**UNIT OF STUDY**

**Title:** “One Mean Tendency” (Unit 13)  **Subject/Course:** Integrated Algebra B Part 1  **Length:** 2½ weeks

**Topic:** Line of Best Fit / Central Tendencies  **Grade:** 9  **Designer:** Foresee/ Phipps

### UNIT GOALS AND EXPECTATIONS

#### IMPORTANT CONCEPTS/UNDERSTANDINGS:
- Find the Domain and Range of Functions
- Correlations determine the relationship between data points
- The average data is represented by the line of best fit in a linear function
- Linear inequalities are solved in the same manner as equations
- Inequalities have infinite number of solutions
- Central Tendencies help to understand the trend of a set of data
- The type of line on a graph of a linear inequality is determined by the symbol

#### ESSENTIAL QUESTIONS:
- What is domain and range?
- What are the four types of correlation?
- How are trend line and line of best fit related?
- What is the difference between equations and inequalities?
- How do the central tendencies show the trend of the data?
- How does the symbol of an inequality relate to the graph?
- How can the solutions of an equation be used to solve a related inequality?

#### STUDENT LEARNING EXPECTATIONS:
- LF.3.AI.2 Determine domain and range of a relation from an algebraic expression, graphs, set of ordered pairs, or table of data
- LF.3.AI.4 Identify independent variables and dependent variables in various representational modes: words, symbols, and/or graph
- DIP.5.AI.1 Construct and use scatter plots and line of best fit to make inferences in real life situations

#### SPECIFIC DECLARATIVE KNOWLEDGE – What I know Vocabulary:
- coordinate systems
- correlation coefficient
- inequalities
- line of best fit
- mean
- median
- midrange
- mode
- parallel lines
- scatter plot
- stem and leaf
- trend line
- domain
- range
- series

#### SPECIFIC PROCEDURAL KNOWLEDGE – What I need to do
- Find the domain and range of functions
- Find terms in an arithmetic sequence
- Find the independent and dependent variables
- Determine the type of correlation represented in a scatter plot
- Sketch the trend line of data
- Find the line of best fit and extrapolate or interpolate
- Find the correlation coefficient
- Solve linear inequalities
- Solve real world problems involving inequalities
- Determine if coordinates are solutions to inequalities
- Graph linear inequalities in a variety of forms
- Find and compare the measures of central tendencies
- Estimate the slope and y-intercept of the line of best fit from a scatter plot.

### UNIT ASSESSMENTS
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<tr>
<td>- Use the 4-Step Vocabulary process to introduce key words from the unit</td>
<td>- 4-Step Vocabulary Worksheet</td>
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<td>- 4-Step Vocabulary Group Work</td>
<td>- Vocabulary List</td>
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<td>- Data Collection Line of Best Fit Activity (students will collect data, make &amp; interpret scatter plots, and create line of best fit to extrapolate)</td>
<td>- Project Rubric</td>
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<td>- Use Class Surveys to interpret central tendencies among data</td>
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<td>- Checkers/ Coins</td>
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**Career Connections**

Sports statistician, Budget planning, Accountant, Consultant, Brokers, Teacher