

Stage 1 Desired Results

ESTABLISHED GOALS (CCSS)

S.ID.1 Represent data with plots on the real number line (dot plots, histograms, and box plots).
S.ID.2 Use statistics appropriate to the shape of the data distribution to compare center (median, mean) and spread (interquartile range, standard deviation) of two or more different data sets.
S.ID.3 Interpret differences in shape, center, and spread in the context of the data sets, accounting for possible effects of extreme data points (outliers).
S.ID.5 Summarize categorical data for two categories in two-way frequency tables. Interpret relative frequencies in the context of the data (including joint, marginal, and conditional relative frequencies). Recognize possible associations and trends in the data.
S.ID.6 Represent data on two quantitative variables on a scatter plot, and describe how the variables are related.
 a. Fit a function to the data; use functions fitted to data to solve problems in the context of the data. Use given functions or choose a function suggested by the context. Emphasize linear and exponential models.
 b. Informally assess the fit of a function by plotting and analyzing residuals.
 c. Fit a linear function for a scatter plot that suggests a linear association.
S.ID.7 Interpret the slope (rate of change) and the intercept (constant term) of a linear model in the context of the data.
S.ID.8 Compute (using technology) and interpret the correlation coefficient of a linear fit.
S.ID.9 Distinguish between correlation and causation

Transfer

Students will be able to independently use their learning to...
understand how a model fits data, use regression techniques to describe approximately linear relationships between quantities, use graphical representations and knowledge of the context to make judgments about the appropriateness of linear models and the fit.

Meaning

UNDERSTANDINGS

Students will understand that...

- *data can be summarized, represented and interpreted on a single count or measurement variable*
- *data can be summarized, represented and interpreted on two categorical and quantitative variables*
- *linear model*

ESSENTIAL QUESTIONS:

How can you represent quantities, patterns and relationships?

Acquisition

Students will know...

- ✓ *distinction between a statistical relationship and a cause-and-effect relationship*

Students will be skilled at...

- ✓ choosing a summary statistic appropriate to the characteristic of the data distribution
- ✓ looking at a linear function to model the relationship between two numerical variables
- ✓ fitting a line to data

Stage 2 Evidence

Evaluative Criteria	Assessment Evidence
<p>PERFORMANCE TASKS</p>	<p>CURRICULUM EMBEDDED PERFORMANCE ASSESSMENT (PERFORMANCE TASKS):</p> <ul style="list-style-type: none"> • Solve • Use a table to complete each part • Solve. Show work and explain you steps
	<p>OTHER EVIDENCE:</p> <ul style="list-style-type: none"> • Use of fundamental math facts • Use of technology • Use of properties •
<p>CLAIMS</p>	<p>CLAIM 1 CLAIM 2 CLAIM 3 CLAIM 4</p> <div style="text-align: right; margin-right: 50px;">  </div>

DEPTH OF KNOWLEDGE LEVELS	DOK 1	DOK2	DOK 3	DOK4	<input type="radio"/>
ACHIEVEMENT LEVEL DESCRIPTORS	ALD 1	ALD 2	ALD 3	ALD 4	<input type="radio"/>

Stage 3 Learning Plan

Summary of Key Learning Events and Instruction

Lesson 3a	

Draft