Enduring Understandings	Essential Questions	Indicators
Choices in data collection and representation affect their interpretation and use.	What is the purpose of displaying data?	4.6.1.2 conduct and use the results of a simple statistical investigation to answer a question.
		4.6.3.1 analyze and interpret data using various formats, including frequency tables.
		4.6.2.1 interpret, organize, and display data, with and without technology, using various formats, including frequency tables and circle graphs.
		4.6.1.3 construct convincing arguments to support conclusions based on analysis of data and interpretation of graphs.
	How does the selection of a sample affect conclusions based on the sample?	4.6.1.1 identify and compare different ways of selecting a sample.
	Which measure of central tendency is most appropriate in a given situation?	4.6.4.1 select and justify mean, median, or mode of a data set as the best representation of a typical value of a data set.
	How can the data representation influence conclusions?	4.6.5.1 recognize and identify the misuses of statistical and numerical data.
		4.6.5.2 analyze why the way in which data are displayed might influence the conclusion reached.
		4.6.5.3 analyze the effect a change of scale will have on graphs.

Enduring Understandings	Essential Questions	Indicators
The analysis and interpretation of data depends on the type of display.	What is the purpose of data displays and statistical measures?	4.7.2.1 organize and display data, with or without technology, using a variety of displays, including box and whisker plots, scatter plots, and back-to-back stem and leaf plots.
		4.7.3.1 analyze and interpret data in a variety of displays, including box and whisker plots, scatter plots, and back-to-back stem and leaf plots.
		4.7.2.2 draw circle graphs using ratios, proportions, and percents.
		4.7.2.3 use box and whisker plots to compare two sets of data.
		4.7.4.1 use the measures of central tendency (mean, median, mode) to compare two sets of data.
Graphical representations and statistical measures can be used to make interpretations and predictions about real world situations.	How can the data representation influence conclusions?	4.7.5.1 evaluate the validity of claims based on analysis of data.
		4.7.5.2 identify data that represent sampling errors and explain why a sample might be biased.