Curriculum: Mathematics
Course: Statistics/EXCEL

Unit: Statistics

Brief Summary of Unit
This unit will explore the foundation of statistics with a focus on content that is addressed on the Algebra 1 Keystone. Along with discussing what the areas of statistics are, we take a closer look at the measures of central tendency including box and whisker plots, measure of spread including standard deviation, and measure of position including bell curves and z-scores.
Competencies/Academic Standards • **A1.2.3 Data Analysis** ○ **A1.2.3.1 Use measures of dispersion to describe a set of data** ○ **A1.2.3.2 Use data displays in problem solving settings and/or to make predictions**
Essential Questions: • How does statistics affect a person on a daily basis? • Hoes does sampling size affect the data that is analyzed? • What measure of central tendency is most effective for the set of data that is being worked with? • What does the standard deviation tell us about the data? • How does the normal bell curve help to understand more about the data set? • How does standard deviation and z-scores relate to each other?
Knowledge: Students will know: • Areas of Statistics • Measures of Central Tendency • Box N Whisker Plots • Standard Deviation • Normal Bell Curve & Z-scores
Essential Skills/Objectives: Students will… • *Identify the 3 areas of Statistics* • *Collect either with a survey, experiment, or using records data for a data set* • *Calculate mean, median, and mode of a data set* • *Draw and interpret a box and whisker plot along with identifying outliers of a data set* • *Compute range and standard deviation of a data set including using a graphing calculator* • *Sketch normal bell curve based on given information* • *Identify specific percentage questions based on a normal bell curve* • *Calculate a z-score or find a missing part of the z-score formula*
Performance Tasks/Major Assessment: Students will demonstrate understanding: ○ Quiz –What is Statistics & Central Tendency Quiz ○ Quiz – Box N Whisker Quiz ○ Quiz – Standard Deviation, Normal Bell Curve, & Z-scores Quiz
Instructional Materials, Equipment, and Technologies ○ Instructional Videos ○ Hands on Labs (Surveys, Experiments, etc) ○ Practice Worksheets ○ Graphing Calculator Exploration

Curriculum: Mathematics
Course: Statistics/EXCEL

Unit: EXCEL

Brief Summary of Unit
This unit will explore the basic features of Microsoft EXCEL which includes but is not limited to basic formatting features of an EXCEL workbook, computing formulas and/or functions within a data set, and displaying the data using the various charts found in EXCEL
Competencies/Academic Standards *There are no academic standards for EXCEL.*
Essential Questions: • How can you change the look of a workbook through formatting to make it look more appealing? • How can a formula/function feature be used to show statistical data? • What is the best chart choice to use when want to display the data on a chart?
Knowledge: Students will know: • Basic Formatting in EXCEL Workbook • Formula & Function Operations in EXCEL Workbook • Creating & Displaying Multiple Charts in EXCEL Workbook
Essential Skills/Objectives: Students will… • *Identify the 3 areas of Statistics* • *Collect either with a survey, experiment, or using records data for a data set* • *Calculate mean, median, and mode of a data set* • *Draw and interpret a box and whisker plot along with identifying outliers of a data set* • *Compute range and standard deviation of a data set including using a graphing calculator* • *Sketch normal bell curve based on given information* • *Identify specific percentage questions based on a normal bell curve* • *Calculate a z-score or find a missing part of the z-score formula*
Performance Tasks/Major Assessment: Students will demonstrate understanding: ○ Basic Formatting Assignment (Excel It! Activity #1-4) ○ Basic Formatting Assignment 2 (Creating a Worksheet) ○ Formula Assignment (Excel It! Activity #10) ○ Function Assignment (Excel It! Activity #11) ○ Chart Assignment (Chart Practice) ○ End of Unit Assignment 1 (Budget Workbook) ○ End of Unit Assignment 2 (M&M Lab)
Instructional Materials, Equipment, and Technologies ○ Follow Along Instruction Notes ○ Excel It! Activity Book ○ Microsoft Office Excel Videos-YouTube