# Mt. Zion High School Curriculum Map

Name: Stephanie Windhorst Department: Math Subject: Algebra 1 Concepts

| Quarter | Essential Skills | Strategies and Activities | CC Standards | Assessments |
|---|---|---|---|---|
| 1 | <u>Unit 1: Integers</u><br>-Students will compare and order integers, and find the absolute value of an expression.<br>-Students will be able to choose an integer to represent a real-life situation.<br>-Students will locate an integer on a number line.<br>-Students will add two or more integers.<br>-Students will subtract integers.<br>-Students will multiply integers.<br>-Students will divide integers.<br>-Students will use the order of operations to solve problems containing integers.<br>-Students will solve word problems containing integers.<br>-Students will evaluate algebraic expressions containing integers.<br>-Students will write algebraic expressions for a given verbal expression. | note-taking<br>deltamath<br>guided practice<br>individual practice<br>integer maze<br>integer escape room | A.REI.1<br>7.NS.1b<br>7.NS.1c<br>A.SSE.2<br>7.NS.2a<br>A.SSE.2<br>7.NS.2b<br>A.REI.10 | Daily Homework<br>Quiz 1-1 to 1-4<br>Unit 1 Test |
| | <u>Unit 2: Expressions and Equations</u><br>-Students will count terms in an algebraic expression.<br>-Students will identify coefficients.<br>-Students will identify like and unlike terms.<br>-Students will combine like terms to simplify an expression.<br>-Students will use the distributive property to simplify an expression.<br>-Students will use inverse operations to solve a two-step equation.<br>-Students will write and solve a two-step equation to model a given word problem. | note-taking<br>deltamath<br>guided practice<br>individual practice<br>Edpuzzle<br>equation corrections activity | A.SSE.1a<br>A.SSE.2<br>A.SSE.1b<br>A.REI.10 | Daily Homework<br>Quiz 2-1 to 2-3<br>Quiz 2-4 to 2-5<br>Quiz 2-6 to 2-7<br>Unit 2 Test |

| Quarter | Essential Skills | Strategies and Activities | CC Standards | Assessments |
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| 1 | -Students will solve multi-step equations which require combining like terms and/or distributive property.<br>-Students will solve equations with variables on both sides of the equal sign.<br>-Students will write and solve a multi-step equation to model a given word problem. | | | |
| 2 | <u>Unit 3: Inequalities</u><br>-Students will use an inequality to represent a real-life scenario.<br>-Students will graph inequalities on a number line.<br>-Students will solve one-step inequalities.<br>-Students will solve two-step inequalities.<br>-Students will solve multi-step inequalities that require combining like terms and using the distributive property.<br>-Students will write and solve an inequality for a given word problem. | note-taking<br>deltamath<br>guided practice<br>individual practice<br>Edpuzzle | A.REI.1<br>A.REI.3<br>A.CED.1 | Daily Homework<br>Quiz 3-1 to 3-4<br>Unit 3 Test |
| 2 | <u>Unit 4: Linear Equations and Functions</u><br>-Students will plot points on a coordinate plane.<br>-Students will complete input-output tables.<br>-Students will graphing a linear equation using a table.<br>-Students will find rate of change.<br>-Students will find slope using rise over run.<br>-Students will find slope using the slope formula.<br>-Students will identify the slope and y-intercept from an equation and from a graph. | note-taking<br>deltamath<br>guided practice<br>individual practice<br>Edpuzzle<br>pixel art activity<br>function maze<br>desmos activity | 7.RP.2<br>8.EE.5<br>F-IF | Daily Homework<br>Quiz 4-1 to 4-3<br>Unit 4 Test |

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| 2 | -Students will write an equation in slope-intercept form for a real-life scenario.<br>-Students will graph lines using slope-intercept form.<br>-Students will determine if a relation is a function (represented by a table, equation, and/or graph).<br>-Students will determine if a function is a linear function.<br>-Students will be able to write an equation in slope-intercept form when given two points on the line, or when given the graph of the line.<br>-Students will be able to rewrite equations in slope-intercept that are given in standard form.<br><br><u>Unit 5: Systems of Equations</u> | | | |
| 3 | -Students will identify if a system of equations has one solution, no solution, or infinitely many solutions given the graph of the system.<br>-Students will determine if an ordered pair is a solution to a given system of equations.<br>-Students will be able to determine the solution of a system of equations given the graph of the system of equations.<br>-Students will solve systems of equations by graphing.<br>-Students will solve systems of equations using substitution.<br>-Students will solve systems of equations using elimination.<br>-Students will write a system of equations for a given word problem.<br><br><u>Unit 6: Percents</u> | note-taking<br>deltamath<br>guided practice<br>individual practice<br>Edpuzzle<br>Breakout Activity | A.REI.5<br>A.REI.6 | Daily Homework<br>Quiz 5-1<br>Unit 5 Test |

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| 3 | -Students will convert between fractions, decimals, and percents.<br>-Students will solve percent problems.<br>-Students will solve problems using the simple interest formula.<br>-Students will solve percent word problems that include sales tax, gratuity, discounts, mark-ups, mark-downs, and commission.<br>-Students will solve problems involving percent of change. | note-taking<br>deltamath<br>guided practice<br>individual practice<br>Edpuzzle<br>pixel art activity<br>restaurant activity | 7.EE.3<br>7.RP.2<br>7.RP.3 | Daily Homework<br>Quiz 6-1 to 6-3<br>Unit 6 Test |
| | <u>Unit 7: Exponents</u> | | | |
| 4 | -Students will write powers in standard form and expanded form.<br>-Students will evaluate expressions involving exponents.<br>-Students will solve problems using order of operations involving exponents.<br>-Students will simplify algebraic expressions using exponent rules.<br>-Students will convert between standard form and scientific notation.<br>-Students will find exact values and approximations of square roots and cube roots.<br>-Students will simplify radical expressions.<br>-Students will solve equations that contain square roots and cube roots. | note-taking<br>deltamath<br>guided practice<br>individual practice<br>Edpuzzle<br>Google Slides Sort<br>Breakout Activity | 8.EE.1<br>8.EE.2<br>8.EE.3<br>8.EE.4 | Daily Homework<br>Quiz 7-1 to 7-4<br>Unit 7 Test |
| | <u>Unit 8: Polynomials</u> | | | |
| 4 | -Students will write polynomials in standard form.<br>-Students will identify if a polynomial is a monomial, binomial, or trinomial.<br>-Students will determine the degree of a monomial.<br>-Students will determine the degree of a | note-taking<br>deltamath<br>guided practice<br>individual practice<br>Edpuzzle<br>polynomial maze | 7.EE.1<br>A.SSE.1<br>A.APR.1 | Daily Homework<br>Quiz 8-1 to 8-3<br>Unit 8 Test |

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| 4 | polynomial.<br>-Students will add and subtract polynomials.<br>-Students will multiply a monomial by a polynomial.<br>-Students will multiply two binomials.<br>-Students will factor a GCF from a polynomial.<br>-Students will factor polynomials in the form $ax^2 + bx + c$. when a = 1. | | | |