Topic C:

Summarizing a Distribution that is Skewed Using the Median and the Interquartile Range

6.SP.A.2, 6.SP.A.3, 6.SP.B.4, 6.SP.B.5

Focus Standard:	6.SP.A.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.
	6.SP.A.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.
	6.SP.B.4	Display numerical data in plots on a number line, including dot plots, histograms, and box plots.
	6.SP.B.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 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.
		d. 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.

COMMON CORE

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Date: 4/15/14

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135

Instructional Days:	5	
	Lesson 12:	Describing the Center of a Distribution Using the Median (P)[1]
	Lesson 13:	Describing Variability Using the Interquartile Range (IQR) (P)
	Lesson 14:	Summarizing a Distribution Using a Box Plot (P)
	Lesson 15:	More Practice with Box Plots (P)
	Lesson 16:	Understanding Box Plots (P)

In Topic C, students are introduced to a measure of center (the median) and a measure of variability (the interquartile range (IQR)) that are appropriate for describing data distributions that are skewed. Box plots are also introduced in this topic. In Lesson 12, students learn to calculate and interpret the median. Quartiles are introduced in Lesson 13, and the quartiles are then used to calculate the IQR. Students also learn to interpret the IQR as a measure of variability in a data distribution. Lessons 14–16 introduce box plots. Boxplots are often difficult for students to interpret, as they are not a graph of a data distribution (as are dot plots and histograms), but rather are a graph of five key summary statistics of a data set (the minimum, lower quartile, median, upper quartile, and the maximum). Lesson 16 has students use box plots to compare groups, setting the stage for future work on comparing groups in Grade 7.

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[1] Lesson Structure Key: **P**-Problem Set Lesson, **M**-Modeling Cycle Lesson, **E**-Exploration Lesson, **S**-Socratic Lesson

COMMON CORE   Topic C: Summarizing a Distribution that is Skewed Using the Median and the
                            Interquartile Range   engage^ny   136
                  Date: 4/15/14