

WHAT WE ARE LEARNING

Collect and Organize Data

VOCABULARY

Here are some of the vocabulary words we use in class:

Survey A method of gathering information about a group

Population The entire group of individuals or objects that could be a part of a survey

Sample A part of the population selected for a survey

Random sample A survey in which each individual or object in the given population has an equal chance of being selected

Cumulative frequency A record that shows a running total of people’s responses

Dear Family,

Your child is learning to collect, analyze, and draw conclusions from data.

One way to collect data is to conduct a survey. For accurate results, samples and survey questions should be unbiased.

The local boys and girls club is conducting a survey about teens’ favorite vacation locations.

Biased Sample	Unbiased Sample
Randomly survey 150 out of 1,000 girls	Randomly survey 150 out of 1,000 teenagers
Biased Question	Unbiased Question
“Do you agree with the members of the Pep Squad that the beach is the best spot for a vacation?”	“Where is your favorite place to go on vacation?”

The mean, median, and mode help to describe a set of data. The mean is the average of a set of numbers, found by dividing the sum of the set by the number of addends.

Data: 25, 38, 43, 27, 38
 Mean: $(25 + 38 + 43 + 27 + 38) \div 5 = 34.2$

The median is the middle number in a set of data. To find the middle number, arrange the data in order, and then select the number.

Data: 3, 5, 8, 10, 43
 Median is 8 because it is in the middle position.

If there are two numbers in the middle, average them to find the median.

Data: 1, 3, 4, 8, 15, 20
 Median: $(4 + 8) \div 2 = 6$

The mode is the number or numbers that occur most often.

Data: 1, 2, 2, 2, 3, 5, 7, 12
 Mode: 2

As you work with your child, talk about math to help build confidence and understanding.

Sincerely,

Collect and Organize Data

Tell whether you would survey the population or use a sample.

1. You want to find out what kind of soup family members would like for lunch.

2. You want to find out the favorite kind of soup of the people in your city.

Pollsters are surveying teens about their favorite stores at the mall. Tell whether the sampling method is biased or unbiased.

3. Randomly survey 450 teens.

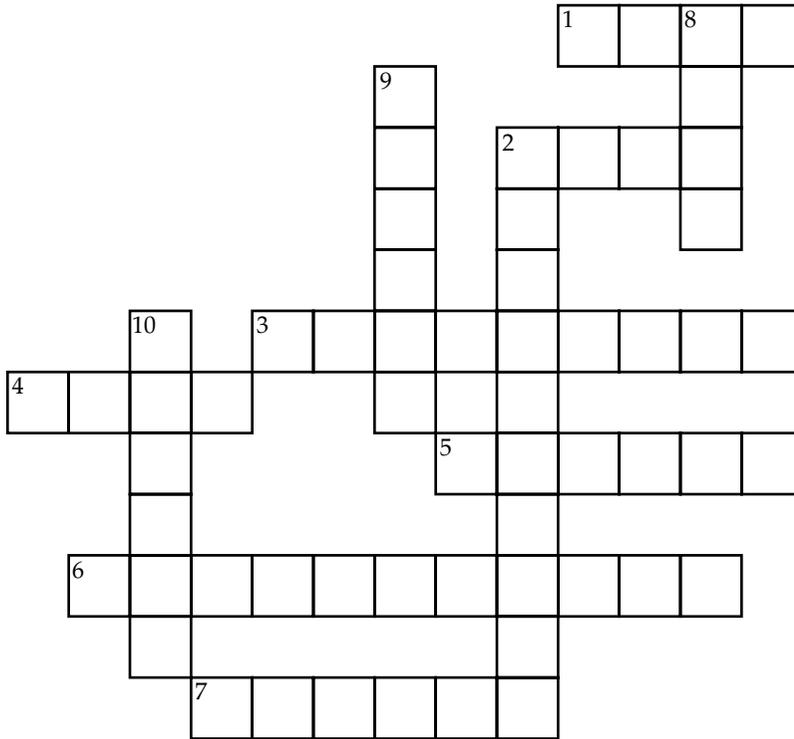
4. Randomly survey 450 boys age 13–18.

Complete the table below.

Favorite Dog	Tally Marks	Frequency	Cumulative Frequency
Golden Retriever	#########		
German Shepherd	######		
Labrador	######		
Chihuahua	###		

Use the frequency data in the table above to answer these questions.

5. What is the mean? _____
6. What is the median? _____
7. What is the mode? _____
8. What is the range? _____



ACROSS

1. In the set of numbers 17, 21, 25, 33, 33, the _____ is 33.
2. One method for recording data is a line _____.
3. A _____ table shows the total for each category or group.
4. You find the _____ by adding a group of numbers and dividing by the number of addends.
5. The part of a group to be surveyed is a _____.
6. You can use tables and graphs to draw _____ about data.
7. The middle number in a data set.

DOWN

2. The entire group of individuals that could be a part of a survey.
8. Information about a group.
9. A method of gathering information about a group.
10. The type of sample in which every individual in the population has an equal chance of being selected.

Answers: 1. mode; 2 across, plot; 2 down, population; 3. frequency; 4. mean; 5. sample; 6. conclusions; 7. median; 8. data; 9. survey; 10. random