Statistics

Grade 8 Math Grade 8 Math
Start Date: February 24, 2014
End Date : March 14, 2014

Unit Overview	Content Elaborations	Unit Resources
Students will be able to: Construct and interpret scatter plots with two variables and using the line of best fit to determine what patterns occur. Use the slope intercept equation to express the pattern which occurs in the line of best fit. Understand the patterns associated with frequency tables and how it relates to the data which was collected.	**Formulating and reasoning about expressions and equations, including modeling an association in bivariate data with a linear equation, and solving linear equations and systems of linear equations.** Construct and interpret scatter plots for bivariate measurement data to investigate patterns of association between two quantities. Describe patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear association. Know that straight lines are widely used to model relationships between two quantitative variables. For scatter plots that suggest a linear association, informally fit a straight line, and informally assess the model fit by judging the closeness of the data points to the line. Use the equation of a linear model to solve problems in the context of bivariate measurement data, interpreting the slope and intercept. *For example, in a linear model for a biology experiment, interpret a slope of 1.5 cm/hr as meaning that an additional hour of sunlight each day is associated with an*	Holt Pre-Algebra: 4-1 4-2 4-3 4-5 4-6 4-7 --surveys and displaying results project-- --assessment--

	additional 1.5 cm in mature plant height. Understand that patterns of association can also be seen in bivariate categorical data by displaying frequencies and relative frequencies in a two-way table. Construct and interpret a two-way table summarizing data on two categorical variables collected from the same subjects. Use relative frequencies calculated for rows or columns to describe possible association between the two variables. *For example, collect data from students in your class on whether or not they have a curfew on school nights and whether or not they have assigned chores at home. Is there evidence that those who have a curfew also tend to have chores?*	
Unit Vocabulary stem-and-leaf plot bar graph biased sample correlation frequency table histogram line graph line of best fit mean median	Enduring Understandings (Big Ideas) Investigate patterns of associations in bivariate data.	Connections This Cluster is connected to the grade 8 Critical Area of Focus #1, Formulating and reasoning about expressions and equations, including modeling an association in bivariate data with a linear equation, and solving linear equations and systems of linear equations.

mode outlier population random sample range sample scatter plot stratified sample systematic sample variablitiy		

Standards

CC_Common Core State Standards - Mathematics (2010) - Grade 8

Domain 8.SP Statistics and Probability

Cluster Statement Investigate patterns of association in bivariate data.

Standard 8.SP.1 Construct and interpret scatter plots for bivariate measurement data to investigate patterns of association between two quantities. Describe patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear association.

Standard 8.SP.2 Know that straight lines are widely used to model relationships between two quantitative variables. For scatter plots that suggest a linear association, informally fit a straight line, and informally assess the model fit by judging the closeness of the data points to the line.

Standard 8.SP.3 Use the equation of a linear model to solve problems in the context of bivariate measurement data, interpreting the slope and intercept.

Standard 8.SP.4 Understand that patterns of association can also be seen in bivariate categorical data by displaying frequencies and relative frequencies in a two-way table. Construct and interpret a two-way table summarizing data on two categorical variables collected from the same subjects. Use relative frequencies calculated for rows or columns to describe possible association between the two variables.

Student Assessment	Unit Refection

Statistics and Probability

Content	Skills	Assessment
A. Collecting and Describing Data B. Displaying Data	A. Collecting and Describing Data 1. samples and survyes 2. organizing data 3. measures of central tendency B. Displaying Data 1. Displaying data 2. misleading graphs and stats 3. scatterplots	Assessment- daily work/independent practice- District Short Cycle- NWEA Map assessment- Student Observation- Survey and Displaying Data Project-

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