

Core Content

Cluster Title: Develop understanding of statistical variability.
Standard: 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.
MASTERY Patterns of Reasoning:
<p>Conceptual: Understand that data collected in response to a statistical question can be analyzed by its distribution. Understand that data distribution can be viewed by its center (mean, median, and mode), spread (range), and overall shape</p> <p>Procedural: Describe a set of data using center and spread</p> <p>Representational: Represent a set of data using center and spread</p>

Supports for Teachers

Critical Background Knowledge
<p>Conceptual: Understanding of statistical questions. Understanding of data collection.</p> <p>Procedural: Organize a set of data in a table or chart</p> <p>Representational: Represent quantities with tables and charts.</p>
Academic Vocabulary and Notation
Center, shape, spread

Instructional Strategies Used		Resources Used	
<p>The teacher will pose a statistical question (e.g. the length of pinky fingers, hours of TV students watch a week, the number of video games they have in their home, the number of people in their family). They will survey the class and, using the data generated, assist students in creating a line plot. The teacher will guide a discussion about the center, spread, and overall shape of the data on the line plot.</p>		<p>Picking data activity: http://www.bbc.co.uk/education/mathsfiler/shockwave/games/datapick.html</p>	
Assessment Tasks Used			
<p>Skill-based Task Students will identify the center, spread, and overall shape of data graphed by teacher.</p>		<p>Problem Task Provided a box score from a college or professional basketball game, have the students pick out the points scored by each player. The students will find the center of the data (in this case, let's use the median), and the spread of the data. Have the students graph the data and describe the overall shape. Then have the students answer the following questions:</p> <ul style="list-style-type: none"> • All players who don't score at or above the median points scored have to ride a stationary bicycle for 20 minutes. List the players who have to ride the bicycle. • The coach is trying to get the team to play more as a team. He is using the spread of the data as a way to determine if they are playing as a team. How might the coach use the spread to accomplish his goal? 	