

## PEANUTS

### Teaching Guidelines

**Subject:** Mathematics

**Topics:** Statistics and Probability

**Grades:** 4 - 7

**Knowledge and Skills:**

- Can create a histogram
- Can represent numerical data in chart and graph form
- Knows what a "normal distribution" is

**Materials:**

- Peanuts in the shell, approximately 25 per team or individual student,
- Centimeter ruler

**Procedure:** Students can do this activity individually or in teams of two.

Each team (or individual) should get about 25 unshelled peanuts to measure. Students may never have measured “to the nearest half centimeter” before and you may need to demonstrate this.

Most graphs should have a “hump” in the center. In comparing their results, students should notice whether all of the humps seem to be at around the same peanut lengths.

If all graphs are combined, the same general shape should be present.

Question for class discussion or written response: Based on what they have seen about peanuts, what would the students think if they bought a bag of peanuts from someone and all of the peanuts were 3 cm or less in length? Why?

Note: The type of graph used in this activity, called a histogram, is a method of summarizing a large quantity of numerical data. In a histogram, the data is sorted into smaller groups whose elements are between given values, and the number of data points in each group is graphed.

It is often the case that when considering some characteristic of an object (such as the length of a peanut), one will find that the values tend to cluster around some particular number, and drop off symmetrically on either side in a “bell-shaped” curve.

# PEANUTS



Popcorn and peanuts are great snacks for baseball watchers. But not all peanuts are the same.

Your teacher will give you some peanuts. Measure the length of each one, to the nearest half centimeter, and record it in the table below.

Then make a graph that shows all of your data. (Your graph should be like the graph below. This type of graph is called a "histogram".)

Compare your graph to graphs made by other students. If you combined the data from everyone in the class, what do you think the graph would look like?

Length	Tally	Number
More than 0 but not more than 1/2		
More than 1/2 but not more than 1		
More than 1 but not more than 1 1/2		
More than 1 1/2 but not more than 2		
More than 2 but not more than 2 1/2		
More than 2 1/2 but not more than 3		
More than 3 but not more than 3 1/2		
More than 3 1/2 but not more than 4		
More than 4 but not more than 4 1/2		

Example graph:

