

Sixth Grade Unit 6 – Statistics

Focus for Unit 6 - Describe data distributions using numerical measures of center and spread. Use dot plots, histograms and box plots to represent and analyze qualitative data. Use bar graphs to represent and analyze categorical data.

- | | |
|---|--|
| <ul style="list-style-type: none"> Recognize a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answers. Understand that a set of data collected to answer a statistical question has a distribution which can be described by its center, spread, and overall shape Recognize that a measure of center for a numerical data set summarizes all of its values with a single number, while a measure of variation describes how its values vary with a single number Display numerical data in plots on a number line, including dot plots, histograms, and box plots | <ul style="list-style-type: none"> Summarize numerical data sets in relation to their context by reporting the number of observations, by describing the nature of the attribute under investigation, including how it was measured and its units of measurement, by giving quantitative measures of center (median and/or mean) and variability (interquartile range and/or mean absolute deviation), as well as describing any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data were gathered, and by relating the choice of measures of center and variability to the shape of the data distribution and the context in which the data were gathered |
|---|--|

Supporting Your Child

■ Always Talk About Math in Positive Ways

Let your child know that learning math is very important. Communicating a positive, can-do attitude about math is the single most important way for you to ensure that your child is successful in mathematics.

■ Know What Your Child Is Studying in Math

Be aware of the math your child is learning each year and know the standards they're required to meet. The standards for this unit are listed above. Ask your child what they're studying in math class, regularly check in with them about math homework.

■ Make Math an Everyday Part of Your Family

Find math at home. Involve your child in activities like shopping, cooking, and home fix-it projects to show them that math is practical and useful. Encourage your child to solve problems that involve math. Engage your child in conversations about what they're thinking about when they solve math problems. Find opportunities to explore math together.

Vocabulary

Measures of Variability: a measure that describes how spread out or scattered a set of data. It is also known as measures of dispersion or measures of spread.

Center: a value that attempts to describe the central position of the data set, the most common method for measuring the center is the mean (an average of the data), the other measures are mode and median

Spread: the most common measures of spread or variability are the standard deviation and range

Box Plot: shows the distribution of a set of data along a number line, dividing the data into four parts using the median and quartiles

Deviation: how far from the normal or how spread out the numbers are, the absolute difference between the element and a given point

Distribution: an arrangement of values of a variable showing their observed or theoretical frequency of occurrence

Histogram: a bar graph that shows how frequently data occur within certain ranges or intervals. The height of each bar gives the frequency in the respective interval.

Mean: the sum of the numbers divided by the number of items in the list

Median: the middle data value of an ordered data set

Mode: a number that occurs most frequently in the data set

Quantitative: data that can be counted or measured

Interquartile Range: the range of values of a frequency distribution between the first and third quartiles