6 Math Unit 09: Statistical Measures

Content Area: **Mathematics**
Course(s):
Time Period: **May**
Length: **12 days**
Status: **Published**

Unit Overview

This chapter focuses on the data and statistics strand. Significant analysis of a data set will be covered.

Standards

6.SP.A.1	Recognize a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answers.
6.SP.A.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.
6.SP.A.3	Recognize that a measure of center for a numerical data set summarizes all of its values with a single number, while a measure of variation describes how its values vary with a single number.
6.SP.B.4	Display numerical data in plots on a number line, including dot plots, histograms, and box plots.
6.SP.B.5.a	Reporting the number of observations.
6.SP.B.5.b	Describing the nature of the attribute under investigation, including how it was measured and its units of measurement.
6.SP.B.5.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.

Materials

Core Materials

- Big Ideas Mathematics
- 9.1 Introduction to Statistics
- 9.2 Mean
- 9.3 Measures of Center
- 9.4 Measures of Variation
- 9.5 Mean Absolute Deviation

Supplementary Materials

- ST Math
- Delta Math

- 3 Act Lessons
- Brainingcamp Manipulatives
- Nearpod Lessons
- Brainpop Resources
- Online Resources

Technology

8.1.8.DA.1	Organize and transform data collected using computational tools to make it usable for a specific purpose.
8.1.8.DA.5	Test, analyze, and refine computational models.
8.1.8.AP.4	Decompose problems and sub-problems into parts to facilitate the design, implementation, and review of programs.

Assessment

Formative Assessment

- Teacher Observation
- Daily Quick Check
- Quizzes
- Exit Tickets

Summative Assessment

- Topic Tests
- Benchmark Tests

Alternative Assessment

- Performance Tasks & Projects

Accommodations & Modifications

Special Education

Differentiated Instruction
Accommodate Based on Students Individual Needs: Strategies

Time/General • Extra time for assigned tasks • Adjust length of assignment • Timeline with due dates for reports and projects • Communication system between home and school • Provide lecture notes/outline	**Processing** • Extra response time • Have students verbalize steps • Repeat, clarify, or reword directions • Mini-breaks between tasks • Provide a warning for transitions • Reading partners	**Comprehension** • Precise step-by-step directions • Short manageable tasks • Brief and concrete directions • Provide immediate feedback • Small group instruction • Emphasize multi-sensory learning	**Recall** • Teacher-made checklist • Use visual graphic organizers • Reference resources to promote independence • Visual and verbal reminders • Graphic organizers
Assistive Technology • Computer/whiteboard • Tape recorder • Spell-checker • Audio-taped books	**Tests/Quizzes/Grading** • Extended time • Study guides • Focused/chunked tests • Read directions aloud	**Behavior/Attention** • Consistent daily structured routine • Simple and clear classroom rules • Frequent feedback	**Organization** • Individual daily planner • Display a written agenda • Note-taking assistance • Color code materials

504

- In class/pull out support with special ed teacher Additional time during intervention time
- Preferred seating
- Questions read aloud
- Extended time for completing tasks Graphic organizers
- Vocabulary support Mnemonic devices
- Songs/videos to reinforce concepts Limit number of questions
- Scribe Manipulatives Calculators Reteach pages Leveled homework
- Lesson intervention activities
- Math Diagnosis & Intervention System Another look homework video
- Practice buddy

ELL

- Translation device/dictionary
- In class/pull out support with ESL teacher
- Preferred seating
- Questions read aloud
- Extended time for completing tasks
- Graphic organizers
- Vocabulary support
- Mnemonic devices
- Songs/videos to reinforce concepts
- Manipulatives
- Math Diagnosis & Intervention System

At-risk of Failure

- Additional time during intervention time
- Questions read aloud
- Graphic organizers
- Vocabulary support
- Mnemonic devices
- Songs/videos to reinforce concepts
- Manipulatives
- Calculators
- Reteach pages
- Leveled homework
- Lesson intervention activities
- Math Diagnosis & Intervention System
- Another look homework video
- Practice buddy

Gifted & Talented

- Independent projects
- Enrichment pages
- Online games
- Leveled Homework
- Extension Activities
- Today's Challenge

Interdisciplinary Connections

Topic 9 STEM Project - Shake It Up: In this project, students explore earthquakes and how engineers design bridges, buildings, dams, roadways, and other structures that can withstand earthquakes.

Science Connection - Students research data about earthquakes, their frequency, and magnitude, how they are measured, and the types of destruction that occur depending upon the magnitude of the earthquake.

RI.CT.6.8	Compare and contrast informational texts in different forms, by different authors, or from different genres (e.g., a memoir written by and a biography on the same person, historical novels and primary source documents, infographics and scientific journals) in terms of their approaches to similar themes and topics.
MS-ETS1-1	Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution, taking into account relevant scientific principles and potential impacts on people and the natural environment that may limit possible solutions.

Career Readiness, Life Literacies & Key Skills

9.2.8.CAP.3	Explain how career choices, educational choices, skills, economic conditions, and personal behavior affect income.
9.1.8.EG.1	Explain how taxes affect disposable income and the difference between net and gross income.
9.4.8.GCA.2	Demonstrate openness to diverse ideas and perspectives through active discussions to achieve a group goal.
9.4.8.IML.3	Create a digital visualization that effectively communicates a data set using formatting techniques such as form, position, size, color, movement, and spatial grouping (e.g., 6.SP.B.4, 7.SP.B.8b).
9.4.8.IML.4	Ask insightful questions to organize different types of data and create meaningful visualizations.
9.4.8.TL.1	Construct a spreadsheet in order to analyze multiple data sets, identify relationships, and facilitate data-based decision-making.
9.1.8.PB.2	Explain how different circumstances can affect one's personal budget.
9.4.8.TL.3	Select appropriate tools to organize and present information digitally.

Career Ready Practices

- CRP1. Act as a responsible and contributing citizen and employee.
- CRP2. Apply appropriate academic and technical skills.
- CRP4. Communicate clearly and effectively and with reason.
- CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.
- CRP12. Work productively in teams while using cultural global competence.