Topic B

Describing Variability and Comparing Distributions

S-ID.A.1, S-ID.A.2, S-ID.A.3

Focus Standards:	S-ID.A.1	Represent data with plots on the real number line (dot plots, histograms, and box plots).★
	S-ID.A.2	Use statistics appropriate to the shape of the data distribution to compare center (median, mean) and spread (interquartile range, standard deviation) of two or more different data sets.★
	S-ID.A.3	Interpret differences in shape, center, and spread in the context of the data sets, accounting for possible effects of extreme data points (outliers).★
Instructional Days:	5	
Lesson 4:	Summarizing Deviations from the Mean (P)[1]	
Lesson 5:	Measuring Variability for Symmetrical Distributions (P)	
Lesson 6:	Interpreting the Standard Deviation (E)	
Lesson 7:	Measuring Variability for Skewed Distributions (Interquartile Range) (E)	
Lesson 8:	Comparing Distributions (E)	

In Topic B, students reconnect with methods for describing variability that they first used in Grade 6. Topic B deepens students' understanding of measures of variability by connecting a measure of the center of a data distribution to an appropriate measure of variability. The mean is used as a measure of center when the distribution is more symmetrical. Students calculate and interpret the mean absolute deviation and the standard deviation to describe variability for data distributions that are approximately symmetric. The median is used as a measure of center for distributions that are more skewed, and students interpret the interquartile range as a measure of variability for data distributions that are not symmetric. Students match histograms to box plots for various distributions based on an understanding of center and variability. Students describe data distributions in terms of shape, a measure of center, and a measure of variability from the center.

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