

Standards Based Map

5th Grade Math

Code:

NBT – Numbers and Operations in Base Ten

OA – Operations and Algebraic Thinking

NF – Number and Operations – Fractions

MD – Measurement & Data

G – Geometry

***Activities and resources are interchangeable within the content clusters**

Top 3 Common Core Math User Friendly Resources:

<http://www.k-5mathteachingresources.com/5th-grade-number-activities.html>

<https://sites.google.com/a/bryantschools.org/math-common-core-resource-site/home-1/5th-grade>

<https://grade5commoncoremath.wikispaces.hcpss.org/home>

Timeline	NxG Standard(s)	Student I Can Statement(s) / Learning Target(s)	Essential Questions	Academic Vocabulary	Strategies / Activities	Resources / Materials	Assessments	Notes / Self - Reflection
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Month 1 Aug	M.5.NBT.1 Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and 1/10 of what it represents in the place to its left to understand the place value system.	I can recognize a digit represents 10 times as much to the right and 1/10 to the left.	How do we compare numbers using place value?	digit multi-digit number place value names base ten whole numbers	Daily Word Problems Daily Spiral Review Game – Use chart paper and deck of cards to generate activities that reinforce place value	http://www.ixl.com/math/grade-5/place-values http://www.ixl.com/math/grade-5/convert-between-place-values http://www.ixl.com/math/grade-5/place-values-in-decimal-numbers	Acuity http://Tenmarks.com http://Smarterbalance.org https://grade5commoncoremath.wikispaces.hcpss.org/Assessing+5.NBT.1	
	M.5.NBT.2 Explain patterns in number of zeros of product when multiplying number by powers of 10, & explain patterns in placement of decimal point when a decimal	I can write numbers in standard, expanded, and exponential notation with expanded form. I can explain patterns in the place value system when	What patterns occur in our number system?	patterns product powers of 10 decimal decimal point exponent multiply	Flashcards / Flash masters for basic fact recall Multiplication baseball/ basketball Ordering of large	http://www.quia.com/jg/65637.html http://www.superteachertools.com/jeopardy/usergames/Sep201036/game1283970841.php	https://grade5commoncoremath.wikispaces.hcpss.org/Assessing+5.NBT.2	

<p>is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10 to understand the place value system.</p>	<p>working with powers of 10.</p>		<p>divide</p>	<p>numbers</p> <p>Timed relay races using decimals to thousandths place</p> <p>http://com moncores heets.com/ SortedByG rade.php? Sorted=5th #s2</p>			
<p>M.5.NBT.3 Read, write, and compare decimals to thousandths. Read and write decimals to thousandths using base-ten numerals, number names, and expanded form. Compare two decimals to thousandths based on meanings of the digits in each place, using >, =, and < symbols</p>	<p>I can read, write, order, and compare all whole numbers and decimals, and identify the place value of each digit.</p>	<p>How do we represent and compare decimals (number form, expanded form and word form)?</p>	<p>comparison</p> <p>expanded notation</p> <p>greater than</p> <p>less than</p> <p>equal to</p> <p>inequality?</p>	<p>http://www. quia.com/ mc/279741 .html</p> <p>http://www. sheppards oftware.co m/mathga mes/decim als/Balloon PopDecim als1.htm</p> <p>http://www. sheppards oftware.co m/mathga mes/decim als/Compa reDecimals .htm</p>	<p>https://grade5 commoncore math.wikispa ces.hcpss.org /Assessing+5. NBT.3</p>		

Month 2 Sept	M.5.NBT.4 Use place value understanding to round decimals to any place.	I can use place value understanding to round decimals to any place.	How do we round decimals?	round estimation reasonable		http://www.sheppardsoftware.com/mathgames/decimals/scooterQuestDecRound.htm http://www.free-training-tutorial.com/decimal/decimal-spaceships.html	https://grade5commoncoremath.wikispaces.hcps.org/Assessing+5.NBT.4 Acuity http://Tenmarks.com http://Smarterbalance.org	
	M.5.NBT.5 Fluently multiply multi-digit numbers using standard algorithm.	I can model fluency in addition, subtraction, multiplication and division of whole numbers.	How do we multiply numbers?	standard algorithm		http://mrnuessbaum.com/draggablemain/index3/ http://www.mathplayground.com/multiplication05.html http://mrnuessbaum.com/grade5standards/532-2/	https://grade5commoncoremath.wikispaces.hcps.org/Assessing+5.NBT.5 Acuity http://Tenmarks.com http://Smarterbalance.org	

	<p>M.5.NBT.6 Find whole-number quotients of whole numbers with up to four-digit dividends & two-digit divisors. Illustrate & explain calculation using equations, rectangular arrays, and/or area models with whole numbers and with decimals to hundredths.</p>	<p>I can divide whole numbers, decimals, and money by one or two digit divisors.</p> <p>I can model fluency in addition, subtraction, multiplication and division of whole numbers.</p>	<p>How do we divide numbers?</p>	<p>non-zero quotient dividend divisor arrays models</p>		<p>http://mrnu.ssbaum.com/grade5standards/533-2</p> <p>http://mrnu.ssbaum.com/grade5standards/537-2/</p>	<p>https://grade5commoncoremath.wikispaces.hcps.org/Assessing+5.NBT.6</p> <p>Acuity</p> <p>http://Tenmarks.com</p> <p>http://Smarterbalance.org</p>	
	<p>M.5.NBT.7 Add, subtract, multiply, & divide decimals to hundredths, using concrete models or drawings & strategies based on place value, properties of operations,</p>	<p>I can solve problems with whole numbers and decimals?</p>	<p>How do we solve problems with whole numbers and decimals?</p>	<p>sum difference product factors quotient dividend divisor</p>		<p>http://mrnu.ssbaum.com/grade5standards/540-2/</p> <p>http://mrnu.ssbaum.com/grade5standards/550-2/</p> <p>http://mrnu</p>	<p>https://grade5commoncoremath.wikispaces.hcps.org/Assessing+5.NBT.7</p> <p>Acuity</p> <p>http://Tenmarks.com</p> <p>http://Smarter</p>	

	and/or the relationship between addition & subtraction; relate the strategy to a written method & explain the reasoning used to perform operations with multi-digit whole numbers and with decimals to hundredths.			remainder place holder		ssbaum.com/grade5standards/549-2	balance.org	
Month 3 Oct	M.5.OA.1 Use parentheses, brackets, or braces in numerical expressions, & evaluate expressions to write and interpret numerical expressions.	I can use parentheses, brackets or braces in numerical expressions and evaluate expressions with these symbols.	What can affect the relationship between numbers within a numerical expression?	associative property commutative property distributive property equation expression variable	http://www.k-5mathteachingresources.com/5th-grade-number-activities.html http://commoncoresheets.com/SortedByGrade.php?Sorted=5th#s2	http://www.topmarks.co.uk/maths-games/7-11-years/mental-maths http://www.mathwire.com/whohas/whohas.html http://www.math-play.com/The-	https://grade5commoncoremath.wikispaces.hcpss.org/Assessing+5.OA.1 Acuity http://Tenmarks.com http://Smarterbalance.org	

					https://grade5commoncoremath.wikispaces.hcpss.org/5.OA.1	24-Game.html			
	<p>M.5.OA.2 Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them.</p>	<p>I can write and interpret simple numerical expressions that record calculations.</p>	<p>What can affect the relationship between numbers within a numerical expression without calculation?</p>	<p>* Review vocab from M.5.OA.1</p>	<p>OA.2 – https://grade5commoncoremath.wikispaces.hcpss.org/5.OA.2</p> <p>OA.3 - https://grade5commoncoremath.wikispaces.hcpss.org/5.OA.3</p> <p>http://www.quia.com/ba/108397.html</p>	<p>http://coolmath.com/prealgebra/06-properties/05-properties-distributive-01.htm</p> <p>http://www.math-play.com/math-basketball-properties-of-multiplication/math-basketball-properties-of-multiplication.html</p> <p>http://www.quia.com/ba/108397.html</p>	<p>https://grade5commoncoremath.wikispaces.hcpss.org/Assessing+5.OA.2</p> <p>Acuity</p> <p>http://Tenmarks.com</p> <p>http://Smarterbalance.org</p>		

	<p>M.5.OA.3 Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns, and graph the ordered pairs on a coordinate plane.</p>	<p>I can use inductive reasoning to find missing elements in a variety of patterns.</p> <p>I can determine the rule of an input/output model using two operations.</p>	<p>How is a pattern determined and explained using inductive reasoning?</p>	<p>* Review vocab from M.5.OA.1</p> <p>ordered pairs</p> <p>coordinate plane</p>		<p>http://mathwire.com</p> <p>http://mathplayground.com/functionmachine.html</p> <p>http://math.rice.edu/~lanius/Patterns/</p> <p>http://www.setgame.com/set/daily_puzzle</p>	<p>https://grade5commoncoremath.wikispaces.hcps.org/Assessing+5.OA.3</p> <p>Acuity</p> <p>http://Tenmarks.com</p> <p>http://Smarterbalance.org</p>	
<p>Month 4 Nov</p>	<p>M.5.NF.1 Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of</p>	<p>I can solve real world problems involving addition and subtraction using whole numbers and fractions.</p> <p>I can solve real world problems involving fractions and mixed</p>	<p>How do we add and subtract fractions?</p>	<p>numerator</p> <p>denominator</p> <p>factors</p> <p>equivalent fractions</p> <p>mixed numbers</p> <p>improper fraction</p> <p>simplest</p>	<p>http://www.teachingwithamontainview.com/2013/04/dividing-fractions-anchor-chart-game.html</p> <p>http://www.mathsisfun.com/numbers/fractions-</p>	<p>http://www.gamequarium.com/fractions.html</p> <p>http://pbskids.org/cyberchase/math-games/melvins-make-match/</p> <p>http://mrnuessbaum.com/pizza_g</p>	<p>https://grade5commoncoremath.wikispaces.hcps.org/Assessing+5.NF.1</p> <p>Acuity</p> <p>http://Tenmarks.com</p> <p>http://Smarterbalance.org</p>	

fractions with like denominators.	numbers. I can model and write equivalent fractions limited to denominators to 10 and 100.		form reduced form benchmark fraction unit fraction percent	division-whole-numbers.html http://www.homeschoolmath.net/teaching/dividing_fractions_1.php	ame/ http://www.math-play.com/adding-and-subtracting-fractions-game.html		
<p>M.5.NF.2 Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators</p> <p>Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers.</p>	<p>I can solve math problems in every day life involving whole numbers and decimals.</p> <p>I can solve real world problems involving addition and subtraction using whole numbers and fractions.</p> <p>I can solve math problems in every day life involving fractions.</p>	How does adding and subtracting fractions relate to real world problems?	prime number composite number prime factorization factor tree greatest common factor least common multiple common denominator	http://www.math-aids.com/Fractions/Dividing Fractions and Whole Numbers.html	http://www.sheppardssoftware.com/mathgames/numbers/fruit_shoot_prime.htm http://www.xpmath.com/forums/arcade.php?do=play&gameid=60 http://www.math-play.com/Factors-and-Multiples-Jeopardy/Factors-and-Multiples-Jeopardy.html	https://grade5commoncoremath.wikispaces.hcpss.org/Assessing+5.NF.2 Acuity http://Tenmarks.com http://Smarterbalance.org	

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Month 5 Dec	<p>M.5.NF.3 Interpret fraction as division of numerator by denominator ($a/b = a \div b$).</p> <p>Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers to apply & extend previous understanding of multiplication & division to multiply & divide fractions, e.g., by using visual fraction models or equations to represent the problem.</p>	I can interpret a fraction as division and solve word problems dividing whole numbers.	How do we interpret fractions as division and solve word problems?	*Review vocab from M.5.NF.1 and M.5.NF.2		<p>http://math.rice.edu/~lanius/Pattens/</p> <p>http://www.arcademic.com/games/speedway/speedway.html</p> <p>http://www.funbrain.com/fractop/</p>	<p>https://grade5commoncoremath.wikispaces.hcpss.org/Assessing+5.NF.3</p> <p>Acuity</p> <p>http://Tenmarks.com</p> <p>http://Smarterbalance.org</p>	

<p>M.5.NF.4 Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction.</p>	<p>I can apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction.</p>	<p>How do we multiply fractions?</p>	<p>*Review vocab from M.5.NF.1 and M.5.NF.2</p>	<p>http://www.funbrain.com/fractop/ http://www.arcademic.com/games/speedway/speedway.html http://www.math-play.com/Multiplying-Fractions-Millionaire/Multiplying-Fractions-Millionaire.html</p>	<p>https://grade5commoncoremath.wikispaces.hcpss.org/Assessing+5.NF.4 Acuity http://Tenmarks.com http://Smarterbalance.org</p>	
<p>M.5.NF.5 Interpret multiplication as scaling (resizing), by comparing the size of a product to the size of one factor on the basis of the size of the other factor,</p>	<p>I can resize an object using multiplication.</p>	<p>How do you show multiplying fractions in a visual model? How can we use scale to resize an</p>	<p>scale partition resize</p>	<p>http://www.brainpop.com/educators/community/bp-topic/scale-drawing/</p>	<p>https://grade5commoncoremath.wikispaces.hcpss.org/Assessing+5.NF.5 Acuity http://Tenmarks.com http://Smarter</p>	

	without performing the indicated multiplication. Explaining why multiplying given number by a fraction greater than 1 results in product greater than the number; explaining why multiplying a given number by a fraction less than 1 results in a product smaller than the given number; and relating the principle of fraction equivalence $a/b = (n \times a)/(n \times b)$ to the effect of multiplying a/b by 1.		object?				balance.org	
Month 6 Jan	M.5.NF.6 Solve real world problems involving multiplication of	I can solve real-world problems involving multiplication	How does multiplying fractions relate to real world	irrelevant information multistep		http://www.insidemathematics.org/index.php/5th-	https://grade5commoncoremath.wikispaces.hcpss.org/Assessing+5.	

	fractions and mixed numbers.	of fractions and mixed numbers.	problems?	problem		grade/	NF.6 Acuity http://Tenmarks.com http://Smarterbalance.org	
	M.5.NF.7 Apply & extend previous understandings of division to divide unit fractions by whole numbers & whole numbers by fractions. Interpret division of a unit fraction by a non-zero whole number, and compute such quotients. Interpret division of a whole number by a unit fraction, and compute such quotients.	I can use my understanding of division to divide fractions.	How can I divide fractions?	reciprocal		http://www.ixl.com/math/grade-5/divide-fractions-by-whole-numbers	https://grade5commoncoremath.wikispaces.hcpss.org/Assessing+5.NF.7 Acuity http://Tenmarks.com http://Smarterbalance.org	

	Solve real world problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions to apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions.							
Month 7 Feb	M.5.MD.1 Convert among different-sized standard measurement units within given measurement system (e.g., convert 5 cm to 0.05 m), & use conversions in solving multi-step, real world	I can solve real world problems using conversion with the customary and metric systems.	How do we convert measurements within systems in real world situations?	metric system base meter liter gram prefix milli-	http://www.nctm.org/standards/content.aspx?id=26975 <a href="https://www.khanacademy.org/math/cc-fifth-grade-math/cc-5th-</td> <td>http://www.sheppardsoftware.com/math.htm#measurement http://mrnu.ssbbaum.com/metric	https://grade5commoncoremath.wikispaces.hcpss.org/Assessing+5.MD.1 Acuity http://Tenmarks.com http://Smarter		

	problems to convert like units within a given measurement system.			centi- kilo- formula area convert	measurement- topic/cc- 5th- volume/v/ measuring -volume- with-unit- cubes		balance.org	
	M.5.MD.2 Make a line plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8). Use operations on fractions to solve problems involving information presented in line plots to represent and interpret data.	I can make, read and interpret tables, charts and graphs to make inferences or verify predictions. I can make a line plot to display a data set and use operations to solve problems from the line plot.	How can we display fractional data using a line plot?	data survey line plot stem leaf stem-and-leaf plot diagram validity	http://www. .helpingwit hmath.co m/by_subj ect/geome try/geo_vol ume.htm	http://www. funbrain.co m/cracker/i ndex.html http://www. harcourtsc hool.com/a ctivity/elab 2004/gr3/2 3.html	https://grade5 commoncore math.wikispa ces.hcpss.org /Assessing+5. MD.2 Acuity http://Tenmar ks.com http://Smarter balance.org	
Month 8 March	M.5.MD.3 Recognize volume as an attribute of solid figures and understand concepts of volume	I can recognize volume as an attribute of solid figures. I can measure volume by counting unit	How do we represent the inside of a 3-D figure?	3-D figure volume cubic unit face		http://www. studyzone. org/testpre p/math4/d/ volumecub p.cfm	https://grade5 commoncore math.wikispa ces.hcpss.org /Assessing+5. MD.3	

	<p>measurement. A cube with side length 1 unit, called a "unit cube," is said to have "one cubic unit" of volume, and can be used to measure volume to recognize volume as an attribute of solid figures and understand concepts of volume measurement.</p> <p>A solid figure which can be packed without gaps or overlaps using n unit cubes is said to have a volume of n cubic units to recognize volume as an attribute of solid figures and understand concepts of volume measurement.</p>	<p>cubes. I can develop strategies (methods) to determine the volume of a rectangular prism. I can solve math problems in every day life estimating or measuring volume of a rectangular prism.</p>		<p>edge vertex cube prism pyramid capacity</p>			<p>Acuity http://Tenmarks.com http://Smarterbalance.org</p>	
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<p>M.5.MD.4 Measure volumes by counting unit cubes, using cubic cm, cubic in, cubic ft, and improvised units.</p>	<p>I can recognize volume as an attribute of solid figures. I can measure volume by counting unit cubes. I can develop strategies (methods) to determine the volume of a rectangular prism. I can solve math problems in every day life estimating or measuring volume of a rectangular prism.</p>	<p>How do we measure volume using cubic units?</p>	<p>*Review vocab from M.5.MD.1 – M.5.MD.3</p>	<p>http://www.xpmath.com/forums/arcade.php?do=play&gameid=118</p> <p>https://www.splashmath.com/skills/volume-using-unit-cubes/attempts/bb2c3148-1fec-43a8-92d2-c0ad90050119</p> <p>http://www.mathplayground.com/cube_perspective.html</p>	<p>https://grade5commoncoremath.wikispaces.hcpss.org/Assessing+5.MD.4</p> <p>Acuity</p> <p>http://Tenmarks.com</p> <p>http://Smarterbalance.org</p>	
<p>M.5.MD.5 Relate volume to operations of multiplication and addition and solve real world and mathematical</p>	<p>I can recognize volume as an attribute of solid figures. I can measure volume by counting unit</p>	<p>How do we relate volume to multiplication and addition using real world</p>	<p>formula rectangular prism length width</p>	<p>https://www.splashmath.com/skills/volume-of-solids/attempts/90282ab5-</p>	<p>https://grade5commoncoremath.wikispaces.hcpss.org/Assessing+5.MD.5</p> <p>Acuity</p>	

	<p>problems involving volume. Find the volume of a right rectangular prism with whole-number side lengths by packing it with unit cubes, and show that the volume is the same as would be found by multiplying the edge lengths, equivalently by multiplying the height by the area of the base. Represent threefold whole number products as volumes, e.g., to represent the associative property of multiplication. Apply the formulas $V = l \times w \times h$ and $V = b \times h$ for rectangular</p>	<p>cubes. I can develop strategies (methods) to determine the volume of a rectangular prism. I can solve math problems in every day life estimating or measuring volume of a rectangular prism.</p>	<p>situations?</p>	<p>height base associative property</p>		<p>3b68-4cd9-b98e-f487165bc1f1 http://www.ixl.com/math/grade-5/volume-of-cubes-and-rectangular-prisms https://www.mangahigh.com/en-us/math_games/shape/length_area_and_volume/volume_of_a_rectangular_prism http://www.learner.org/interactive/s/geometry/area_volume.html</p>	<p>http://Tenmarks.com http://Smarterbalance.org</p>	
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	<p>prisms to find volumes of right rectangular prisms with whole-number edge lengths in the context of solving real world and mathematical problems. Recognize volume as additive. Find volumes of solid figures composed of two non-overlapping right rectangular prisms by adding the volumes of the non-overlapping parts, applying this technique to solve real world problems.</p>							
<p>Month 9 April</p>	<p>M.5.G.1 Use pair of perpendicular number lines,</p>	<p>I can use a pair of perpendicular number lines</p>	<p>How do we graph ordered</p>	<p>coordinate plane</p>	<p>http://www.shodor.org/interactive/activities/</p>	<p>http://www.math-play.com/Geometry-</p>	<p>https://grade5commoncoremath.wikispaces.hcps.org</p>	

	<p>axes, to define coordinate system, with intersection of lines (the origin) arranged to coincide with 0 on each line & given point in plane located by using an ordered pair of numbers, called its coordinates. Understand that the first number indicates how far to travel from the origin in the direction of one axis, and the second number indicates how far to travel in the direction of the second axis, with the convention that the names of the two axes and the coordinates</p>	<p>to identify coordinates, origin and ordered pairs (x,y).</p>	<p>pairs?</p>	<p>x-axis y-axis origin ordered pair x-coordinate y-coordinate</p>	<p>es/General Coordinate s/ http://www.math-salamanders.com/geometry-cheat-sheet.html</p>	<p>Math-Games.html</p>	<p>/Assessing+5.G.1 Acuity http://Tenmarks.com http://Smarterbalance.org</p>	
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	correspond (e.g., x-axis and x-coordinate, y-axis and y-coordinate).							
	<p>M.5.G.2 Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation.</p>	I can represent real world math problems by graphing points in the first quadrant of the coordinate plane and interpret value points.	How do we use graphs to represent real world and mathematical problems?	quadrant *Also review M.5.G.1 vocab		https://www.georgiastandards.org/Common-Core/Common%20Core%20Framework/CGPS_Math_5_Unit6_Framework_SE.pdf	https://grade5commoncoremath.wikispaces.hcpss.org/Assessing+5.G.2 Acuity http://Tenmarks.com http://Smarterbalance.org	
	<p>M.5.G.3 Understand attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category.</p>	I can identify and classify the attributes of a two-dimensional figure by their sides and angles.	What are the properties of 2-D figures?	2-D figure angle side congruent		http://www.math-play.com/Geometry-Math-Games.html	https://grade5commoncoremath.wikispaces.hcpss.org/Assessing+5.G.3 Acuity http://Tenmarks.com http://Smarter	

						http://www.math-play.com/sapes-game.html	https://grade5commoncoremath.wikispaces.hcpss.org/Assessing+5.G.4	
	M.5.G.4 Classify two-dimensional figures in a hierarchy based on properties.	I can identify and classify the attributes of a two-dimensional figure by their sides and angles.	How do we classify the properties of a 2-D figure?	parallel lines perpendicular lines polygon triangle equilateral triangle isosceles triangle scalene triangle acute angle obtuse angle right angle rectangle quadrilateral rhombus square trapezoid parallelogram			Acuity http://Tenmarks.com http://Smarterbalance.org	

				m pentagon hexagon octagon				
Month 10 May	REVIEW						Acuity http://Tenmarks.com http://Smarterbalance.org	