Vocabulary: Box-and-Whisker Plots



**Vocabulary**

* Box-and-whisker plot – a graph that indicates the median, the middle 50%, the maximum, and the minimum value of a data set.



* + On a box-and-whisker plot, the middle 50% of a data set is shown by the width (or height) and position of a rectangle. This is the “box” in a box-and-whisker plot.
	+ The median of the data set is indicated by a line inside the box.
	+ The maximum and minimum values are indicated by the endpoints of line segments (“whiskers”) that extend away from the box.
* Interquartile range – the difference between the first and third quartiles of a data set. This is equal to the range of the middle 50% of the data set.
	+ The abbreviation for interquartile range is “IQR.”
	+ For example, if *Q*1 is 3 and *Q*3 is 11, then IQR = 11 – 3 = 8.
* Maximum – the greatest value in a data set.
* Median – the middle value in a set of numbers.
	+ Before finding the median, all data should be in order from least to greatest.
	+ If there is an odd number of values, the median is the middle number.
		- For example, the median of the data set 2, 3, 5, 6, 8 is 5.
	+ If there is an even number of values, the median is the mean of the middle two values.
		- For example, the median of the data set 3, 5, 6, 8 is  =  = 5.5.
* Minimum – the least value in a data set.
* Quartile – one of three values that divide a data set into quarters.
	+ The second quartile (*Q*2) is the median of the data set.
	+ The first quartile (*Q*1) is the median of the values that are less than *Q*2.
	+ The third quartile (*Q*3) is the median of the values that are greater than *Q*2.
	+ In a box-and-whisker plot, *Q*1 and *Q*3 form the sides of the box, while *Q*2 (the median) is indicated by a line inside the box.