Unit Plan by Prioritized Standards

Content Area	MATH
Grade/Course	6th
Unit of Study	Statistics
Duration of Unit	12 days - 3 weeks

Insert priority standards below (include code). **CIRCLE or Highlight** the **SKILLS** that students need to be able to do and **UNDERLINE** the **CONCEPTS** that students need to know. **(address "supporting" standards in daily lesson plans)**

MGSE6.SP.1. ==Recognize== a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answers. For example, "How old am I?" is not a statistical question, but "How old are the students in my school?" is a statistical question because one anticipates variability in students' ages.

MGSE6.SP.2. ==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.

MGSE6.SP.3 ==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.

MGSE6.SP.4. ==Display numerical data== in plots on a number line, including dot plots, histograms, and box plots.

MGSE6.SP.5 Summarize numerical data sets in relation to their context, such as by:
    a. Reporting the number of observations.
    b. Describing the nature of the attribute under investigation, including how it was measured and its units of measurement.
    c. Giving quantitative measures of center (median and/or mean) and variability (interquartile range).
    d. Relating the choice of measures of center and variability to the shape of the data distribution and the context in which the data was gathered.

Skills (what must be able to do)	Concepts (what students need to know)	DOK Level / Bloom's
• Recognize a "statistical" question as one that anticipates variability in the data	The answer to a statistical question has data to support its answer	½
• Data can be described by its center, spread, and overall shape	A data set has a distribution that can be described	⅔
• 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.	Difference between numerical data set and measure of variation	¾

• Display data in a line plot, histogram and box-and-whisker plot		½
• Summarize numerical data sets in relation to their context		⅔

Step 5: Determine BIG Ideas (enduring understandings students will remember long after the unit of study)	**Step 6: Write Essential Questions** (these guide instruction and assessment for all tasks. The big ideas are answers to the essential questions)

Recognize that statistical questions and the answers account for variability in the data.
 	
• **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.**
 	
• **Understand that numerical data can be displayed in plots on a number line, including dot plots, histograms, and box plots.**
• **Summarize numerical data sets in relation to their context, such as by:**
 	
  • **Reporting the number of observations.**
 	
  • **Describing the nature of the attribute under investigation, including how it was measured and its units of measurement.**
 	
  • **Giving quantitative measures of center (median and/or mean) and variability (range or interquartile range), 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.**
 	
  • **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**
	• What is the best way to organize a set of data?
	
	• What kinds of graphs will best represent a given set of data?
	
	• How can I describe the center of a set of data?
	
	• How can I decide which measure of center (i.e., mean or median) best describes the data?
	
	• How do I choose and create appropriate graphs to represent data?
	
	• What conclusions can be drawn from data?

Essential Unit Vocabulary
•Box and whisker plot   •Frequency   •Histogram   •Line Plot   •Inter-Quartile Range (IQR)

•Mean   •Median   •Minimum/Maximum Value   •Outlier   •Skewed data   •Range
•Measures of Central Tendency

Next step, create assessments and engaging learning experiences