

GRADE 3

Number & Operations in Base Ten

First Trimester - August/September - October

	Common Core State Standard	Assessment	Resources	Vocabulary
	<i>CCSS.Math.Content.3.NBT.2</i> <i>Use place value understanding to round whole numbers to the nearest 10 or 100</i>	Rounding to tens and hundreds in Assessment binder	Investigations Unit 3 one lesson 1.7A Various worksheets in rounding binder	landmark numbers rounding nearest ten nearest hundred
	<u>CCSS.Math.Content.3.NBT.A.2</u> <i>Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.</i>	End of Unit 1 assessment is test named Addition, Subtraction, and the Number System Pre/Post teacher created End of Unit test named Addition/Subtraction/Rounding	Investigation Unit1 and Unit 3 Extensions can be found in Unit 8	digit sum equation tens place ones place difference number line unmarked number line add up subtract back

		Located in Assessment Binder		penny dime dollar quarter nickel addition combinations
	CCSS.Math.Content.3.OA.1 Interpret products of whole numbers, e.g., interpret 5×7 as the total number of objects in 5 groups of 7 objects each. <i>For example, describe a context in which a total number of objects can be expressed as 5×7</i>	Mid-module assessment task End of module assessment task Located in assessment binder and retyped in a friendlier format	Engage NY CCSS first module Located in binder with label NY Multiplication Unit 1 Module 5 Lessons 1 - 27	multiplication multiply equation product multiple factors
	CCSS.Math.Content.3.OA.2 Interpret whole number quotients of whole numbers, e.g., interpret 56 divided by 8 as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each. <i>For example, describe a context in which a number of shares or a number of groups can be expressed as 56 divided by 8.</i>		Engage NY Lessons 1 - 18	sharing grouping array equal groups distribute parentheses row/column unknown unit

	<u>CCSS.Math.Content.3.NBT.A.3</u> <i>Multiply one-digit whole numbers by multiples of 10 in the range 10-90 (e.g., 9×80, 5×60) using strategies based on place value and properties of operations.</i>		Engage NY Lessons 1 - 21	
	<u>CCSS.Math.Content.3.OA.A.3</u> Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem. ¹		Engage NY Lessons 1 - 21	division divide dividend divisor quotient remainder
	<u>CCSS.Math.Content.3.OA.A.4</u> Determine the unknown whole number in a multiplication or division equation relating three whole numbers. <i>For example, determine the unknown number that makes the equation true in each of the equations $8 \times ? = 48$, $5 = _ \div 3$, $6 \times 6 = ?$</i>		Engage NY Lessons 1 - 18	Whole numbers
	<i>Understand properties of multiplication and the relationship between multiplication and division.</i> <u>CCSS.Math.Content.3.OA.B.5</u> <i>Apply properties of operations as strategies to</i>		Engage NY Lessons 1 - 15; 19 - 21	Commutative Property Associative Property Distributive Property

	<p>multiply and divide.² Examples: If $6 \times 4 = 24$ is known, then $4 \times 6 = 24$ is also known. (Commutative property of multiplication.) $3 \times 5 \times 2$ can be found by $3 \times 5 = 15$, then $15 \times 2 = 30$, or by $5 \times 2 = 10$, then $3 \times 10 = 30$. (Associative property of multiplication.) Knowing that $8 \times 5 = 40$ and $8 \times 2 = 16$, one can find 8×7 as $8 \times (5 + 2) = (8 \times 5) + (8 \times 2) = 40 + 16 = 56$. (Distributive property.)</p>			
	<p>CCSS.Math.Content.3.OA.B.6 Understand division as an unknown-factor problem. For example, find $32 \div 8$ by finding the number that makes 32 when multiplied by 8.</p>		Engage NY Lessons 1 - 18	
	<p>Multiply and divide within 100. CCSS.Math.Content.3.OA.C.7 Fluently multiply and divide within 100, using</p>		Engage NY Lessons 1 - 18	Fluent

	<p><i>strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$, one knows $40 \div 5 = 8$) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.</i></p>			
	<p><i>Solve problems involving the four operations, and identify and explain patterns in arithmetic.</i></p> <p><u>CCSS.Math.Content.3.OA.D.8</u> <i>Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.³</i></p>		<p>Engage NY Lessons 8 - 11; 16 - 21</p>	<p>Unknown quantity Reasonableness</p>
	<p><u>CCSS.Math.Content.3.OA.D.9</u> <i>Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends.</i></p>		<p>Engage NY Lessons 1 - 3; 12 - 21</p>	<p>Patterns Properties of Operations Decomposed</p>

	Common Core State Standard	Assessment	Resources	Vocabulary
	CCSS.Math.Content.3.NBT.A.3 <i>Multiply one-digit whole numbers by multiples of 10 in the range 10-90 (e.g., 9×80, 5×60) using strategies based on place value and properties of operations.</i>		Engage NY Lessons	

Number & Operations_Fractions

March through end of April

	Common Core State Standard	Assessment	Resources	Vocabulary
	<p>Develop understanding of fractions as numbers.</p> <p><u>CCSS.Math.Content.3.NF.A.1</u></p> <p>Understand a fraction $1/b$ as the quantity formed by a parts of size $1/\text{quantity}$ formed by 1 part when a whole is partitioned into b equal parts; understand a fraction a/b as the b.</p>	<p>Engage NY Mid Module Assessment Retyped in Assessment Book</p> <p>Pre - Post test teacher created</p>	<p>Engage NY Lessons 1 - 13</p> <p>Investigations Unit 7 Lesson 1.1, 1.5, 1.6, 2.1, 2.2, 2.4,</p>	<p>Part</p> <p>Whole</p> <p>half/halves</p> <p>Thirds</p> <p>Fourths</p> <p>Sixths</p> <p>Eighths</p> <p>Equal</p> <p>Shade</p> <p>Unit</p> <p>Divide</p> <p>Sum</p> <p>Equally</p> <p>Represent</p> <p>Equivalent</p> <p>Numerator</p> <p>Denominator</p> <p>Fraction</p> <p>Fraction bar</p> <p>Area model</p> <p>Unit fraction</p> <p>Fractional part</p> <p>Interval</p>

				Equivalent fraction Set model pentagon
	<u>CCSS.Math.Content.3.NF.A.2</u> Understand a fraction as a number on the number line; represent fractions on a number line diagram.		Engage NY Lessons 14 - 30 Didax workbook Fractions Made Easy Lessons 4 - 10 and worksheets	Number line Interval Endpoint
	<u>CCSS.Math.Content.3.NF.A.2.a</u> Represent a fraction $1/b$ on a number line diagram by defining the interval from 0 to 1 as the whole and partitioning it into b equal parts. Recognize that each part has size $1/b$ and that the endpoint of the part based at 0 locates the number $1/b$ on the number line.		Engage NY Lessons 14 - 30 Didax workbook Fractions Made Easy Lessons 4 - 10 and worksheets	
	<u>CCSS.Math.Content.3.NF.A.2.b</u> Represent a fraction a/b on a number line diagram by marking off a lengths $1/b$ from 0. Recognize that the resulting interval has size a/b and that its endpoint locates the number a/b on the number line		Engage NY Lessons 14 - 30 Didax workbook Fractions Made Easy Lessons 4 - 10 and worksheets	
	<u>CCSS.Math.Content.3.NF.A.3</u> Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size.		Engage NY Lessons 10 - 27 Investigations Lessons 1.5, 1.6, 2.2	

	<p><u>CCSS.Math.Content.3.NF.A.3.a</u> Understand two fractions as equivalent (equal) if they are the same size, or the same point on a number line.</p>		<p>Engage NY Lessons 10 -27</p> <p>Investigations Lessons 2.2</p>	
	<p><u>CCSS.Math.Content.3.NF.A.3.b</u> Recognize and generate simple equivalent fractions, e.g., $1/2 = 2/4$, $4/6 = 2/3$. Explain why the fractions are equivalent, e.g., by using a visual fraction model.</p>		<p>Engage NY Lessons 10 - 27</p> <p>Investigations Lessons 2.2</p>	
	<p><u>CCSS.Math.Content.3.NF.A.3.c</u> Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers. <i>Examples: Express 3 in the form $3 = 3/1$; recognize that $6/1 = 6$; locate $4/4$ and 1 at the same point of a number line diagram.</i></p>		<p>Engage NY Lessons 5 - 27</p>	

Measurement & Data

January through end of February

	Common Core State Standard	Assessment	Resources	Vocabulary
	<p><i>Solve problems involving measurement and estimation.</i></p> <p><u>CCSS.Math.Content.3.MD.A.1</u></p> <p><i>Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram.</i></p>	<p>Pretest labeled Pre/Post M&D located in assessment binder</p> <p>Mid-Module Assessment Task plus teacher created challenge for a 4</p>	<p>Math binder labeled measurement includes lessons 2 through 5 from Engage NY module</p>	<p>hour minute second elapsed time minute hand hour hand o'clock quarter to quarter past half past</p>
	<p><u>CCSS.Math.Content.3.MD.A.2</u></p> <p><i>Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l).¹ Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem.²</i></p>		<p>Math binder labeled measurement lesson Fill it Up</p>	<p>measure estimate milliliter liter graduated cylinder volume capacity</p>

	<p>Represent and interpret data. CCSS.Math.Content.3.MD.B.3 Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled bar graphs. <i>For example, draw a bar graph in which each square in the bar graph might represent 5 pets.</i></p>		<p>Investigations Unit 2 lesson 1.1 Teacher created graphing activities</p>	<p>scale picture graph bar graph title labels vertical scale horizontal scale data categories</p>
	<p>CCSS.Math.Content.3.MD.B.4 Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units—whole numbers, halves, or quarters.</p>		<p>Investigations Unit 2 Lessons 2.1 and 2.2</p> <p>Groundworks - Reasoning about Measurement Broken ruler activities</p>	<p>half inch quarter inch fourths line plot mode median range mean outlier</p>
	<p>Geometric measurement: understand concepts of area and relate area to multiplication and to addition. CCSS.Math.Content.3.MD.C.5 Recognize area as an attribute of plane figures and understand concepts of area measurement.</p>	<p>Pre - Post Area and Perimeter test in Assessment binder</p>	<p>Binder labeled Area and Perimeter Engage NY Lessons 1 - 5</p>	<p>Area Length Array Two dimensional</p>
	<p>CCSS.Math.Content.3.MD.C.5.a A square with side length 1 unit, called "a</p>		<p>Engage NY Lessons 1 - 5</p>	<p>Unit square Row</p>

	unit square," is said to have "one square unit" of area, and can be used to measure area.			column
	CCSS.Math.Content.3.MD.C.5.b A plane figure which can be covered without gaps or overlaps by n unit squares is said to have an area of n square units		Engage NY Lessons 1 - 5	Tiles Plane figure Overlays Gaps
	CCSS.Math.Content.3.MD.C.6 Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvised units).		Engage NY Lessons 1 - 5	Square units Improvised units Square cm Square in Square ft Square m
	CCSS.Math.Content.3.MD.C.7 Relate area to the operations of multiplication and addition.		Engage NY Lessons 1 - 5	Length Width
	CCSS.Math.Content.3.MD.C.7.a Find the area of a rectangle with whole-number side lengths by tiling it, and show that the area is the same as would be found by multiplying the side lengths.		Engage NY Lessons 1 - 5	Overlaps
	CCSS.Math.Content.3.MD.C.7.b Multiply side lengths to find areas of rectangles with whole-number side lengths in the context of solving real world and mathematical problems, and represent whole-number products as rectangular		Engage NY Lessons 1 - 5	Polygon

	areas in mathematical reasoning.			
	CCSS.Math.Content.3.MD.C.7.c Use tiling to show in a concrete case that the area of a rectangle with whole-number side lengths a and $b + c$ is the sum of $a \times b$ and $a \times c$. Use area models to represent the distributive property in mathematical reasoning		Engage NY Lessons 1 - 5	Boundaries
	CCSS.Math.Content.3.MD.C.7.d Recognize area as additive. Find areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts, applying this technique to solve real world problems.		Engage NY Lessons 1 - 5	
	Geometric measurement: recognize perimeter. CCSS.Math.Content.3.MD.D.8 Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.		Investigations Unit 4 Perimeter, Angles, and Area Lessons 1.1 - 1.5	Perimeter Edge

Geometry

May through end of the year

	Common Core State Standard	Assessment	Resources	Vocabulary
	<p>Reason with shapes and their attributes. CCSS.Math.Content.3.G.A.1 Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.</p>	<p>Teacher created Geometry Pre - Post tests in Assessment binder</p>	<p>Geometry binder Geoboards Engage NY Module 7 Lessons 4 - 9</p>	<p>Square Rectangle Triangle Circle Rhombus trapezoid Shared attributes Line Line segment Side Vertex Quadrilateral Parallelogram Polygon Congruent Angle</p>
	<p>CCSS.Math.Content.3.G.A.2 Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. <i>For example, partition a shape into 4 parts with equal</i></p>		<p>Bridges in Mathematics Grade 3 Set C4 Geometry: Quadrilaterals Activities 1 - 5</p>	<p>Partition Equal area Right angle Acute angle Obtuse angle Regular Polygon</p>

	<i>area, and describe the area of each part as 1/4 of the area of the shape.</i>			
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GRADE 3

Number & Operations in Base Ten

First Trimester - August/September - October

	Common Core State Standard	Assessment	Resources	Vocabulary
	<i>CCSS.Math.Content.3.NBT.2</i> <i>Use place value understanding to round whole numbers to the nearest 10 or 100</i>	Rounding to tens and hundreds in Assessment binder	Investigations Unit 3 one lesson 1.7A Various worksheets in rounding binder	landmark numbers rounding nearest ten nearest hundred
	<u>CCSS.Math.Content.3.NBT.A.2</u> <i>Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.</i>	End of Unit 1 assessment is test named Addition, Subtraction, and the Number System Pre/Post teacher created End of Unit test named Addition/Subtraction/Rounding	Investigation Unit1 and Unit 3 Extensions can be found in Unit 8	digit sum equation tens place ones place difference number line unmarked number line add up subtract back

		Located in Assessment Binder		penny dime dollar quarter nickel addition combinations
	CCSS.Math.Content.3.OA.1 Interpret products of whole numbers, e.g., interpret 5×7 as the total number of objects in 5 groups of 7 objects each. <i>For example, describe a context in which a total number of objects can be expressed as 5×7</i>	Mid-module assessment task End of module assessment task Located in assessment binder and retyped in a friendlier format	Engage NY CCSS first module Located in binder with label NY Multiplication Unit 1 Module 5 Lessons 1 - 27	multiplication multiply equation product multiple factors
	CCSS.Math.Content.3.OA.2 Interpret whole number quotients of whole numbers, e.g., interpret 56 divided by 8 as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each. <i>For example, describe a context in which a number of shares or a number of groups can be expressed as 56 divided by 8.</i>		Engage NY Lessons 1 - 18	sharing grouping array equal groups distribute parentheses row/column unknown unit

	<u>CCSS.Math.Content.3.NBT.A.3</u> <i>Multiply one-digit whole numbers by multiples of 10 in the range 10-90 (e.g., 9×80, 5×60) using strategies based on place value and properties of operations.</i>		Engage NY Lessons 1 - 21	
	<u>CCSS.Math.Content.3.OA.A.3</u> Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem. ¹		Engage NY Lessons 1 - 21	division divide dividend divisor quotient remainder
	<u>CCSS.Math.Content.3.OA.A.4</u> Determine the unknown whole number in a multiplication or division equation relating three whole numbers. <i>For example, determine the unknown number that makes the equation true in each of the equations $8 \times ? = 48$, $5 = _ \div 3$, $6 \times 6 = ?$</i>		Engage NY Lessons 1 - 18	Whole numbers
	<i>Understand properties of multiplication and the relationship between multiplication and division.</i> <u>CCSS.Math.Content.3.OA.B.5</u> <i>Apply properties of operations as strategies to</i>		Engage NY Lessons 1 - 15; 19 - 21	Commutative Property Associative Property Distributive Property

	<p>multiply and divide.² Examples: If $6 \times 4 = 24$ is known, then $4 \times 6 = 24$ is also known. (Commutative property of multiplication.) $3 \times 5 \times 2$ can be found by $3 \times 5 = 15$, then $15 \times 2 = 30$, or by $5 \times 2 = 10$, then $3 \times 10 = 30$. (Associative property of multiplication.) Knowing that $8 \times 5 = 40$ and $8 \times 2 = 16$, one can find 8×7 as $8 \times (5 + 2) = (8 \times 5) + (8 \times 2) = 40 + 16 = 56$. (Distributive property.)</p>			
	<p>CCSS.Math.Content.3.OA.B.6 Understand division as an unknown-factor problem. For example, find $32 \div 8$ by finding the number that makes 32 when multiplied by 8.</p>		Engage NY Lessons 1 - 18	
	<p>Multiply and divide within 100. CCSS.Math.Content.3.OA.C.7 Fluently multiply and divide within 100, using</p>		Engage NY Lessons 1 - 18	Fluent

	<p><i>strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$, one knows $40 \div 5 = 8$) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.</i></p>			
	<p><i>Solve problems involving the four operations, and identify and explain patterns in arithmetic.</i></p> <p><u>CCSS.Math.Content.3.OA.D.8</u> <i>Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.³</i></p>		<p>Engage NY Lessons 8 - 11; 16 - 21</p>	<p>Unknown quantity Reasonableness</p>
	<p><u>CCSS.Math.Content.3.OA.D.9</u> <i>Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends.</i></p>		<p>Engage NY Lessons 1 - 3; 12 - 21</p>	<p>Patterns Properties of Operations Decomposed</p>

	Common Core State Standard	Assessment	Resources	Vocabulary
	<u>CCSS.Math.Content.3.NBT.A.3</u> <i>Multiply one-digit whole numbers by multiples of 10 in the range 10-90 (e.g., 9×80, 5×60) using strategies based on place value and properties of operations.</i>		Engage NY Lessons	

Number & Operations_Fractions

March through end of April

	Common Core State Standard	Assessment	Resources	Vocabulary
	<p>Develop understanding of fractions as numbers.</p> <p><u>CCSS.Math.Content.3.NF.A.1</u></p> <p>Understand a fraction $1/b$ as the quantity formed by a parts of size $1/\text{quantity}$ formed by 1 part when a whole is partitioned into b equal parts; understand a fraction a/b as the b.</p>	<p>Engage NY Mid Module Assessment Retyped in Assessment Book</p> <p>Pre - Post test teacher created</p>	<p>Engage NY Lessons 1 - 13</p> <p>Investigations Unit 7 Lesson 1.1,1.5, 1.6, 2.1, 2.2, 2.4,</p>	<p>Part Whole half/halves Thirds Fourths Sixths Eighths Equal Shade Unit Divide Sum Equally Represent Equivalent Numerator Denominator Fraction Fraction bar Area model Unit fraction Fractional part Interval</p>

				Equivalent fraction Set model pentagon
	<u>CCSS.Math.Content.3.NF.A.2</u> Understand a fraction as a number on the number line; represent fractions on a number line diagram.		Engage NY Lessons 14 - 30 Didax workbook Fractions Made Easy Lessons 4 - 10 and worksheets	Number line Interval Endpoint
	<u>CCSS.Math.Content.3.NF.A.2.a</u> Represent a fraction $1/b$ on a number line diagram by defining the interval from 0 to 1 as the whole and partitioning it into b equal parts. Recognize that each part has size $1/b$ and that the endpoint of the part based at 0 locates the number $1/b$ on the number line.		Engage NY Lessons 14 - 30 Didax workbook Fractions Made Easy Lessons 4 - 10 and worksheets	
	<u>CCSS.Math.Content.3.NF.A.2.b</u> Represent a fraction a/b on a number line diagram by marking off a lengths $1/b$ from 0. Recognize that the resulting interval has size a/b and that its endpoint locates the number a/b on the number line		Engage NY Lessons 14 - 30 Didax workbook Fractions Made Easy Lessons 4 - 10 and worksheets	
	<u>CCSS.Math.Content.3.NF.A.3</u> Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size.		Engage NY Lessons 10 - 27 Investigations Lessons 1.5, 1.6, 2.2	

	<p><u>CCSS.Math.Content.3.NF.A.3.a</u> Understand two fractions as equivalent (equal) if they are the same size, or the same point on a number line.</p>		<p>Engage NY Lessons 10 -27</p> <p>Investigations Lessons 2.2</p>	
	<p><u>CCSS.Math.Content.3.NF.A.3.b</u> Recognize and generate simple equivalent fractions, e.g., $1/2 = 2/4$, $4/6 = 2/3$. Explain why the fractions are equivalent, e.g., by using a visual fraction model.</p>		<p>Engage NY Lessons 10 - 27</p> <p>Investigations Lessons 2.2</p>	
	<p><u>CCSS.Math.Content.3.NF.A.3.c</u> Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers. <i>Examples: Express 3 in the form $3 = 3/1$; recognize that $6/1 = 6$; locate $4/4$ and 1 at the same point of a number line diagram.</i></p>		<p>Engage NY Lessons 5 - 27</p>	

Measurement & Data

January through end of February

	Common Core State Standard	Assessment	Resources	Vocabulary
	<p><i>Solve problems involving measurement and estimation.</i></p> <p><u>CCSS.Math.Content.3.MD.A.1</u></p> <p><i>Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram.</i></p>	<p>Pretest labeled Pre/Post M&D located in assessment binder</p> <p>Mid-Module Assessment Task plus teacher created challenge for a 4</p>	<p>Math binder labeled measurement includes lessons 2 through 5 from Engage NY module</p>	<p>hour minute second elapsed time minute hand hour hand o'clock quarter to quarter past half past</p>
	<p><u>CCSS.Math.Content.3.MD.A.2</u></p> <p><i>Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l).¹ Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem.²</i></p>		<p>Math binder labeled measurement lesson Fill it Up</p>	<p>measure estimate milliliter liter graduated cylinder volume capacity</p>

	<p>Represent and interpret data. CCSS.Math.Content.3.MD.B.3 Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled bar graphs. <i>For example, draw a bar graph in which each square in the bar graph might represent 5 pets.</i></p>		<p>Investigations Unit 2 lesson 1.1 Teacher created graphing activities</p>	<p>scale picture graph bar graph title labels vertical scale horizontal scale data categories</p>
	<p>CCSS.Math.Content.3.MD.B.4 Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units—whole numbers, halves, or quarters.</p>		<p>Investigations Unit 2 Lessons 2.1 and 2.2</p> <p>Groundworks - Reasoning about Measurement Broken ruler activities</p>	<p>half inch quarter inch fourths line plot mode median range mean outlier</p>
	<p>Geometric measurement: understand concepts of area and relate area to multiplication and to addition. CCSS.Math.Content.3.MD.C.5 Recognize area as an attribute of plane figures and understand concepts of area measurement.</p>	<p>Pre - Post Area and Perimeter test in Assessment binder</p>	<p>Binder labeled Area and Perimeter Engage NY Lessons 1 - 5</p>	<p>Area Length Array Two dimensional</p>
	<p>CCSS.Math.Content.3.MD.C.5.a A square with side length 1 unit, called "a</p>		<p>Engage NY Lessons 1 - 5</p>	<p>Unit square Row</p>

	unit square," is said to have "one square unit" of area, and can be used to measure area.			column
	CCSS.Math.Content.3.MD.C.5.b A plane figure which can be covered without gaps or overlaps by n unit squares is said to have an area of n square units		Engage NY Lessons 1 - 5	Tiles Plane figure Overlays Gaps
	CCSS.Math.Content.3.MD.C.6 Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvised units).		Engage NY Lessons 1 - 5	Square units Improvised units Square cm Square in Square ft Square m
	CCSS.Math.Content.3.MD.C.7 Relate area to the operations of multiplication and addition.		Engage NY Lessons 1 - 5	Length Width
	CCSS.Math.Content.3.MD.C.7.a Find the area of a rectangle with whole-number side lengths by tiling it, and show that the area is the same as would be found by multiplying the side lengths.		Engage NY Lessons 1 - 5	Overlaps
	CCSS.Math.Content.3.MD.C.7.b Multiply side lengths to find areas of rectangles with whole-number side lengths in the context of solving real world and mathematical problems, and represent whole-number products as rectangular		Engage NY Lessons 1 - 5	Polygon

	areas in mathematical reasoning.			
	CCSS.Math.Content.3.MD.C.7.c Use tiling to show in a concrete case that the area of a rectangle with whole-number side lengths a and $b + c$ is the sum of $a \times b$ and $a \times c$. Use area models to represent the distributive property in mathematical reasoning		Engage NY Lessons 1 - 5	Boundaries
	CCSS.Math.Content.3.MD.C.7.d Recognize area as additive. Find areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts, applying this technique to solve real world problems.		Engage NY Lessons 1 - 5	
	Geometric measurement: recognize perimeter. CCSS.Math.Content.3.MD.D.8 Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.		Investigations Unit 4 Perimeter, Angles, and Area Lessons 1.1 - 1.5	Perimeter Edge

Geometry

May through end of the year

	Common Core State Standard	Assessment	Resources	Vocabulary
	<p>Reason with shapes and their attributes.</p> <p><u>CCSS.Math.Content.3.G.A.1</u></p> <p>Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.</p>	<p>Teacher created Geometry Pre - Post tests in Assessment binder</p>	<p>Geometry binder Geoboards Engage NY Module 7 Lessons 4 - 9</p>	<p>Square Rectangle Triangle Circle Rhombus trapezoid Shared attributes Line Line segment Side Vertex Quadrilateral Parallelogram Polygon Congruent Angle</p>
	<p><u>CCSS.Math.Content.3.G.A.2</u></p> <p>Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. <i>For example, partition a shape into 4 parts with equal</i></p>		<p>Bridges in Mathematics Grade 3 Set C4 Geometry: Quadrilaterals Activities 1 - 5</p>	<p>Partition Equal area Right angle Acute angle Obtuse angle Regular Polygon</p>

	<i>area, and describe the area of each part as 1/4 of the area of the shape.</i>			
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