

# Unit Plan Template

**UNIT 1: Modeling with Linear Equations and Inequalities** TIME FRAME: 2 months

**TEACHER:** Meghan Miller

## Unit Summary and Rationale:

- Perform arithmetic operations on polynomials
- Understand the relationship between zeros and factors
- Interpret the structure of expressions
- Solve equations and inequalities in one variable
- Create equations that describe numbers or relationships
- Interpret functions that arise in applications in terms of the context
- Represent and solve equations and inequalities graphically
- Build a function that models a relationship between two quantities
- Construct & compare linear, quadratic, & exponential models
- Build new functions from existing functions
- Analyze functions using different representation
- Use properties of rational and irrational numbers

**Unit Standards:** Teachers should list the standards to be addressed within the unit.

HAS-CED.A.1, HAS-REI.A.1, HAS-REI.B.3, HSN-Q.A.1, HAS-CED.A.4, HAS-CED.A.1, HAS-REI. B.3

**Learning Tasks:** Teachers list the various tasks students will engage in throughout the unit. (Content) – Should be separated by Reading Tasks, Writing Tasks, Discussion Tasks, and Language/Vocabulary Tasks.

Practice Worksheet A and B  
Puzzle Worksheets  
Whiteboard review activity  
Basic Skills Review WS

**Skills:** These are what the students need to be able to do in relation to the tasks. These skills are translated statements from the standards and represent measurable verbs, instructional targets, and descriptors for the sake of consistency across teachers in the same content area and grade level.

- solve linear equations with coefficients represented by letters in one variable
- use the properties of equality to justify steps in solving linear equations
- solve linear inequalities in one variable.
  - rearrange linear formulas and literal equations, isolating a specific variable.
- identify different parts of an expression, including terms, factors and constants.
- explain the meaning of parts of an expression in context.
- identify and describe relationships between quantities in word problems.

	<ul style="list-style-type: none"> <li>● create linear equations in one variable.</li> <li>● create linear inequalities in one variable.</li> <li>● use equations and inequalities to solve real world problems. <ul style="list-style-type: none"> <li>● explain each step in the solution process.</li> <li>● identify and describe relationships between quantities in word problems.</li> </ul> </li> <li>● create linear equations in one variable.</li> <li>● create linear inequalities in one variable.</li> <li>● use equations and inequalities to solve real world problems. <ul style="list-style-type: none"> <li>● explain each step in the solution process.</li> </ul> </li> <li>● create linear equations in two variables, including those from a context. <ul style="list-style-type: none"> <li>● select appropriate scales for constructing a graph.</li> <li>● interpret the origin in graphs.</li> </ul> </li> <li>● graph equations on coordinate axes, including labels and scales.</li> <li>● identify and describe the solutions in the graph of an equation. <ul style="list-style-type: none"> <li>● distinguish linear models representing approximately linear data from linear. equations representing “perfectly” linear relationships.</li> </ul> </li> <li>● create a scatter plot and sketch a line of best fit.</li> <li>● fit a linear function to data using technology.</li> <li>● solve problems using prediction equations.</li> <li>● interpret the slope and the intercepts of the linear model in context. <ul style="list-style-type: none"> <li>● determine the correlation coefficient for the linear model using technology.</li> </ul> </li> </ul>
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**Key Terms / Vocabulary:**

Conjuncture, theorem, equation, solution, inverse operations, equivalent equations, mean, absolute value, opposite, literal equation, inequality, graph of an inequality, solution of an inequality, equivalent inequalities, solution set, compound inequality, absolute value inequality, absolute deviation

**Assessments:**

- 1.1-1.3 Quiz
- Chapter 1 Test
- 2.1-2.4 Quiz
- Chapter 2 Test

<p><b>Learning Activities:</b> Any agreed upon activities/lesson plans can be listed here.</p> <p>Group Work White Board Activity Math Battleship</p>	<p><b>Resources / Text Selections:</b></p> <p>Kahn academy Kuta worksheets Big ideas worksheets and online assignments</p>
<p><b>Additional Notes:</b></p>	