

08 Analyzing Data

Content Area: **Mathematics**
Course(s):
Time Period: **Week1**
Length: **1 Week**
Status: **Published**

Stage 1: Desired Results

Analyzing Data

Unit Overview/ Rationale

Standards & Indicators

Common Core: Mathematics, Common Core: Grade 8, Mathematical Practice

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

MA.7.7.SP.A.1

Understand that statistics can be used to gain information about a population by examining a sample of the population; generalizations about a population from a sample are valid only if the sample is representative of that population. Understand that random sampling tends to produce representative samples and support valid inferences.

MA.7.7.SP.A.2

Use data from a random sample to draw inferences about a population with an unknown characteristic of interest. Generate multiple samples (or simulated samples) of the same size to gauge the variation in estimates or predictions.

MA.7.7.SP.B.3

Informally assess the degree of visual overlap of two numerical data distributions with similar variabilities, measuring the difference between the centers by expressing it as a multiple of a measure of variability.

MA.7.7.SP.B.4

Use measures of center and measures of variability for numerical data from random samples to draw informal comparative inferences about two populations.

Big Ideas - Students will understand that...

- Random sampling can be used to draw inferences about a population.
- Informal comparative inferences about two populations can be drawn.
- Sampling has an effect on data collection.

Essential Questions - What provocative questions will foster inquiry and transfer of learning

- How can data be gathered that is fair and indicative of a population?
- How can inferences be drawn based upon gathered data?
- How can data about two populations be compared?

Content - Students will know...

Key concepts:

biased question, box plot, inference, interquartile range, mean absolute deviation, population, random sample, sample, variability

Skills - Students will be able to...

- Learn how to gather data about a population.
- Use data from samples to make predictions and estimates about populations.

-Compare data about two populations using measures of center and measures of variability.

-Solve problems involving data sets.

Stage 2: Assessment Evidence

Assessment

Stage 3: Learning Plan

Learning Activities

Resources

Pearson

Algebra 1

c2012,

Chapter 8