

## How to use the AERO Common Core Mapping document

Curriculum should focus on the critical areas of the standards. If you have used the AERO Indicators to develop your curriculum, use this document to align your AERO indicators to the Common Core Standards. A reminder this is not a checklist, rather knowing the curriculum addresses the critical areas and is based on the big ideas of math, you can map your standards to the Common Core. You can then align your resources to the multitude of common core math resources and assessments now available. More importantly, it addresses the issue of more rigorous instruction and assessment.

<i>Grade</i>	<i>Critical Area</i>	<i>Cluster</i>	<i>Common Core Standard</i>
<b>K</b>	<b>#1 Representing, relating and operating on whole numbers, initially with sets of objects</b>	<b>Know number names and the count sequence.</b>	K.CC.1 K.CC.2 K.CC.3
		<b>Count to tell the number of objects.</b>	K.CC.4 K.CC.5
		<b>Compare numbers.</b>	K.CC.6 K.CC.7
		<b>Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.</b>	K.OA.1 K.OA.2 K.OA.3 K.OA.4 K.OA.5
		<b>Describe and compare measurable attributes.</b>	K.MD.1 K.MD.2
		<b>Classify objects and count the number of objects in each category.</b>	K.MD.3

		<b>Work with numbers 11-19 to gain foundations for place value.</b>	<b>K.NBT.1</b>
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<i>Grade</i>	<i>Critical Area</i>	<i>Cluster</i>	<i>Common Core Standard</i>
<b>K</b>	<b>#2</b> Describing shapes and space	Identify and describe shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres).	K.G.1 K.G.2 K.G.3
		Analyze, compare, create, and compose shapes.	K.G.4 K.G.5 K.G.6
<b>1</b>	<b>#1</b> Developing understanding of addition, subtraction, and strategies for addition and subtraction within 20	Represent and solve problems involving addition and subtraction.	1.OA.1 1.OA.2
		Understand and apply properties of operations and the relationship between addition and subtraction.	1.OA.3 1.OA.4
		Add and subtract within 20.	1.OA.5 1.OA.6
		Work with addition and subtraction equations.	1.OA.7 1.OA.8
		Use place value understanding and properties of operations to add and subtract.	1.NBT.4 1.NBT.5 1.NBT.6
<b>1</b>	<b>#2</b> Developing understanding of whole number relationships and place value, including grouping in tens and ones	Extend the counting sequence.	1.NBT.1
		Understand place value.	1.NBT.2 1.NBT.3

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<i>Grade</i>	<i>Critical Area</i>	<i>Cluster</i>	<i>Common Core Standard</i>
<b>1</b>	<b>#3</b> Developing understanding of linear measurement and measuring lengths as iterating length units	Measure lengths indirectly and by iterating length units.	1.MD.1 1.MD.2
		Tell and write time.	1.MD.3
		Represent and interpret data.	1.MD.7
<b>1</b>	<b>#4</b> Reasoning about attributes of, and composing and decomposing geometric shapes	Reason with shapes and their attributes.	1G.1 1G.2 1G.3
<b>2</b>	<b>#1</b> Extending understanding of base-ten notation	Understand place value.	2.NBT.1 2.NBT.2 2.NBT.3 2.NBT.4
<b>2</b>	<b>#2</b> Building fluency with addition and subtraction	Use place value understanding and properties of operations to add and subtract.	2.NBT.5 2.NBT.6 2.NBT.7 2.NBT.8 2.NBT.9
		Relate addition and subtraction to length.	2.MD.5 2.MD.6
		Work with time and money.	2.MD.8
		Represent and solve problems involving addition and	2.OA.1

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		subtraction.	2.OA.2
<b>2</b>		<b>Add and subtract within 20.</b>	2.OA.3
		<b>Work with equal groups of objects to gain foundations for multiplication.</b>	2.OA.4
<b>2</b>	<b>#3 Using standard units of measure</b>	<b>Measure and estimate lengths in standard units.</b>	2.MD.1 2.MD.2 2.MD.3 2.MD.4
<b>2</b>	<b>#4 Describing and analyzing shapes</b>	<b>Reason with shapes and their attributes.</b>	2.G.1 2.G.2 2.G.3
		<b>Work with equal groups of objects to gain foundations for multiplication.</b>	2.OA.4
<b>3</b>	<b>#1 Developing understanding of multiplication and division and strategies for multiplication and division within 100</b>	<b>Represent and solve problems involving multiplication and division.</b>	3.OA.1 3.OA.2 3.OA.3 3.OA.4
		<b>Understand properties of multiplication and the relationship between multiplication and division.</b>	3.OA.5 3.OA.6
		<b>Multiply and divide within 100.</b>	3.OA.7
		<b>Solve problems involving the four operations, and identify and explain patterns in arithmetic.</b>	3.OA.8 3.OA.9

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3		Use place value understanding and properties of operations to perform multi-digit arithmetic.	3.NBT.3
		Geometric measurement: understand concepts of area and relate area to multiplication and to addition.	3.NBT.7
3	<b>#2</b> Developing understanding of fraction equivalence, addition and subtraction of fractions with like denominators, and multiplication of fractions by whole numbers	Develop understanding of fractions as numbers.	3.NF.1 3.NF.2 3.NF.3
		Represent and interpret data.	3.MD.4
3	<b>#3</b> Developing understanding of the structure of rectangular arrays and of area	Geometric measurement: understand concepts of area and relate area to multiplication and to addition.	3.MD.5 3.MD.6 3.MD.7
		Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures.	3.MD.8
		Reason with shapes and their attributes.	3.G.2



<i>Grade</i>	<i>Critical Area</i>	<i>Cluster</i>	<i>Common Core Standard</i>
<b>3</b>	<b>#4</b> Describing and analyzing two-dimensional shapes	Reason with shapes and their attributes.	3.G.1
		Develop understanding of fractions as numbers.	3.NF.1 3.NF.3
<b>4</b>	<b>#1</b> Developing an understanding and fluency with multi-digit multiplication, and developing understanding of dividing to find quotients involving multi-digit dividends	Use the four operations with whole numbers to solve problems	4.OA.1 4.OA.2 4.OA.3
		Gain familiarity with factors and multiples.	4.OA.4
		Generalize place value understanding for multi-digit whole numbers.	4.NBT.1 4.NBT.2 4.NBT.3
		Use place value understanding and properties of operations to perform multi-digit arithmetic	4.NBT.5 4.NBT.6
		Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.	4.MD.2 4.MD.3

<i>Grade</i>	<i>Critical Area</i>	<i>Cluster</i>	<i>Common Core Standard</i>
<b>4</b>	<b>#2</b> Developing an understanding of fraction equivalence, addition and subtraction of fractions with like denominators, and multiplication of fractions by whole numbers	<b>Extend understanding of fraction equivalence and ordering.</b>	4.NF.1 4.NF.2
		<b>Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.</b>	4.NF.3 4.NF.4
		<b>Understand decimal notation for fractions, and compare decimal fractions.</b>	4.NF.5 4.NF.6 4.NF.7
		<b>Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.</b>	4.MD.1 4.MD.2
		<b>Represent and interpret data.</b>	4.MD.4
<b>4</b>	<b>#3</b> Understand that geometric figures can be analyzed and classified based on their properties, such as having parallel sides, perpendicular sides, particular angle measures, and symmetry.	<b>Geometric measurement: understand concepts of angle and measure angles.</b>	4.MD.5 4.MD.6 4.MD.7
		<b>Draw and identify lines and angles, and classify shapes by properties of their lines and angles.</b>	4.G.1 4.G.2 4.G.3

<i>Grade</i>	<i>Critical Area</i>	<i>Cluster</i>	<i>Common Core Standard</i>
<b>5</b>	<b>#1</b> Developing fluency with addition and subtraction of fractions and developing understanding of the multiplication of fractions and of division of fractions in limited cases (unit fractions divided by whole numbers and whole numbers divided by unit fractions)	Use equivalent fractions as a strategy to add and subtract fractions.	5.NF.1 5.NF.2 5.NF.3 5.NF.4 5.NF.5 5.NF.6 5.NF.7
		Represent and interpret data.	5.MD.2
<b>5</b>	<b>#2</b> Extending division to 2-digit divisors, integrating decimal fractions into the place value system and developing understanding of operations with decimals to hundredths, and developing fluency with whole number and decimal operations	Write and interpret numerical expressions.	5.OA.1
		Understand the place value system.	5.NBT.1 5.NBT.2 5.NBT.3 5.NBT.4
		Perform operations with multi-digit whole numbers and with decimals to hundredths.	5.NBT.5 5.NBT.6 5.NBT.7
		Convert like measurement units within a given measurement system.	5.MD.1

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<b>5</b>	<b>#3 Developing understanding of volume</b>	<b>Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.</b>	5.MD.3 5.MD.4 5.MD.5
		<b>Apply and extend previous understandings of multiplication and division to multiply and divide fractions</b>	5.NF.4 5.NF.5
		<b>Classify two-dimensional figures into categories based on their properties.</b>	5.G.3 5.G.4
<b>6</b>	<b>#1 Connecting ratio and rate to whole number multiplication and division and using concepts of ratio and rate to solve problems</b>	<b>Understand ratio concepts and use ratio reasoning to solve problems.</b>	6.RP.1 6.RP.2 6.RP.3
<b>6</b>	<b>#2 Completing understanding of division of fractions and extending the notion of number to the system of rational numbers, which includes negative numbers</b>	<b>Apply and extend previous understandings of numbers to the system of rational numbers.</b>	6.NS.1
		<b>Compute fluently with multi-digit numbers and find common factors and multiples.</b>	6.NS.2 6.NS.3 6.NS.4

<i>Grade</i>	<i>Critical Area</i>	<i>Cluster</i>	<i>Common Core Standard</i>
<b>6</b>	<b>#3 Writing, interpreting and using expressions, and equations</b>	<b>Apply and extend previous understandings of arithmetic to algebraic expressions.</b>	<b>6.EE.1 6.EE.2 6.EE.3 6.EE.4</b>
		<b>Reason about and solve one-variable equations and inequalities.</b>	<b>6.EE.5 6.EE.6 6.EE.7 6.EE.8</b>
		<b>Represent and analyze quantitative relationships between dependent and independent variables.</b>	<b>6.EE.9</b>
<b>6</b>	<b>#4 Developing understanding of statistical thinking</b>	<b>Develop understanding of statistical variability.</b>	<b>6.SP.1 6.SP.2 6.SP.3</b>
		<b>Summarize and describe distributions.</b>	<b>6.SP.4 6.SP.5</b>
<b>7</b>	<b>#1 Developing understanding of and applying proportional relationships</b>	<b>Analyze proportional relationships and use them to solve real-world and mathematical problems.</b>	<b>7.RP.1 7.RP.2 7.RP.3</b>

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<b>7</b>	<b>#2 Developing understanding of operations with rational numbers and working with expressions and linear equations</b>	<b>Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.</b>	7.NS.1 7.NS.2 7.NS.3
		<b>Analyze proportional relationships and use them to solve real-world and mathematical problems.</b>	7.RP.2
		<b>Use properties of operations to generate equivalent expressions.</b>	7.EE.1 7.EE.2
		<b>Solve real-life and mathematical problems using numerical and algebraic expressions and equations.</b>	7.EE.3 7.EE.4
<b>7</b>	<b>#3 Solving problems involving scale drawings and informal geometric constructions, and working with two- and three-dimensional shapes to solve problems involving area, surface area, and volume</b>	<b>Solve real-life and mathematical problems using numerical and algebraic expressions and equations.</b>	7.EE.4
		<b>Draw, construct, and describe geometrical figures and describe the relationships between them.</b>	7.G.1 7.G.2 7.G.3
		<b>Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.</b>	7.G.4 7.G.5 7.G.6

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<b>7</b>	<b>#4 Drawing inferences about populations based on samples.</b>	<b>Use random sampling to draw inferences about a population.</b>	<b>7.SP.1 7.SP.2</b>
		<b>Draw informal comparative inferences about two populations.</b>	<b>7.SP.3 7.SP.4</b>
<b>8</b>	<b>#1 Formulating and reasoning about expressions and equations, including modeling an association in bivariate data with a linear equation, and solving linear equations and systems of linear equations</b>	<b>Understand the connections between proportional relationships, lines, and linear equations.</b>	<b>8.EE.5 8.EE.6</b>
		<b>Analyze and solve linear equations and pairs of simultaneous linear equations.</b>	<b>8.EE.7 8.EE.8</b>
		<b>Investigate patterns of association in bivariate data.</b>	<b>8.SP.1 8.SP.2 8.SP.3 8.SP.4</b>
<b>8</b>	<b>#2 Grasping the concept of a function and using functions to describe quantitative relationships</b>	<b>Define, evaluate, and compare functions.</b>	<b>8.F.1 8.F.2 8.F.3</b>
		<b>Use functions to model relationships between quantities.</b>	<b>8.F.4 8.F.5</b>

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<b>8</b>	<b>#3 Analyzing two- and three-dimensional space and figures using distance, angle, similarity, and congruence, and understanding and applying the Pythagorean Theorem</b>	<b>Understand the connections between proportional relationships, lines, and linear equations.</b>	<b>8.EE.6</b>
		<b>Understand congruence and similarity using physical models, transparencies, or geometry software.</b>	<b>8.G.1 8.G.2 8.G.3 8.G.4 8.G.5</b>
		<b>Understand and apply the Pythagorean Theorem.</b>	<b>8.G.6 8.G.7 8.G.8</b>
		<b>Solve real-world and mathematical problems involving volume of cylinders, cones, and spheres.</b>	<b>8.G.9</b>