

# Guns in Our World: Using Bar Graphs to Understand Impact of Gun Violence on Youth

## PURPOSE

To use bar graphs to analyze data about the impact of gun violence on students and their peers.

## GRADE LEVELS

Elementary  
Early Middle School

## CONTENT AREAS

Math  
Science

## TIME

1 30-40 minute period for lesson, plus  
1 20 minute quiz session on a different day

## STUDENT OBJECTIVES

- Students will define terms associated with graphing, including axes, data, tally chart, and bar graph.
- Students will collect data and represent data using a tally system and bar graph.
- Students will correctly read and interpret data in a bar graph.
- Students will create generalizations based on an examination of data in a bar graph.

## STANDARDS AND BENCHMARKS

Mathematics State Goal 6D, 10A  
Science State Goal 11A

## LEARNING STYLES

Visual/Spatial  
Logical/Mathematical

## MATERIALS

Bar Graph How-To  
Tally Chart Worksheet  
Blank Bar Graph  
Bar Graph Quiz  
Bar Graph Key

## VOCABULARY

Axes, x and y  
Data  
Tally Chart  
Bar Graph

## ASSESSMENT

Bar Graph Quiz

## ACTIVITIES

### Anticipatory Set

- Put up the overhead (or distribute copies) of the **Bar Graph How-To** handout. Read through the handout as a class and ask students to interpret the graph by asking the following questions:
  - Which color juice do students like the most?
  - Which color juice do students like the least?

- How many students prefer the most popular juice?
- How many students prefer the least popular juice?
- How many more students prefer yellow juice than red juice?

### Lesson:

- Define the following terms:
  - **x-axis:** horizontal line
  - **y-axis:** vertical line
  - **data:** a collection of information (facts, numbers, measurements)
  - **Tally Chart:** Using marks to group counting into 5's
  - **Bar graph:** uses bars to show amounts (numbers) to easily compare
- Tell students that they will be collecting data and creating a bar graph to help compare that data. A bar graph shows numbers so that the larger a bar graph is, the larger the number, or amount of data, it represents.
- Pass out the **Tally Chart worksheet** and put up an overhead or draw a chart on the board corresponding to the one on the worksheet. Read through the notes at the top as a class.
  - Using a show of hands, read each question on the tally chart and count how many students raise their hands for each. You may wish to do this with heads down/eyes closed to ensure honesty and make students feel secure.
  - Write the number of hands raised in tally form in the chart on the board.
  - When you are finished, have students copy the tally marks onto their own sheets and then count by 5's (you may demonstrate by completing the first one together) and write the amount numerically in the last column.
- Pass out copies of the **blank Graph paper** and help students set up their graphs for the data on their tally charts.
  - **X-axis** should be labeled "How many students..." and the **y-axis** should be "Number of students"
  - The scale you choose will depend on the size of your class, but generally, counting by 5's will work for most class sizes.
  - The points along the x-axis will correspond to each of the questions from the tally chart. Have students write these in so that they read, left to right, "...seen a gun in real life?"; "...seen a gun in movies or games?"; "...know where to get a gun?"; "...play with toy guns?"; "...know someone who has been shot?"
  - Tell students that they will begin graphing the data from their tally charts and remind them to give their graph an appropriate title when they are finished.
- Allow students to work in pairs to complete their graphs and check to make corrections before dismissing students.

### Debrief/Assessment:

- Debrief by asking students the following questions. They should use their graphs to answer, with their tally charts put away.
  - How many more students have seen a gun in movies or games than have seen a gun in real life?
  - Which question did the most students respond to?
  - Which question did the least students respond to?
  - How many students know someone who has been shot?
  - How many students **do not** play with toy guns?
- Review the **Bar Graph How-To** and tell students to study it for a quiz next class period. The quiz will cover the terms they learned during the lesson plan, tally charts, and graphing.
- Assess student understanding using in-class **Bar Graph Quiz** and re-teach if necessary.

### Suggestions for Extension Activities:

1. Follow with a lesson plan on gun safety using **Don't Become A Statistic**.
2. Follow with **Part 2** of this lesson plan using line graphs.
3. Have students collect, tally, and graph, answers the questions for other classes or grades. Teach them how to do a double bar-graph to compare data within the same category.