epidemic in the United States, 1991–1998. *JAMA* 1999;282:1519–1522.

Mokdad AH, Serdula M, Dietz W, et al. The continuing obesity epidemic in the United States. *JAMA* 2000;284:1650–1651.

Mokdad AH, Bowman BA, Ford ES, et al. The continuing epidemics of obesity and diabetes in the United States. *JAMA* 2001;286(10):1195–1200.

Mokdad AH, Bowman BA, Ford ES, et al. Prevalence of obesity, diabetes, and obesity related health risk factors, 2001. *JAMA* 2003;289:76–79.