

Core Content

Cluster Title: Summarize and describe distributions.
Standard: 5. Summarize numerical data sets in relation to their context, such as by: 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.
MASTERY Patterns of Reasoning:
Conceptual: Interpret a set of numerical data beyond measures of center and variability by noticing and describing patterns and deviations. Understand the representation of a set of numerical data in the context of the data. Understand mean absolute deviation. Procedural: Determine variability such as interquartile range (use mean absolute deviation as an extension). Describe the overall pattern of data. Describe any striking deviations from the overall pattern (outliers). Representational: Create and use data plots to interpret a set of data.

Supports for Teachers

Critical Background Knowledge
Conceptual: Understand measures of center and how they are used to interpret a set of data. Understand measures of variability and how they are used to interpret a set of data. Understand absolute value. Procedural: Calculate mean, median, and range of a data set. Representational: Represent data with plots

Academic Vocabulary and Notation	
1 st Quartile (Q ₁), 2 nd Quartile (Q ₂), 3 rd Quartile (Q ₃), 4 th Quartile (Q ₄), Box plot, Distribution, Dot plot, Histogram, Interquartile range, Upper quartile, Lower quartile, Median, Upper endpoint, Lower endpoint, Deviation	
Instructional Strategies Used	Resources Used
Have each student choose two to three books from the library and have them record the number of pages in each. Graph the data as a class on a line plot, then interpret the data and create a box plot. Use the box plot to show variation of data, and then interpret deviation from mean using specific data from the pages recorded.	http://www.deltastate.edu/docs/math/Mitchell3.pdf http://www.ade.az.gov/standards/math/2010MathStandards/Gradelevel/MathGr6.pdf pages 41-43
Assessment Tasks Used	
Skill-based Task	Problem Task
Students will gather and summarize data using a box plot.	They will also interpret differences in given values compared to the mean (deviation from the mean), noting patterns or deviations in the data display.