

# AIM HIGH SCHOOL

## Curriculum Map



11648 N. Main Street  
Whitmore Lake, MI 48189  
(734) 550 - 9595  
[www.aimhighschool.com](http://www.aimhighschool.com)

<b>COURSE TITLE:</b> Algebra 1	<b>DESCRIPTION OF COURSE:</b>  Algebra 1 focuses on the operations associated with linear and quadratic equations. The course starts off with a review of basic algebraic concepts, such as variables, order of operations, exponents, and problem solving skills. By the end of this course students will have the knowledge necessary to solve and graph equations and inequalities. Students will also be able to apply this knowledge to other areas of math, such as word problems, ratios, and proportions.
<b>PREREQUISITES:</b> Pre-Algebra	

Every student should understand and use all concepts and skills from the previous grade levels. The standard is designed so that new learning builds on preceding skills.

CONTENT	CORE CONCEPTS	ASSESSMENT	STANDARDS
<b>Unit 0: Pre-Algebra Review</b>	<ul style="list-style-type: none"> <li>○ Recognize operations in real life scenarios</li> <li>○ Operations with real numbers (Integers, Decimals, &amp; Fractions)</li> <li>○ Many forms of Multiplication &amp; Division</li> <li>○ Switch between Improper and Mixed Fractions</li> <li>○ Fraction Word Problems</li> <li>○ Exponents, Square Roots, and Absolute Value</li> </ul>	<b>Pretest</b>	
<b>Unit 1: Expressions &amp; Number Types</b>	<ul style="list-style-type: none"> <li>○ Order of Operations</li> <li>○ Evaluating Expressions</li> <li>○ Translating Verbal Phrases</li> <li>○ Number Types</li> </ul>	<ul style="list-style-type: none"> <li>○ <b>Guided Notes</b></li> <li>○ <b>Interactive Practice Problem Sets</b></li> <li>○ <b>Corrective Assignments (If needed)</b></li> <li>○ <b>Mastery Checks</b></li> <li>○ <b>Unit Test</b></li> </ul>	Common Core <a href="#">HSA.SSE.A.1</a> , <a href="#">HSA.SSE.B.3</a>
<b>Unit 2: Properties of Algebra &amp; Variable Expressions</b>	<ul style="list-style-type: none"> <li>○ Algebraic Properties (Commutative, Associative, Identity, and Inverse Properties)</li> <li>○ Combine Like Terms</li> <li>○ Distributive Property</li> <li>○ Write multistep expressions</li> </ul>	<ul style="list-style-type: none"> <li>○ <b>Guided Notes</b></li> <li>○ <b>Interactive Practice Problem Sets</b></li> <li>○ <b>Corrective Assignments (If needed)</b></li> <li>○ <b>Mastery Checks</b></li> <li>○ <b>Unit Test</b></li> </ul>	Michigan State Standards A-SSE  Common Core <a href="#">HSA.SSE.A.2</a> , <a href="#">HSA.APR.A.1</a>
<b>Unit 3: Solve &amp; Write Equations</b>	<ul style="list-style-type: none"> <li>○ Write &amp; solve one step equations</li> <li>○ Write &amp; solve two step equations</li> <li>○ Write &amp; solve multi-step equations (Square Roots, Powers, and Consecutive Numbers)</li> <li>○ Write &amp; solve equations with adding like terms</li> <li>○ Write &amp; solve equations with distribution</li> <li>○ Write &amp; solve equations with variables on both sides</li> <li>○ Write &amp; Solve Equations using a table</li> <li>○ Translate sentences into equations and solve</li> <li>○ Understand different solution types (one solution, no solution, and infinitely many)</li> <li>○ Rearrange formulas for a specified variable (i.e. Change the subject of the formula) to solve real world geoscience problems</li> </ul>	<ul style="list-style-type: none"> <li>○ <b>Guided Notes</b></li> <li>○ <b>Interactive Practice Problem Sets</b></li> <li>○ <b>3 Act Math Activities</b></li> <li>○ <b>Corrective Assignments (If needed)</b></li> <li>○ <b>Mastery Checks</b></li> <li>○ <b>Unit Test</b></li> </ul>	Michigan State Standards A-CED, A-REI  Common Core <a href="#">HSA.CED.A.1</a> , <a href="#">HSA.REI.A.1</a> , <a href="#">HSA.REI.A.2</a> , <a href="#">HSF.IF.A.3</a> , <a href="#">HSF.LE.A.2</a>

CONTENT	CORE CONCEPTS	ASSESSMENT	STANDARDS
<b>Unit 4: Ratios, Rates, Proportions, &amp; Equations w/ Rational Coefficients</b>	<ul style="list-style-type: none"> <li>○ Ratios &amp; Unit Rates</li> <li>○ Dimensional Analysis and Conversions</li> <li>○ Solve Proportions</li> <li>○ Cross Multiplication (Basic to advanced Binomials)</li> <li>○ Solve equations with fractions in the coefficients</li> <li>○ Solve equations with decimals in the coefficients</li> <li>○ Write equations with fractional coefficients (Work problems)</li> </ul>	<ul style="list-style-type: none"> <li>○ <b>Guided Notes</b></li> <li>○ <b>Interactive Practice Problem Sets</b></li> <li>○ <b>3 Act Math Activities</b></li> <li>○ <b>Corrective Assignments (If needed)</b></li> <li>○ <b>Mastery Checks</b></li> <li>○ <b>Unit Test</b></li> </ul>	<p>Michigan State Standards A-CED, A-REI</p> <p>Common Core <a href="#">HSA.CED.A.1</a>, <a href="#">HSA.REI.A.1</a>, <a href="#">HSA.REI.A.2</a>, <a href="#">HSF.IF.B.6</a></p>
<b>Unit 5: Percentages &amp; Percent Equations</b>	<ul style="list-style-type: none"> <li>○ Understand how to switch between a decimal, fraction, and percent</li> <li>○ Find easy percentages of a number without a calculator</li> <li>○ Estimate percentages</li> <li>○ Solve percent equations, knowing that "of" → <math>\cdot</math>, "is" → <math>=</math>, "what" → <math>x</math>, and <math>\%</math> → <math>\div 100</math></li> <li>○ Can write and solve "percent of" story problems (Including finding original amount problems)</li> <li>○ Define commission, tax, tip, discount, markup, etc.</li> <li>○ Find tip and total on a bill</li> <li>○ Solve percent increase and percent decrease story problems (Including finding original amount problems)</li> <li>○ Solve multi-step percent problems (Including finding original amount problems)</li> </ul>	<ul style="list-style-type: none"> <li>○ <b>Guided Notes</b></li> <li>○ <b>Interactive Practice Problem Sets</b></li> <li>○ <b>3 Act Math Activities</b></li> <li>○ <b>Corrective Assignments (If needed)</b></li> <li>○ <b>Mastery Checks</b></li> <li>○ <b>Unit Test</b></li> </ul>	<p>Michigan State Standards A-CED, A-REI</p> <p>Common Core <a href="#">HSA.CED.A.1</a>, <a href="#">HSA.REI.A.1</a>, <a href="#">HSF.LE.A.2</a></p>
<b>Unit 6: Linear Equations</b>	<ul style="list-style-type: none"> <li>○ Plot points in a coordinate plane</li> <li>○ Write one step linear equations from a table</li> <li>○ Model direct variation problems</li> <li>○ Graph linear equations by plotting points in a table</li> <li>○ Graph using intercepts</li> <li>○ Understand and find slope</li> <li>○ Graph and write linear equations in <math>y=mx+b</math> form</li> <li>○ Graph and write linear equations in <math>Ax + By = C</math> form</li> </ul>	<ul style="list-style-type: none"> <li>○ <b>Guided Notes</b></li> <li>○ <b>Interactive Practice Problem Sets</b></li> <li>○ <b>3 Act Math Activities</b></li> <li>○ <b>Corrective Assignments (If needed)</b></li> <li>○ <b>Mastery Checks</b></li> <li>○ <b>Unit Test</b></li> </ul>	<p>Michigan State Standards A-CED, A-REI, F-BF</p> <p>Common Core <a href="#">HSA.CED.A.4</a>, <a href="#">HSA.REI.B.3</a>, <a href="#">HSF.IF.B.6</a></p>

CONTENT	CORE CONCEPTS	ASSESSMENT	STANDARDS
<b>Unit 7: Writing Linear Functions</b>	<ul style="list-style-type: none"> <li>○ Function notation</li> <li>○ Write an equation of a line given the slope and one point</li> <li>○ Write the equation of a line in slope-intercept given two points</li> <li>○ Write a function given 2 points on the line</li> <li>○ Model real world data with functions</li> <li>○ Investigate relationships between quantities by using scatter plots</li> <li>○ Use line of best fit to make and evaluate predictions</li> <li>○ Write equations of lines passing through a given point and either parallel or perpendicular to a given line</li> </ul>	<ul style="list-style-type: none"> <li>○ <b>Guided Notes</b></li> <li>○ <b>Interactive Practice Problem Sets</b></li> <li>○ <b>3 Act Math Activities</b></li> <li>○ <b>Corrective Assignments (If needed)</b></li> <li>○ <b>Mastery Checks</b></li> <li>○ <b>Unit Test</b></li> </ul>	<p>Michigan State Standards A-CED, A-REI, F-IF, F-BF, F-LE</p> <p>Common Core  <a href="#">HSA.CED.A.2</a>,  <a href="#">HSA.REI.B.3</a>,  <a href="#">HSF.IF.A.1</a>,  <a href="#">HSF.IF.A.2</a>,  <a href="#">HSF.IF.A.3</a>,  <a href="#">HSF.IF.B.6</a>,  <a href="#">HSF.IF.C.7.A</a>,  <a href="#">HSF.BF.A.1</a>,  <a href="#">HSF.LE.A.1</a>,  <a href="#">HSF.LE.A.2</a>,  <a href="#">HSF.LE.A.3</a></p>
<b>Unit 8: Solve Systems of Equations</b>	<ul style="list-style-type: none"> <li>○ Solve systems of linear equations by graphing</li> <li>○ Solve systems of equations by using substitution</li> <li>○ Solve systems of equations by using elimination</li> <li>○ Identify one solution, no solution, and infinitely many solution for each method</li> <li>○ Determine the best method for solving systems of equations</li> <li>○ Setup systems of equations to solve real-world problems</li> <li>○ Solve distance, rate, and time story problems using tables</li> <li>○ Solve mixture problems using tables</li> </ul>	<ul style="list-style-type: none"> <li>○ <b>Guided Notes</b></li> <li>○ <b>Interactive Practice Problem Sets</b></li> <li>○ <b>3 Act Math Activities</b></li> <li>○ <b>Corrective Assignments (If needed)</b></li> <li>○ <b>Mastery Checks</b></li> <li>○ <b>Unit Test</b></li> </ul>	<p>Michigan State Standards A-REI</p> <p>Common Core  <a href="#">HSA.CED.A.1</a>,  <a href="#">HSA.REI.C.5</a>,  <a href="#">HSA.REI.C.6</a>,</p>

CONTENT	CORE CONCEPTS	ASSESSMENT	STANDARDS
<b>Unit 9: Intro to Inequalities, Absolute Values, &amp; Square Roots</b>	<ul style="list-style-type: none"> <li>○ Inequalities on a number line</li> <li>○ Solve multistep inequalities</li> <li>○ Solve inequalities with variables on both sides</li> <li>○ Basic absolute value equations</li> <li>○ Operations with Square Roots</li> <li>○ Square Root Equations</li> </ul>	<ul style="list-style-type: none"> <li>○ <b>Guided Notes</b></li> <li>○ <b>Interactive Practice Problem Sets</b></li> <li>○ <b>3 Act Math Activities</b></li> <li>○ <b>Corrective Assignments (If needed)</b></li> <li>○ <b>Mastery Checks</b></li> <li>○ <b>Unit Test</b></li> </ul>	<p>Michigan State Standards A-REI</p> <p>Common Core <a href="#">HSA.APR.A.1</a>, <a href="#">HSA.CED.A.1</a>, <a href="#">HSA.CED.A.3</a></p>
<b>Unit 10: Exponents</b>	<ul style="list-style-type: none"> <li>○ Expand and Condense Exponents</li> <li>○ Exponent Rules</li> <li>○ Negative and Zero Powers</li> <li>○ Scientific Notation</li> <li>○ Write Exponential Growth and Decay Functions from a table</li> </ul>	<ul style="list-style-type: none"> <li>○ <b>Guided Notes</b></li> <li>○ <b>Interactive Practice Problem Sets</b></li> <li>○ <b>3 Act Math Activities</b></li> <li>○ <b>Corrective Assignments (If needed)</b></li> <li>○ <b>Mastery Checks</b></li> <li>○ <b>Unit Test</b></li> <li>○</li> </ul>	<p>Michigan State Standards A-SSE, A-REI, F-IF, F-BF, F-LE</p> <p>Common Core <a href="#">HSA.SSE.A.1.B</a>, <a href="#">HSA.SSE.A.2</a>, <a href="#">HSA.SSE.B.4</a>, <a href="#">HSA.CED.A.2</a>, <a href="#">HSF.IF.C.8.B</a>, <a href="#">HSF.BF.A.1</a>, <a href="#">HSF.LE.A.2</a>, <a href="#">HSF.LE.A.3</a>, <a href="#">HSF.LE.A.4</a></p>

CONTENT	CORE CONCEPTS	ASSESSMENT	STANDARDS
<b>Unit 11: Polynomial Operations and Factoring</b>	<ul style="list-style-type: none"> <li>○ Identify polynomials by finding the degree and rewriting in standard form</li> <li>○ Add and subtract polynomials by identifying like terms</li> <li>○ Use the distributive property to multiply polynomials</li> <li>○ Applying the Zero Product Property</li> <li>○ Factor out the GCF of the terms of a polynomial</li> <li>○ Factor polynomials in the form <math>x^2+bx+c</math></li> <li>○ Factor polynomials in the form <math>ax^2+bx+c</math></li> <li>○ Find the squares of sums and differences</li> <li>○ Find the product of a sum and a difference</li> <li>○ Double Factoring</li> <li>○ Factor a polynomial by grouping</li> </ul>	<ul style="list-style-type: none"> <li>○ <b>Guided Notes</b></li> <li>○ <b>Interactive Practice Problem Sets</b></li> <li>○ <b>3 Act Math Activities</b></li> <li>○ <b>Corrective Assignments (If needed)</b></li> <li>○ <b>Mastery Checks</b></li> <li>○ <b>Unit Test</b></li> </ul>	<p>Michigan State Standards A-SSE, A-APR</p> <p>Common Core  <a href="#">HSA.SSE.A.1.A</a>,  <a href="#">HSA.SSE.A.2</a>,  <a href="#">HSA.SSE.B.3.A</a>,  <a href="#">HSA.APR.A.1</a>,  <a href="#">HSA.APR.B.2</a>,  <a href="#">HSA.APR.B.3</a>,  <a href="#">HSA.APR.C.4</a>,  <a href="#">HSA.APR.C.5</a>,  <a href="#">HSA.REI.B.4</a>,  <a href="#">HSF.LE.A.4</a></p>
<b>Unit 12: Algebra 2 Preview</b>	<ul style="list-style-type: none"> <li>○ Graph 2 variable inequalities in slope intercept form</li> <li>○ Graph parent functions (Absolute Value, Square Root, of Exponents Functions)</li> <li>○ Graph &amp; Write Translations of Any Parent Function</li> <li>○ Graph Inequalities of an Functions Type</li> </ul>	<ul style="list-style-type: none"> <li>○ <b>Guided Notes</b></li> <li>○ <b>Interactive Practice Problem Sets</b></li> <li>○ <b>3 Act Math Activities</b></li> <li>○ <b>Corrective Assignments (If needed)</b></li> <li>○ <b>Mastery Checks</b></li> <li>○ <b>Unit Test</b></li> </ul>	<p>Michigan State Standards F-IF, F-BF, F-LE</p> <p>Common Core  <a href="#">HSA.CED.A.3</a>,  <a href="#">HSA.REI.D.12</a>,  <a href="#">HSF.IF.C.7.B</a>,  <a href="#">HSF.IF.C.7.A</a>,  <a href="#">HSF.IF.C.7.E</a>,  <a href="#">HSF.IF.C.8.B</a>,  <a href="#">HSF.BF.A.1</a>,  <a href="#">HSF.BF.B.3</a></p>