## Essential Standards Chart: What is it we expect students to learn?

| Grade: 9th | Subject: Algebra 1 | Team Members: Brad Gray, Danny Wiltz, Tracie Kinsey, Chelsea Walker, Tori Clemmons, Jeff White, Pan Gentry, Jake Pullen, Charity Cross |

<table>
<thead>
<tr>
<th>Standard Description</th>
<th>Example Rigor</th>
<th>Prerequisite Skills</th>
<th>Common Assessment</th>
<th>When Taught</th>
<th>Extension Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is the essential standard to be learned? Describe in student-friendly vocabulary.</td>
<td>Students will be able to determine the appropriate unit of measure (perimeter for fencing, area for flooring, etc)</td>
<td>Vocabulary and prior knowledge of the difference in units of measure and appropriate formulas to calculate them</td>
<td>• Common questions on all assessments  • Benchmark assessment  • Common Quizzes  • Observations  • Weekly Homework  • Warm-up</td>
<td>Unit 1</td>
<td>• DOK 3-4 problems</td>
</tr>
<tr>
<td>NQ1: Use Units of measure as a way to understand problems.</td>
<td>Students will be able to analyse a problem and determine appropriate units to represent the situation</td>
<td>Knowledge of the metric and English systems of measurement. Knowledge of appropriate calculations (area, volume, etc)</td>
<td>• Common questions on all assessments  • Benchmark assessment  • Common Quizzes  • Observations  • Weekly Homework  • Warm-up</td>
<td>Unit 1</td>
<td>• DOK 3-4 problems</td>
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<tr>
<td>NQ2: Define appropriate quantities for the purpose of descriptive modeling. Students will use appropriate quantities for representing the situation.</td>
<td>Given a word problem, students can gather the useful information, identify appropriate variables, and create an equation or function to represent the situation.</td>
<td>Ability to translate verbal statements into expressions, equations, or inequalities. Proficient skills of manipulating and solving equations.</td>
<td>• Common questions on all assessments  • Benchmark assessment  • Common Quizzes  • Observations  • Weekly Homework  • Warm-up</td>
<td>Unit 2</td>
<td>• DOK 3-4 problems</td>
</tr>
<tr>
<td>CED 2: Create linear equations in two or more variables to represent relationships between quantities.</td>
<td>Students will be able to solve linear equations, justifying each step with the specific algebraic property used.</td>
<td>Vocabulary related to algebraic properties. Knowledge of the steps involved in solving equations</td>
<td>• Common questions on all assessments  • Benchmark assessment  • Common Quizzes  • Observations  • Weekly Homework  • Warm-up</td>
<td>Unit 1</td>
<td>• DOK 3-4 problems</td>
</tr>
<tr>
<td>SSE 3: Choose and produce an equivalent form of an expression to reveal and explain properties of the quantity represented by the expression.</td>
<td>Students will be able to analyse a graph to find specific values without algebraic calculations.</td>
<td>Knowledge of graphing lines and determining coordinates of specific points.</td>
<td>• Common questions on all assessments  • Benchmark assessment  • Common Quizzes  • Observations  • Weekly Homework  • Warm-up</td>
<td>Unit 2</td>
<td>• DOK 3-4 problems</td>
</tr>
<tr>
<td>REI 10: Understand that the graph of an equation in two variables is the set of all its solutions plotted in the coordinate plane.</td>
<td>Students will be able to analyse a graph to find specific values without algebraic calculations.</td>
<td>Knowledge of graphing lines and determining coordinates of specific points.</td>
<td>• Common questions on all assessments  • Benchmark assessment  • Common Quizzes  • Observations  • Weekly Homework  • Warm-up</td>
<td>Unit 2</td>
<td>• DOK 3-4 problems</td>
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</table>

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### REI1: Use algebraic properties and the properties of real numbers, justify the steps of a simple one-solution equation.

| Student will be able to solve linear equations, justifying each step with the specific algebraic property used. | Vocabulary related to algebraic properties. Knowledge of the steps involved in solving equations | • Common questions on all assessments  
• Benchmark assessment  
• Common Quizzes  
• Observations  
• Weekly Homework  
• Warm-up | Unit 1 | • DOK 3-4 problems |

### FBF1: Write a function that describes a relationship between two quantities.

| Given a specific scenario, students will be able to identify the dependent and independent variables and create an expression to model the situation | Knowledge of functions (definition, vocabulary, and evaluating)  
Proficient ability to translate expressions | • Common questions on all assessments  
• Benchmark assessment  
• Common Quizzes  
• Observations  
• Weekly Homework  
• Warm-up | Unit 2 | • DOK 3-4 problems |

### FIF1: Understand that a function from one asset sent to another asset assigns to each element of the domain exactly; one element of the range each input value maps to exactly one output value.

| Students will be able to analyse charts, graphs, tables, etc to determine if the relation is a function. | All vocabulary dealing with functions (domain, range, input, output, etc) | • Common questions on all assessments  
• Benchmark assessment  
• Common Quizzes  
• Observations  
• Weekly Homework  
• Warm-up | Unit 2 | • DOK 3-4 problems |

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- Since this is for 3 classes that move at different paces, this is the order in which they will be taught