

**Sequence of activities to develop reasoning about center.**

<i>Milestones: Ideas and Concepts</i>	<i>Suggested Activities</i>
<b>INFORMAL IDEAS PRIOR TO FORMAL STUDY OF CENTER</b>	
<ul style="list-style-type: none"> <li>Idea of center as a typical or representative value for a graph of a variable (e.g., dot).</li> </ul>	<ul style="list-style-type: none"> <li>Distinguishing Distributions (Lesson 1, Distribution Unit, Chapter 8)</li> </ul>
<ul style="list-style-type: none"> <li>The mean as somewhere in between the highest and lowest value but not necessarily the middle value or the midpoint of the horizontal scale.</li> </ul>	<ul style="list-style-type: none"> <li>What does the Mean Mean Activity (Lesson 1: “Reasoning about Measures of Center”)</li> </ul>
<b>FORMAL IDEAS OF CENTER</b>	
<ul style="list-style-type: none"> <li>Properties of the mean as a balance point and the value for which all deviations from that value sum to zero.</li> </ul>	<ul style="list-style-type: none"> <li>What does the Mean Mean Activity (Lesson 1)</li> </ul>
<ul style="list-style-type: none"> <li>How the mean is affected by extreme values.</li> </ul>	<ul style="list-style-type: none"> <li>What does the Mean Mean Activity (Lesson 1)</li> </ul>
<ul style="list-style-type: none"> <li>The median as the middle value in a data set.</li> </ul>	<ul style="list-style-type: none"> <li>What does the Median Mean Activity (Lesson 1)</li> </ul>
<ul style="list-style-type: none"> <li>Properties of the median: under what conditions it changes or stays the same.</li> </ul>	<ul style="list-style-type: none"> <li>What does the Median Mean Activity (Lesson 1)</li> </ul>
<ul style="list-style-type: none"> <li>Comparing properties of the mean and median.</li> </ul>	<ul style="list-style-type: none"> <li>Means and Medians Activity (Lesson 1)</li> </ul>
<ul style="list-style-type: none"> <li>The idea of a typical value.</li> </ul>	<ul style="list-style-type: none"> <li>What is Typical Activity (Lesson 2: “Choosing Appropriate Measures”)</li> </ul>
<ul style="list-style-type: none"> <li>Understanding why and how to use appropriate measures of center for a sample of data for a particular variable.</li> </ul>	<ul style="list-style-type: none"> <li>Choosing an Appropriate Measure of Center Activity (Lesson 2)</li> </ul>
<b>BUILDING ON FORMAL IDEAS OF CENTER IN SUBSEQUENT TOPICS</b>	
<ul style="list-style-type: none"> <li>How center and spread are used together to compare groups.</li> </ul>	<ul style="list-style-type: none"> <li>Activities in Lessons 1, 2, 3 and 4, Comparing Groups Unit)</li> </ul>
<ul style="list-style-type: none"> <li>The idea and role of mean in normal distribution.</li> </ul>	<ul style="list-style-type: none"> <li>What is Normal Activity (Lesson 3, Statistical Models Uni)</li> </ul>
<ul style="list-style-type: none"> <li>Recognize stability of measures of center as sample size increases. When sample grows, see how measure of center predict center of larger population, and how it stabilizes (varies less).</li> </ul>	<ul style="list-style-type: none"> <li>Sampling activities in Lessons 1, 2, and 3, Samples and Sampling Unit</li> </ul>
<ul style="list-style-type: none"> <li>Role of mean in making inferences.</li> </ul>	<ul style="list-style-type: none"> <li>Activities in Lessons 1, 2, 3, 4 and 5 (Statistical Inference Unit)</li> </ul>
<ul style="list-style-type: none"> <li>Role of mean in bivariate distribution.</li> </ul>	<ul style="list-style-type: none"> <li>❖ An activity involving fitting and</li> </ul>

	<p>interpreting the regression line to bivariate data. (The symbol ❖ indicates that this activity is not included in these lessons.)</p>
--	--