

TOPIC/TITLE	MESSAGE	ASSIGNMENT (CALL TO ACTION)	CONTENT DIRECTIONS	URL	NOTES
<b>Welcome</b>	Welcome to the Grade 4 Mathematics Pennsylvania Learns iTunes U course. We are setting the stage for this course by providing you with background information about Pennsylvania Mathematics Core Standards and the Standards for Mathematical Practice.				
<b>Pennsylvania Core Standards</b>	<p>Pennsylvania Core Standards: The State Board approved the final Chapter 4 regulations on September 12, 2013. The Independent Regulatory Review Commission (IRRC) approved the final regulation on November 21, 2013. With publication of Chapter 4 in the Pennsylvania Bulletin, the new regulations took effect on March 1, 2014.</p> <p>As part of the new regulations, Pennsylvania's Core Standards offer a set of rigorous, high-quality academic expectations in Mathematics that all students should master by the end of each grade level. The PA Core Standards are robust and relevant to the real world and reflect the knowledge and skills our young people need to succeed in life after high school, in both post-secondary education and a globally competitive workforce.</p>				
		REVIEW the "Teacher Resources" and "Student Resources" section of the PA Core Implementation section of the SAS Portal.		<a href="http://www.pdesas.org/Standard/PACore">http://www.pdesas.org/Standard/PACore</a>	

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<b>Standards for Mathematical Practice and Content</b>					
<b>About the Standards for Mathematical Practice and Content</b>	The Standards for Mathematical Practice describe varieties of expertise that mathematics educators at all levels should seek to develop in their students. These practices rest on important "processes and proficiencies" with longstanding importance in mathematics education. The first of these are the NCTM process standards of problem solving, reasoning and proof, communication, representation, and connections. The second are the strands of mathematical proficiency specified in the National Research Council's report Adding It Up: This report explores how students in pre-K through 8th grade learn mathematics and highlights the importance of the inclusion of the following in teaching and learning: adaptive reasoning, strategic competence, conceptual understanding (comprehension of mathematical concepts, operations and relations), procedural fluency (skill in carrying out procedures flexibly, accurately, efficiently and appropriately), and productive disposition (habitual inclination to see mathematics as sensible, useful, and worthwhile, coupled with a belief in diligence and one's own efficacy).				
<b>Standards for Mathematical Practice</b>	The eight Standards of Mathematical Practice: 1 Make sense of problems and persevere in solving them. 2 Reason abstractly and quantitatively. 3 Construct viable arguments and critique the reasoning of others. 4 Model with mathematics. 5 Use appropriate tools strategically. 6 Attend to precision. 7 Look for and make use of structure. 8 Look for and express regularity in repeated reasoning.  The Standards for Mathematical Practice describe ways in which developing student practitioners of the discipline of mathematics increasingly ought to engage with the subject matter as they grow in mathematical maturity and expertise throughout the elementary, middle and high school years.				
		LEARN how the standards improve teaching, make learning more engaging, create shared expectations, and cultivate lifelong learning for students.	NCTM and The Hunt Institute have produced a series of videos to enhance understanding of the mathematics that students need to succeed in college, life, and careers. Beginning in the primary grades, the videos address the importance of developing a solid foundation for algebra, as well as laying the groundwork for calculus and other postsecondary mathematics coursework. The series also covers the Standards for Mathematical Practice elaborated in the PA Core Standards for Mathematics and examines why developing conceptual understanding requires a different approach to teaching and learning.	<a href="https://itunes.apple.com/us/itunes-u/hunt-institute-ccss-series/id461816983?mt=10">https://itunes.apple.com/us/itunes-u/hunt-institute-ccss-series/id461816983?mt=10</a>	

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Standards for Mathematical Content	<p>The Standards for Mathematical Content are a balanced combination of procedure and understanding. Expectations that begin with the word “understand” are often especially good opportunities to connect the practices to the content. Students who lack understanding of a topic may rely on procedures too heavily. Without a flexible base from which to work, they may be less likely to consider analogous problems, represent problems coherently, justify conclusions, apply the mathematics to practical situations, use technology mindfully to work with the mathematics, explain the mathematics accurately to other students, step back for an overview, or deviate from a known procedure to find a shortcut. In short, a lack of understanding effectively prevents a student from engaging in the mathematical practices. The content standards which set an expectation of understanding are potential “points of intersection” between the Standards for Mathematical Content and the Standards for Mathematical Practice. These points of intersection are intended to be weighted toward central and generative concepts in the school mathematics curriculum that most merit the time, resources, innovative energies, and focus necessary to qualitatively improve the curriculum, instruction, assessment, professional development, and student achievement in mathematics.</p>	DEEPEN your understanding of the PA Core Standards shifts in mathematics.	This course is intended to deepen your understanding of the PA Core Standards shifts in mathematics. It is designed to stimulate thinking around designing and delivering instruction matched to the Standards and how this may change your classroom practice. The content describes how the Standards differ from previous Standards and thoroughly explains the Shifts of focus, coherence and rigor.	<a href="https://itunes.apple.com/us/course/ccss-for-teachers-math-shifts/id679843407">https://itunes.apple.com/us/course/ccss-for-teachers-math-shifts/id679843407</a>	

Module 1: Place Value, Rounding, Fluency with Addition and Subtraction Algorithms of Whole Numbers

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<b>Module 1: Place Value, Rounding, Fluency with Addition and Subtraction Algorithms of Whole Numbers</b>	<p>In grade 4, instructional time should focus on four critical areas:</p> <ol style="list-style-type: none"> <li>1 developing understanding and fluency with multi-digit multiplication including familiarity with patterns, factors and multiples, and developing understanding of dividing to find quotients involving multi-digit dividends.</li> <li>2 Developing an understanding of fraction/decimal equivalence, addition and subtraction of fractions with like denominators, and multiplication of fractions by whole numbers.</li> <li>3 Understanding that geometric figures can be analyzed and classified on their properties, such as having parallel sides, perpendicular sides, particular angle measures, and symmetry.</li> <li>4 Solving problems involving length, weight, liquid, mass, volume, time, area, and perimeter.</li> </ol> <p>Module 1 begins with a study of large numbers. Students are familiar with big units. For example, movies take about a gigabyte (1,000,000,000 bytes) to store on a computer while songs take about a megabyte (1,000,000 bytes). To understand these big numbers, the students rely upon previous mastery of rounding and the addition and subtraction algorithms. In a sense, the algorithms have come full circle: In Grades 2 and 3 the algorithms were the abstract idea students were trying to learn, but by Grade 4 the algorithms have become the concrete knowledge students use to understand new ideas.</p> <p><b>FOCUS STANDARDS</b>  <a href="#">CC.2.1.4.B.1</a> - Apply place value concepts to show an understanding of multi-digit whole numbers.  <a href="#">CC.2.1.4.B.2</a> - Use place value understanding and properties of operations to perform multi-digit arithmetic.</p> <p><b>IMPORTANT STANDARDS</b>  <a href="#">CC.2.2.4.A.1</a> - Represent and solve problems involving the four operations.</p>				
	<p><b>Standards for Mathematical Practice</b>                      MP# 1. Make sense of problems and persevere in solving them                      MP# 2. Reason abstractly and quantitatively                      MP# 4. Model with mathematics                      MP# 5. Use appropriate tools strategically                      MP# 6. Attend to precision                      MP# 7. Look for and make use of structure (Deductive Reasoning)</p> <p>Mathematical Practices resource page on SAS</p>				
Understanding Multi-Digit Whole Numbers	In this lesson, you will understand place value in multi-digit whole numbers.	<b>WATCH</b> "Understand Relationships Between Digits and Their Place Value."		<a href="https://learnzillion.com/lessons/516-understand-relationships-between-digits-and-their-place-value">https://learnzillion.com/lessons/516-understand-relationships-between-digits-and-their-place-value</a>	
		<b>PRACTICE</b> applying the understanding that a digit in one place represents ten times what it represents to the right.	Explain your thinking in writing on the Explain Everything app.	<a href="https://www.illustrativemathematics.org/content-standards/4/NBT/A/1/tasks/1809">https://www.illustrativemathematics.org/content-standards/4/NBT/A/1/tasks/1809</a>	Threatened and Endangered task
				<a href="https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8">https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8</a>	<a href="https://play.google.com/store/apps/details?id=com.explaineverything.explaineverything&amp;hl=en">https://play.google.com/store/apps/details?id=com.explaineverything.explaineverything&amp;hl=en</a>

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		<b>PRACTICE</b> applying the understanding that a digit in one place represents ten times what it represents to the right.	Explain your thinking in writing on the Explain Everything app.	<a href="https://www.illustrativemathematics.org/content-standards/4/NBT/A/1/tasks/1808">https://www.illustrativemathematics.org/content-standards/4/NBT/A/1/tasks/1808</a>	Thousands and Millions of Fourth Graders task
				<a href="https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8">https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8</a>	<a href="https://play.google.com/store/apps/details?id=com.explaineverything.explaineverything&amp;hl=en">https://play.google.com/store/apps/details?id=com.explaineverything.explaineverything&amp;hl=en</a>
		<b>PRACTICE</b> converting between place values.		<a href="http://mrmussbaum.com/grade_4_standards/converting/">http://mrmussbaum.com/grade_4_standards/converting/</a>	
Representing Whole Numbers	In this lesson, you will read and write whole numbers in standard form, expanded form, and word form through 1,000,000.	LEARN how to write numbers in standard form.	Here's a BIG number that needs to be expressed in standard form. Can you do this example with us? I bet you can!	<a href="https://www.khanacademy.org/math/cc-fourth-grade-math/cc-5th-place-value-rounding-topi/cc-4th-place-value/v/place-value-2">https://www.khanacademy.org/math/cc-fourth-grade-math/cc-5th-place-value-rounding-topi/cc-4th-place-value/v/place-value-2</a>	
		REPRESENT numbers in standard form.		<a href="https://braingenie.ck12.org/skills/102528">https://braingenie.ck12.org/skills/102528</a>	
		LEARN how to write a number in expanded form.		<a href="https://www.khanacademy.org/math/cc-fourth-grade-math/cc-5th-place-value-rounding-topi/cc-4th-place-value/v/place-value-3">https://www.khanacademy.org/math/cc-fourth-grade-math/cc-5th-place-value-rounding-topi/cc-4th-place-value/v/place-value-3</a>	
		REPRESENT numbers in expanded form.		<a href="https://braingenie.ck12.org/skills/102530">https://braingenie.ck12.org/skills/102530</a>	
Comparing Multi-Digit Numbers	In this lesson, you will compare two multi-digit numbers through 1,000,000 based on meanings of the digits in each place.	LEARN how to compare two multi-digit numbers.	Which number is bigger? Which number is smaller? Are they equal? Use your knowledge of place value to find the answer.	<a href="https://www.khanacademy.org/math/cc-fourth-grade-math/cc-5th-place-value-rounding-topi/cc-4th-place-value/v/comparing-whole-number-place-values">https://www.khanacademy.org/math/cc-fourth-grade-math/cc-5th-place-value-rounding-topi/cc-4th-place-value/v/comparing-whole-number-place-values</a>	
		COMPARE two multi-digit numbers.		<a href="https://www.ixl.com/math/grade-4/compare-numbers-up-to-billions">https://www.ixl.com/math/grade-4/compare-numbers-up-to-billions</a>	
Rounding Multi-Digit Numbers	In this lesson, you will round multi-digit whole numbers (through 1,000,000) to any place.	<b>WATCH</b> a video on rounding multi-digit whole numbers on a number line.		<a href="https://www.khanacademy.org/math/cc-fourth-grade-math/cc-5th-place-value-rounding-topi/cc-4th-rounding/v/rounding-whole-numbers-1">https://www.khanacademy.org/math/cc-fourth-grade-math/cc-5th-place-value-rounding-topi/cc-4th-rounding/v/rounding-whole-numbers-1</a>	
		<b>PRACTICE</b> rounding multi-digit whole numbers through 1,000,000 to any place. (Round to the hundreds place; in-app purchase available for larger numbers.)		<a href="https://itunes.apple.com/us/app/rounding/id572102136?mt=8">https://itunes.apple.com/us/app/rounding/id572102136?mt=8</a>	<a href="http://www.abcya.com/rounding_numbers.htm">http://www.abcya.com/rounding_numbers.htm</a>

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		<b>PRACTICE</b> rounding multi-digit whole numbers through 1,000,000 to any place.		<a href="https://www.khanacademy.org/math/cc-fourth-grade-math/cc-5th-place-value-rounding-topi/cc-4th-rounding/e/rounding_whole_numbers">https://www.khanacademy.org/math/cc-fourth-grade-math/cc-5th-place-value-rounding-topi/cc-4th-rounding/e/rounding_whole_numbers</a>	
Multi-Digit Arithmetic	In this lesson, you will add and subtract multi-digit whole numbers. (Limit sums and differences up to and including 1,000,000.)	<b>LEARN</b> about using partial sums to add multi-digit whole numbers		<a href="https://learnzillion.com/lessons/3121-add-using-partial-sums">https://learnzillion.com/lessons/3121-add-using-partial-sums</a>	
		<b>LEARN</b> about the standard algorithm to add multi-digit whole numbers.		<a href="https://learnzillion.com/lessons/3122">https://learnzillion.com/lessons/3122</a>	
		<b>PRACTICE</b> adding multi-digit whole numbers.	Choose addition.	<a href="https://itunes.apple.com/us/app/4th-grade-splash-math-worksheets/id492885924?mt=8">https://itunes.apple.com/us/app/4th-grade-splash-math-worksheets/id492885924?mt=8</a>	<a href="https://www.splashmath.com/math-skills/fourth-grade">https://www.splashmath.com/math-skills/fourth-grade</a>
		<b>PRACTICE</b> finding the missing addend in a multi-digit addition problem.		<a href="http://mrmussbaum.com/admissing/">http://mrmussbaum.com/admissing/</a>	
		<b>APPLY</b> your knowledge to work problems.		<a href="https://www.ixl.com/math/grade-4/add-numbers-up-to-millions-word-problems">https://www.ixl.com/math/grade-4/add-numbers-up-to-millions-word-problems</a>	
		<b>WATCH</b> the video on solving subtraction problems using a number line.		<a href="https://learnzillion.com/lessons/1583-solve-subtraction-problems-using-a-number-line">https://learnzillion.com/lessons/1583-solve-subtraction-problems-using-a-number-line</a>	
		<b>LEARN</b> about the standard algorithm to subtract multi-digit whole numbers.		<a href="https://learnzillion.com/lessons/3160-subtract-using-the-standard-subtraction-algorithm">https://learnzillion.com/lessons/3160-subtract-using-the-standard-subtraction-algorithm</a>	
		<b>PRACTICE</b> subtracting multi-digit whole numbers.	Choose subtraction.	<a href="https://itunes.apple.com/us/app/4th-grade-splash-math-worksheets/id492885924?mt=8">https://itunes.apple.com/us/app/4th-grade-splash-math-worksheets/id492885924?mt=8</a>	<a href="https://www.splashmath.com/math-skills/fourth-grade">https://www.splashmath.com/math-skills/fourth-grade</a>
		<b>PRACTICE</b> subtracting numbers with five and six-digits.		<a href="http://mrmussbaum.com/sub56/">http://mrmussbaum.com/sub56/</a>	
		<b>EXTEND</b> your understanding of subtraction.		<a href="https://www.illustrativemathematics.org/content-standards/4/NBT/B/tasks/1189">https://www.illustrativemathematics.org/content-standards/4/NBT/B/tasks/1189</a>	To regroup or not to regroup task from illustrativemathematics.org
				<a href="https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8">https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8</a>	<a href="https://play.google.com/store/apps/details?id=com.explaineverything.explaineverything&amp;hl=en">https://play.google.com/store/apps/details?id=com.explaineverything.explaineverything&amp;hl=en</a>
Multi-Digit Arithmetic with Estimation	In this lesson, you will estimate the answer to addition and subtraction using whole numbers through six digits.	<b>PRACTICE</b> using estimation to find sums and differences.		<a href="http://mrmussbaum.com/estimation-valley-golf-ipad.html">http://mrmussbaum.com/estimation-valley-golf-ipad.html</a>	

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Extending Your Learning	In this lesson, you will demonstrate application of skills presented throughout this module.	<b>APPLY CONCEPTS</b> to <b>CREATE</b> and <b>DESIGN</b> your own lesson using "Educreations" involving place value, multi-digit addition and subtraction, rounding and estimation.		<a href="https://itunes.apple.com/us/app/educreations-interactive-whiteboard/id478617061?mt=8">https://itunes.apple.com/us/app/educreations-interactive-whiteboard/id478617061?mt=8</a>	<a href="https://play.google.com/store/apps/details?id=com.explaineverything.explaineverything&amp;hl=en">https://play.google.com/store/apps/details?id=com.explaineverything.explaineverything&amp;hl=en</a>

Module 2: Unit Conversions: Addition and Subtraction of Length, Weight, Liquid Volume, Area, and Perimeter; Intervals of Time

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<b>Module 2: Unit Conversions: Addition and Subtraction of Length, Weight, Liquid Volume, Area, and Perimeter; Intervals of Time</b>	<p>This module focuses on what it means to measure length, weight, liquid volume, area, perimeter, and intervals of time; and the use of standard tools to make these measurements. It also includes the relationships of different units within a system (customary and metric) and the relative sizes of measurement units within one system of units including in., ft., yd., mi. km, m, cm; kg, g; lb., oz. l, ml, hr., min., sec, gal., qt., pt., c., and oz. The application of this knowledge is used to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals. It is further explored to use the area and perimeter formulas for rectangles in real world and mathematical problems.</p> <p><b>Focus Standards for Module 2</b>  <a href="#">CC.2.4.4.A.1</a> - Solve problems involving measurement and conversions from a larger unit to a smaller unit.</p> <p><b>Important Standards for Module 2</b>  <a href="#">CC.2.1.4.B.2</a> - Use place value understanding and properties of operations to perform multi-digit arithmetic.  <a href="#">CC.2.2.4.A.1</a> - Represent and solve problems involving the four operations.</p>				
	<p><b>Standards for Mathematical Practice</b>                      MP# 1. Make sense of problems and persevere in solving them                      MP# 2. Reason abstractly and quantitatively                      MP# 4. Model with mathematics                      MP# 5. Use appropriate tools strategically                      MP# 6. Attend to precision                      MP# 7. Look for and make use of structure (Deductive Reasoning)                      MP# 8. Look for and express regularity in repeated reasoning</p> <p>Mathematical Practices resource page on SAS</p>				
		Access Module 2		<a href="http://www.pdesas.org/module/cm/Cmap/View/16857">http://www.pdesas.org/module/cm/Cmap/View/16857</a>	
<b>Systems of Measurement</b>	In this lesson, you will explore relative sizes of measurement units within one system; including standard units (in., ft., yd., mi, oz., lb.; and c., pt., qt., gal.), metric units (cm, m, km, g, kg, and ml, l), and time (sec., min., hr., day, wk., mo., and yr.).	<b>EXPLORE</b> relative sizes of measurement units through watching a series of videos.		<a href="https://www.khanacademy.org/math/cc-fourth-grade-math/cc-4th-measurement-topic/cc-4th-metric-us-customary">https://www.khanacademy.org/math/cc-fourth-grade-math/cc-4th-measurement-topic/cc-4th-metric-us-customary</a>	
<b>Comparing Units of Measurement</b>	In this lesson, you will express measurements in a larger unit in terms of a smaller unit. (A table of equivalencies will be provided.)	<b>LEARN</b> the relationship between cups, pints, quarts, and gallons by watching a video and listening to a song.		<a href="http://www.youtube.com/watch?v=E4UC_StFhAk&amp;feature=youtu.be">http://www.youtube.com/watch?v=E4UC_StFhAk&amp;feature=youtu.be</a>	
		<b>CREATE</b> a capacity creature to demonstrate the relationships between cups, pints, quarts, and gallons.	Print and cut out the templates and construct your capacity creature.	<a href="http://ambmathmap.weebly.com/uploads/1/4/5/0/14506594/capacitycreatureactivityplan.pdf">http://ambmathmap.weebly.com/uploads/1/4/5/0/14506594/capacitycreatureactivityplan.pdf</a>	
		<b>DESCRIBE</b> how your capacity creature will help you remember how the units of measure are related.	Take a picture of the creature, import into the Explain Everything app, and write a one paragraph story about your creature that will help you remember how the units of measure are related.	<a href="https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8">https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8</a>	<a href="https://play.google.com/store/apps/details?id=com.explaineverything.explaineverything&amp;hl=en">https://play.google.com/store/apps/details?id=com.explaineverything.explaineverything&amp;hl=en</a>
		<b>SOLVE</b> a word problem involving length measurement conversions.	<b>DEMONSTRATE</b> your thinking through calculation and an explanation within the Explain Everything app.	<a href="https://www.illustrativemathematics.org/content-standards/4/MD/A/1/tasks/1508">https://www.illustrativemathematics.org/content-standards/4/MD/A/1/tasks/1508</a>	Who is the tallest? task
				<a href="https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8">https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8</a>	<a href="https://play.google.com/store/apps/details?id=com.explaineverything.explaineverything&amp;hl=en">https://play.google.com/store/apps/details?id=com.explaineverything.explaineverything&amp;hl=en</a>

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<b>Mathematical Operations</b>	In this lesson, you will use the four operations to solve word problems involving distances, intervals of time (such as elapsed time), liquid volumes, masses of objects, (including problems involving simple fractions and decimals); and problems that require expressing measurements given in a larger unit in terms of a smaller unit.	<b>LEARN</b> how to and <b>PRACTICE</b> solving word problems involving measurement conversions.	Complete all lessons in the unit including watching videos and engaging in the practice problems.	<a href="https://learnzillion.com/resources/64184-introducing-measurement-conversions">https://learnzillion.com/resources/64184-introducing-measurement-conversions</a>	
<b>Area and Perimeter</b>	In this lesson, you will apply the area and perimeter formulas for rectangles in real-world and mathematical problems (may include finding a missing side length) NOTE: Whole numbers only; formulas will be provided.	<b>REVIEW</b> finding area and perimeter.		<a href="https://learnzillion.com/lesson_plans/3680?card=50709">https://learnzillion.com/lesson_plans/3680?card=50709</a>	
		<b>SOLVE</b> a word problem involving area and perimeter.	Import the task into the Explain Everything app.	<a href="http://www.k-5mathteachingresources.com/support-files/fencing-a-garden.pdf">http://www.k-5mathteachingresources.com/support-files/fencing-a-garden.pdf</a>	
		<b>DRAW</b> and <b>EXPLAIN</b> your solution within the Explain Everything app.		<a href="https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8">https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8</a>	<a href="https://play.google.com/store/apps/details?id=com.explaineverything.explaineverything&amp;hl=en">https://play.google.com/store/apps/details?id=com.explaineverything.explaineverything&amp;hl=en</a>
		<b>SOLVE</b> a word problem involving area and perimeter.	Import the task into the Explain Everything app.	<a href="http://www.k-5mathteachingresources.com/support-files/designing-a-zoo-enclosure.pdf">http://www.k-5mathteachingresources.com/support-files/designing-a-zoo-enclosure.pdf</a>	
		<b>DRAW</b> and <b>EXPLAIN</b> your solution within the Explain Everything app.		<a href="https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8">https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8</a>	<a href="https://play.google.com/store/apps/details?id=com.explaineverything.explaineverything&amp;hl=en">https://play.google.com/store/apps/details?id=com.explaineverything.explaineverything&amp;hl=en</a>
<b>Time</b>	In this lesson, you will identify time (analog and digital) as the amount of minutes before or after the hour as well as calculate elapsed time.	<b>PRACTICE</b> identifying and telling time.		<a href="https://itunes.apple.com/us/app/telling-time-for-kids-learn/id592075414?mt=8">https://itunes.apple.com/us/app/telling-time-for-kids-learn/id592075414?mt=8</a>	<a href="https://play.google.com/store/apps/details?id=com.giggleup.ITTAFree">https://play.google.com/store/apps/details?id=com.giggleup.ITTAFree</a>
				<a href="https://itunes.apple.com/us/app/set-clock-telling-time-learn/id531809006?mt=8">https://itunes.apple.com/us/app/set-clock-telling-time-learn/id531809006?mt=8</a>	<a href="http://www.abcya.com/telling_time.htm">http://www.abcya.com/telling_time.htm</a>
		<b>WATCH</b> the demonstration on how to find the finish time in an elapsed time problem.		<a href="https://www.educreations.com/lesson/view/elapsed-time-find-the-finishing-time/26413758/?s=DeZMmv">https://www.educreations.com/lesson/view/elapsed-time-find-the-finishing-time/26413758/?s=DeZMmv</a>	
		<b>WATCH</b> this demonstration on how to find the elapsed time with a given start and finish time.		<a href="https://www.educreations.com/lesson/view/elapsed-time-start-and-finish-given/26415160/?s=5iu4GG">https://www.educreations.com/lesson/view/elapsed-time-start-and-finish-given/26415160/?s=5iu4GG</a>	
		<b>PRACTICE</b> finding elapsed time.	Set to difficulty 3.	<a href="http://www.shodor.org/interactivate/activities/ElapsedTime/">http://www.shodor.org/interactivate/activities/ElapsedTime/</a>	

Module 3: Multiplication and Division of up to a 4-Digit Number by up to a 1-Digit Number Using Place Value

TOPIC/TITLE	MESSAGE	ASSIGNMENT (CALL TO ACTION)	CONTENT DIRECTIONS	URL	Alternative to IOS or Notes
<b>Module 3: Multiplication and Division of up to a 4-Digit Number by up to a 1-Digit Number Using Place Value</b>	<p>In Module 3, students make use of place value and properties of operations including the distributive property to develop efficient strategies for multiplying and dividing multi-digit whole numbers and explain why the strategies work. Students also solve word problems throughout the module where they select and accurately apply appropriate methods to estimate, mentally calculate, or use the procedures they are learning to compute products and quotients.</p> <p><b>Focus Standards</b>  <a href="#">CC.2.1.4.B.1</a> - Apply place value concepts to show an understanding of multi-digit whole numbers.  <a href="#">CC.2.1.4.B.2</a> - Use place value understanding and properties of operations to perform multi-digit arithmetic.  <a href="#">CC.2.2.4.A.1</a> - Represent and solve problems involving the four operations.</p> <p><b>IMPORTANT STANDARDS</b>  <a href="#">CC.2.2.4.A.2</a> - Develop and/or apply number theory concepts to find factors and multiples.  <a href="#">CC.2.2.4.A.4</a> - Generate and analyze patterns using one rule.</p>				
	<p>Standards for Mathematical Practice                      MP# 1. Make sense of problems and persevere in solving them                      MP# 2. Reason abstractly and quantitatively                      MP# 4. Model with mathematics                      MP# 5. Use appropriate tools strategically                      MP# 6. Attend to precision                      MP# 7. Look for and make use of structure</p> <p>Mathematical Practices resource page on SAS</p>				
		ACCESS Module 3		<a href="http://www.pdesas.org/module/cm/Cmap/View/16858">http://www.pdesas.org/module/cm/Cmap/View/16858</a>	
<b>Comparison</b>	In this lesson, you will interpret a multiplication equation as a comparison and represent verbal statements of multiplicative comparisons as multiplication equations.	<b>LEARN</b> how to represent multiplicative comparison.		<a href="https://learnzillion.com/lessons/2543-see-multiplication-as-a-comparison-using-number-sentences">https://learnzillion.com/lessons/2543-see-multiplication-as-a-comparison-using-number-sentences</a>	
		<b>PRACTICE</b> representing multiplicative comparison with multiplication equations.		<a href="https://www.khanacademy.org/math/cc-fourth-grade-math/cc-4th-mult-div-topic/cc-4th-mult-comparing/e/comparing-with-multiplication">https://www.khanacademy.org/math/cc-fourth-grade-math/cc-4th-mult-div-topic/cc-4th-mult-comparing/e/comparing-with-multiplication</a>	
		<b>PRACTICE</b> completing multiplicative comparison statements.		<a href="http://mrusbaum.com/grade4standards/multiplication_statements">http://mrusbaum.com/grade4standards/multiplication_statements</a>	
<b>Word Problems with Multiplicative Comparison</b>	In this lesson, you will multiply or divide to solve word problems involving multiplicative comparison, distinguishing multiplicative comparison from additive comparison.	<b>LEARN</b> how to solve problems involving multiplicative comparison, distinguishing them from problems involving additive comparison.		<a href="https://www.khanacademy.org/math/cc-fourth-grade-math/cc-4th-mult-div-topic/cc-4th-mult-comparing/v/comparisons-multiplication-addition">https://www.khanacademy.org/math/cc-fourth-grade-math/cc-4th-mult-div-topic/cc-4th-mult-comparing/v/comparisons-multiplication-addition</a>	
		<b>LEARN</b> how to use thinking blocks to solve multiplicative comparison problems.		<a href="https://www.youtube.com/watch?v=O8fbBqvZCXY">https://www.youtube.com/watch?v=O8fbBqvZCXY</a>	
		<b>SOLVE</b> multiplicative comparison word problems with thinking blocks.	Choose Compare Quantities - One Step Models	<a href="https://itunes.apple.com/us/app/thinking-blocks-multiplication/id669725575?mt=8">https://itunes.apple.com/us/app/thinking-blocks-multiplication/id669725575?mt=8</a>	<a href="http://www.mathplayground.com/tb_multiplication/thinking_blocks_multiplication_division.html">http://www.mathplayground.com/tb_multiplication/thinking_blocks_multiplication_division.html</a>
		<b>LEARN</b> how to solve more complex word problems involving multiplicative comparison.		<a href="https://www.youtube.com/watch?v=yF0zWOBAm1Q">https://www.youtube.com/watch?v=yF0zWOBAm1Q</a>	
		<b>LEARN</b> how to solve two step multiplicative comparison problems using thinking blocks.		<a href="https://www.youtube.com/watch?v=kc3OXSGDHT0">https://www.youtube.com/watch?v=kc3OXSGDHT0</a>	

TOPIC/TITLE	MESSAGE	ASSIGNMENT (CALL TO ACTION)	CONTENT DIRECTIONS	URL	Alternative to IOS or Notes
		<b>SOLVE</b> 2-step multiplicative comparison word problems with thinking blocks.	Choose Compare Quantities - Two Step Models	<a href="https://itunes.apple.com/us/app/thinking-blocks-multiplication/id669725575?mt=8">https://itunes.apple.com/us/app/thinking-blocks-multiplication/id669725575?mt=8</a>	<a href="http://www.mathplayground.com/tb_multiplication/thinking_blocks_multiplication_division.html">http://www.mathplayground.com/tb_multiplication/thinking_blocks_multiplication_division.html</a>
<b>Multiplying Whole Numbers</b>	In this lesson, you will multiply a whole number of up to four digits by a one-digit whole number and multiply 2 two-digit numbers.	<b>WATCH</b> a video on using the area model to multiply two-digit by two-digit numbers.		<a href="https://learnzillion.com/lessons/1879-use-an-area-model-for-multiplication-of-two-digit-numbers-by-two-digit-numbers">https://learnzillion.com/lessons/1879-use-an-area-model-for-multiplication-of-two-digit-numbers-by-two-digit-numbers</a>	
		<b>LEARN</b> strategies for solving multiplication problems involving properties of operations.		<a href="https://www.khanacademy.org/math/cc-fourth-grade-math/cc-4th-mult-div-topic/cc-4th-multiplication/v/more-ways-to-think-about-multiplying">https://www.khanacademy.org/math/cc-fourth-grade-math/cc-4th-mult-div-topic/cc-4th-multiplication/v/more-ways-to-think-about-multiplying</a>	
		<b>PRACTICE</b> solving multiplication problems using properties of operations.		<a href="https://www.khanacademy.org/math/cc-fourth-grade-math/cc-4th-mult-div-topic/cc-4th-multiplication/e/multiplication-with-place-value-understanding">https://www.khanacademy.org/math/cc-fourth-grade-math/cc-4th-mult-div-topic/cc-4th-multiplication/e/multiplication-with-place-value-understanding</a>	
		<b>LEARN</b> about and solve problems involving multiplication of multi-digit numbers.	Follow the entire sequence of videos and activities.	<a href="https://www.khanacademy.org/math/cc-fourth-grade-math/cc-4th-mult-div-topic/cc-4th-area-models">https://www.khanacademy.org/math/cc-fourth-grade-math/cc-4th-mult-div-topic/cc-4th-area-models</a>	
		<b>ANALYZE</b> another strategy for multiplying whole numbers.	Review the problem. Solve problem 1 and explain your thinking in writing for problem 2 within the Explain Everything app.	<a href="http://www.k-5mathteachingresources.com/support-files/multiplication-strategy-doubling-and-halving.pdf">http://www.k-5mathteachingresources.com/support-files/multiplication-strategy-doubling-and-halving.pdf</a>	
				<a href="https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8">https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8</a>	<a href="https://play.google.com/store/apps/details?id=com.explaineverything.explaineverything&amp;hl=en">https://play.google.com/store/apps/details?id=com.explaineverything.explaineverything&amp;hl=en</a>
		<b>APPLY</b> 2-digit by 2-digit multiplication skills using problems from this worksheet.		<a href="http://www.dadsworksheets.com/v1/Worksheets/Word%20Problems/Multiplication_Word_Problems_Four_V1.html">http://www.dadsworksheets.com/v1/Worksheets/Word%20Problems/Multiplication_Word_Problems_Four_V1.html</a>	
		<b>APPLY</b> strategies learned to solve a multiplication word problem.	Review the problem. Solve the problem including a diagram and explanation within the Explain Everything app.	<a href="https://www.illustrativemathematics.org/content-standards/4/OA/A/3/tasks/876">https://www.illustrativemathematics.org/content-standards/4/OA/A/3/tasks/876</a>	Karl's Garden task
				<a href="https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8">https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8</a>	<a href="https://play.google.com/store/apps/details?id=com.explaineverything.explaineverything&amp;hl=en">https://play.google.com/store/apps/details?id=com.explaineverything.explaineverything&amp;hl=en</a>
<b>Division</b>	In this lesson, you will divide up to four-digit dividends by one-digit divisors with answers written as whole-number quotients and remainders. (Flexible strategies not the algorithm)	<b>LEARN</b> about solving division problems using area models.		<a href="https://www.khanacademy.org/math/cc-fourth-grade-math/cc-4th-mult-div-topic/cc-4th-division/v/area-models-to-visualize-division-using-place-value">https://www.khanacademy.org/math/cc-fourth-grade-math/cc-4th-mult-div-topic/cc-4th-division/v/area-models-to-visualize-division-using-place-value</a>	
		<b>PRACTICE</b> solving division problems using an area model.		<a href="https://www.khanacademy.org/math/cc-fourth-grade-math/cc-4th-mult-div-topic/cc-4th-division/e/multi-digit-division-with-visual-models">https://www.khanacademy.org/math/cc-fourth-grade-math/cc-4th-mult-div-topic/cc-4th-division/e/multi-digit-division-with-visual-models</a>	
		<b>LEARN</b> how to use the partial quotients strategy for division.		<a href="http://everydaymath.uchicago.edu/teaching-topics/computation/div-part-quot/">http://everydaymath.uchicago.edu/teaching-topics/computation/div-part-quot/</a>	

TOPIC/TITLE	MESSAGE	ASSIGNMENT (CALL TO ACTION)	CONTENT DIRECTIONS	URL	Alternative to IOS or Notes
		<b>CALCULATE</b> the answer to one row of problems using the partial quotients strategy. <b>DEMONSTRATE</b> your solution using the Explain Everything app.		<a href="http://www.k-5mathteachingresources.com/support-files/division-strategy-partial-quotients-ver.1.pdf">http://www.k-5mathteachingresources.com/support-files/division-strategy-partial-quotients-ver.1.pdf</a>	
				<a href="https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8">https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8</a>	<a href="https://play.google.com/store/apps/details?id=com.explaineverything&amp;hl=en">https://play.google.com/store/apps/details?id=com.explaineverything&amp;hl=en</a>
		<b>LEARN</b> how to deal with remainders when dividing.		<a href="https://learnzillion.com/lessons/53-interpret-the-remainder-of-a-division-problem">https://learnzillion.com/lessons/53-interpret-the-remainder-of-a-division-problem</a>	
<b>Multi-Step Word Problems</b>	In this lesson, you will solve multi-step word problems posed with whole numbers using the four operations. Your answers will be either whole numbers or have remainders that must be interpreted yielding a final answer that is a whole number. Represent these problems using equations with a symbol or letter standing for the unknown quantity.	<b>SOLVE</b> the division word problems interpreting the remainders correctly.	Follow the directions providing a solution and written explanation within the Explain Everything app.	<a href="https://www.illustrativemathematics.org/content-standards/4/OA/A/3/tasks/1289">https://www.illustrativemathematics.org/content-standards/4/OA/A/3/tasks/1289</a>	Carnival Tickets task
				<a href="https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8">https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8</a>	<a href="https://play.google.com/store/apps/details?id=com.explaineverything&amp;hl=en">https://play.google.com/store/apps/details?id=com.explaineverything&amp;hl=en</a>
		<b>SOLVE</b> multi-step word problems using bar models.	Choose More Than One Operation	<a href="https://itunes.apple.com/us/app/thinking-blocks-multiplication/id669725575?mt=8">https://itunes.apple.com/us/app/thinking-blocks-multiplication/id669725575?mt=8</a>	<a href="http://www.mathplayground.com/tb_multiplication/thinking_blocks_multiplication_division.html">http://www.mathplayground.com/tb_multiplication/thinking_blocks_multiplication_division.html</a>
<b>Estimation</b>	In this lesson, you will estimate the answer to addition, subtraction, and multiplication problems using whole numbers through six digits. When estimating answers for multiplication, it will be no more than 2 digits times 1 digit, excluding powers of 10.	<b>PRACTICE</b> estimating multiplication products.		<a href="http://www.ixl.com/math/grade-4/estimate-products-multiply-by-1-digit-numbers">http://www.ixl.com/math/grade-4/estimate-products-multiply-by-1-digit-numbers</a>	
		<b>PRACTICE</b> these sample problems.	Identify the missing symbol (+, -, ×, ÷, =, <, and >) that makes a number sentence true (single-digit divisor only)	<a href="http://www.ixl.com/math/grade-4/inequalities-with-multiplication">http://www.ixl.com/math/grade-4/inequalities-with-multiplication</a>	

Module 4: Addition and Subtraction of Angle Measurement of Planar Figures

TOPIC/TITLE	MESSAGE	ASSIGNMENT (CALL TO ACTION)	CONTENT DIRECTIONS	URL	Alternatives to IOS or Notes
<b>Module 4: Addition and Subtraction of Angle Measurement of Planar Figures</b>	<p>Module 4 focuses as much on solving unknown angle problems using letters and equations as it does on building, drawing, and analyzing two-dimensional shapes in geometry. Students have already used letters and equations to solve word problems in earlier grades. They continue to do so in Grade 4, and now they also learn to solve unknown angle problems: work that challenges students to build and solve equations to find unknown angle measures. First, students learn the definition of degree and learn how to measure angles in degrees using a protractor. From the definition of degree and the fact that angle measures are additive, the following rudimentary facts about angles naturally follow:</p> <ol style="list-style-type: none"> <li>1. Vertical angles are equal.</li> <li>2. The sum of angle measurements on a line is 180 degrees.</li> <li>3. The sum of angle measurements around a point is 360 degrees.</li> </ol> <p><b>Focus Standards in Module 4</b>  <a href="#">CC.2.3.4.A.1</a> - Draw lines and angles and identify these in two-dimensional figures.  <a href="#">CC.2.3.4.A.2</a> - Classify two-dimensional figures by properties of their lines and angles.  <a href="#">CC.2.3.4.A.3</a> - Recognize symmetric shapes and draw lines of symmetry.  <a href="#">CC.2.4.4.A.1</a> - Solve problems involving measurement and conversions from a larger unit to a smaller unit.</p>				
	<p><b>Standards for Mathematical Practice</b>                      MP# 5. Use appropriate tools strategically.                      MP# 6. Attend to precision.                      MP# 7. Look for and make use of structure.                      Mathematical Practices resource page on SAS</p>				
		ACCESS Module 4: Addition and Subtraction of Angle Measurement of Planar Figures		<a href="http://www.pdesas.org/module/cm/Cmap/View/16862">http://www.pdesas.org/module/cm/Cmap/View/16862</a>	
<b>Drawing Geometric Lines and Angles</b>	In this lesson, you will draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. You will identify these in two-dimensional figures.	<b>WATCH</b> and <b>LEARN</b> the basic principles of a line, a line segment, and a ray.		<a href="https://www.khanacademy.org/math/cc-fourth-grade-math/cc-4th-geometry-topic/cc-4th-lines-rays-angles/v/lines-line-segments-and-rays">https://www.khanacademy.org/math/cc-fourth-grade-math/cc-4th-geometry-topic/cc-4th-lines-rays-angles/v/lines-line-segments-and-rays</a>	
		<b>PRACTICE</b> recognizing line segments, lines, and rays.		<a href="https://www.khanacademy.org/math/cc-fourth-grade-math/cc-4th-geometry-topic/cc-4th-lines-rays-angles/e/recognizing_rays_lines_and_line_segments">https://www.khanacademy.org/math/cc-fourth-grade-math/cc-4th-geometry-topic/cc-4th-lines-rays-angles/e/recognizing_rays_lines_and_line_segments</a>	
		<b>LEARN</b> how to draw parallel and perpendicular lines.		<a href="https://www.khanacademy.org/math/cc-fourth-grade-math/cc-4th-geometry-topic/cc-4th-lines-rays-angles/v/drawing-lines-exercise-example">https://www.khanacademy.org/math/cc-fourth-grade-math/cc-4th-geometry-topic/cc-4th-lines-rays-angles/v/drawing-lines-exercise-example</a>	
		<b>PRACTICE</b> drawing parallel and perpendicular lines.		<a href="https://www.khanacademy.org/math/cc-fourth-grade-math/cc-4th-geometry-topic/cc-4th-lines-rays-angles/e/drawing-lines">https://www.khanacademy.org/math/cc-fourth-grade-math/cc-4th-geometry-topic/cc-4th-lines-rays-angles/e/drawing-lines</a>	
		<b>IDENTIFY</b> parallel and perpendicular lines in the real world.	Take pictures of parallel and perpendicular items around you. Label them as parallel or perpendicular using the Skitch app.	<a href="https://itunes.apple.com/us/app/skitch-snap-mark-up-send/id490505997?mt=8">https://itunes.apple.com/us/app/skitch-snap-mark-up-send/id490505997?mt=8</a>	<a href="https://play.google.com/store/apps/details?id=com.evernote.webar&amp;hl=en">https://play.google.com/store/apps/details?id=com.evernote.webar&amp;hl=en</a>
		<b>APPLY</b> your knowledge of line segments and angles to analysis of the alphabet.	Answer question a and b only within the Explain Everything app. Point out the least number of segments and arcs needed to create each letter as your draw them.	<a href="https://www.illustrativemathematics.org/content-standards/4/G/A/1/tasks/1263">https://www.illustrativemathematics.org/content-standards/4/G/A/1/tasks/1263</a>	The Geometry of Letters task

TOPIC/TITLE	MESSAGE	ASSIGNMENT (CALL TO ACTION)	CONTENT DIRECTIONS	URL	Alternatives to IOS or Notes
				<a href="https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8">https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8</a>	<a href="https://play.google.com/store/apps/details?id=com.explaineverything.explaineverything&amp;hl=en">https://play.google.com/store/apps/details?id=com.explaineverything.explaineverything&amp;hl=en</a>
		<b>DETERMINE</b> which letters of the alphabet have parallel or perpendicular lines.	Review the directions and complete the activity within the Geoboard app in the next post.	<a href="http://www.k-5mathteachingresources.com/support-files/alphabet-lines.pdf">http://www.k-5mathteachingresources.com/support-files/alphabet-lines.pdf</a>	
		<b>CONSTRUCT</b> letters with parallel and perpendicular lines.	Complete question 1 only from the previous post using the Geoboard App taking a screenshot of each letter.	<a href="https://itunes.apple.com/us/app/geoboard-by-math-learning/id519896952?mt=8">https://itunes.apple.com/us/app/geoboard-by-math-learning/id519896952?mt=8</a>	<a href="https://www.mathlearningcenter.org/web-apps/geoboard/">https://www.mathlearningcenter.org/web-apps/geoboard/</a>
		<b>LISTEN</b> to a song explaining the three types of angles (acute, obtuse, right).		<a href="https://www.youtube.com/watch?v=vB9Fax-9nAs">https://www.youtube.com/watch?v=vB9Fax-9nAs</a>	
<b>Measuring Angles</b>	In this lesson, you will measure angles in whole-number degrees using a protractor. With the aid of a protractor, you will sketch angles of specified measure.	<b>LEARN</b> how to measure angles using a protractor.		<a href="https://www.khanacademy.org/math/cc-fourth-grade-math/cc-4th-geometry-topic/cc-4th-angles/v/using-a-protractor">https://www.khanacademy.org/math/cc-fourth-grade-math/cc-4th-geometry-topic/cc-4th-angles/v/using-a-protractor</a>	
		<b>PRACTICE</b> using a protractor to measure given angles.		<a href="http://mrnussbaum.com/protractor/">http://mrnussbaum.com/protractor/</a>	
		<b>IDENTIFY</b> measurements of angles by their degrees.		<a href="https://itunes.apple.com/us/app/angle-asteroids-sylvanplay/id813902552?mt=8">https://itunes.apple.com/us/app/angle-asteroids-sylvanplay/id813902552?mt=8</a>	<a href="https://play.google.com/store/apps/details?id=air.com.sylvanplay.googleangleasteroids&amp;hl=en">https://play.google.com/store/apps/details?id=air.com.sylvanplay.googleangleasteroids&amp;hl=en</a>
		<b>LEARN</b> how to draw angles.	Watch from 0:00 - 0:40.	<a href="https://www.youtube.com/watch?v=3RcNsg7-hXs">https://www.youtube.com/watch?v=3RcNsg7-hXs</a>	
		<b>CONSTRUCT</b> angles of specified degrees.	Import a screenshot of the worksheet into the Explain Everything app and construct the angles.	<a href="http://www.math-aids.com/cgi/pdf_viewer_4.cgi?script_name=angles_drawing.pl&amp;language=0&amp;memo=&amp;answer=1&amp;x=123&amp;y=11">http://www.math-aids.com/cgi/pdf_viewer_4.cgi?script_name=angles_drawing.pl&amp;language=0&amp;memo=&amp;answer=1&amp;x=123&amp;y=11</a>	
<b>Finding Unknown Angles</b>	In this lesson, you will, solve addition and subtraction problems to find unknown angles on a diagram in real-world and mathematical problems. Angles must be adjacent and non-overlapping.	<b>LEARN</b> about finding missing angles in diagrams.		<a href="https://www.khanacademy.org/math/cc-fourth-grade-math/cc-4th-geometry-topic/cc-4th-interpreting-angles/v/decomposing-angles">https://www.khanacademy.org/math/cc-fourth-grade-math/cc-4th-geometry-topic/cc-4th-interpreting-angles/v/decomposing-angles</a>	
		<b>PRACTICE</b> finding the missing angles in diagrams.		<a href="https://www.khanacademy.org/math/cc-fourth-grade-math/cc-4th-geometry-topic/cc-4th-interpreting-angles/e/decomposing-angles">https://www.khanacademy.org/math/cc-fourth-grade-math/cc-4th-geometry-topic/cc-4th-interpreting-angles/e/decomposing-angles</a>	
		<b>PRACTICE</b> drawing angles of specified degrees.	Review the directions and complete the activity using the app in the next post.	<a href="https://www.illustrativemathematics.org/content-standards/4/G/A/1/tasks/909">https://www.illustrativemathematics.org/content-standards/4/G/A/1/tasks/909</a>	Measuring Angles task
		<b>CALCULATE</b> missing angles within the drawing.	Use the Geogebra App to complete the activity from the previous post.	<a href="https://itunes.apple.com/us/app/geogebra/id687678494?mt=8">https://itunes.apple.com/us/app/geogebra/id687678494?mt=8</a>	<a href="https://www.geogebra.org">https://www.geogebra.org</a> Download the applet
<b>Classifying Two-Dimensional Figures</b>	In this lesson, you will, classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize right triangles as a category and identify right triangles.	<b>RECOGNIZE and DEFINE</b> attributes of polygons.	Import a screenshot of the activity into the Explain Everything app and answer the questions within the document.	<a href="https://www.illustrativemathematics.org/content-standards/4/G/A/2/tasks/1275">https://www.illustrativemathematics.org/content-standards/4/G/A/2/tasks/1275</a>	Defining Attributes of Rectangles and Parallelograms task
				<a href="https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8">https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8</a>	<a href="https://play.google.com/store/apps/details?id=com.explaineverything.explaineverything&amp;hl=en">https://play.google.com/store/apps/details?id=com.explaineverything.explaineverything&amp;hl=en</a>

TOPIC/TITLE	MESSAGE	ASSIGNMENT (CALL TO ACTION)	CONTENT DIRECTIONS	URL	Alternatives to IOS or Notes
		<b>CONSTRUCT</b> examples and non-examples of quadrilaterals based on given definitions.	Complete the activity within the Explain Everything app drawing the diagrams specified and providing written explanations.	<a href="https://www.illustrativemathematics.org/content-standards/4/G/A/2/tasks/1274">https://www.illustrativemathematics.org/content-standards/4/G/A/2/tasks/1274</a>	What shape am I? task
				<a href="https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8">https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8</a>	<a href="https://play.google.com/store/apps/details?id=com.explaineverything.explaineverything&amp;hl=en">https://play.google.com/store/apps/details?id=com.explaineverything.explaineverything&amp;hl=en</a>
		<b>CONSTRUCT</b> quadrilaterals based on specified attributes.	Review the directions. Complete the activity within the Geoboard app in the next post.	<a href="http://www.k-5mathteachingresources.com/support-files/quadrilateral-criteria.pdf">http://www.k-5mathteachingresources.com/support-files/quadrilateral-criteria.pdf</a>	
			Complete the activity from the previous post in the Geoboard app. Take a screen shot of each quadrilateral and import into the PowerPoint app in the next post.	<a href="https://itunes.apple.com/us/app/geoboard-by-math-learning/id519896952?mt=8">https://itunes.apple.com/us/app/geoboard-by-math-learning/id519896952?mt=8</a>	<a href="https://www.mathlearningcenter.org/web-apps/geoboard/">https://www.mathlearningcenter.org/web-apps/geoboard/</a>
		<b>IDENTIFY</b> each quadrilateral based on the specified attributes.	Create a slide show of the quadrilaterals identifying each shape.	<a href="https://itunes.apple.com/us/app/microsoft-powerpoint/id586449534?mt=8">https://itunes.apple.com/us/app/microsoft-powerpoint/id586449534?mt=8</a>	<a href="https://play.google.com/store/apps/details?id=com.microsoft.office.powerpoint&amp;hl=en">https://play.google.com/store/apps/details?id=com.microsoft.office.powerpoint&amp;hl=en</a>
		<b>CONSTRUCT</b> right triangles.	Review the directions. Complete the activity within the Geoboard app in the next post.	<a href="http://www.k-5mathteachingresources.com/support-files/right-triangles-on-the-geoboard.pdf">http://www.k-5mathteachingresources.com/support-files/right-triangles-on-the-geoboard.pdf</a>	
			Complete the activity from the previous post in the Geoboard app. Take a screen shot of each right triangle and import into the PowerPoint app in the next post.	<a href="https://itunes.apple.com/us/app/geoboard-by-math-learning/id519896952?mt=8">https://itunes.apple.com/us/app/geoboard-by-math-learning/id519896952?mt=8</a>	<a href="https://www.mathlearningcenter.org/web-apps/geoboard/">https://www.mathlearningcenter.org/web-apps/geoboard/</a>
		<b>EXPLAIN</b> the differences between different right triangles.	Create a slide show of the right triangles and answers to the final questions.	<a href="https://itunes.apple.com/us/app/microsoft-powerpoint/id586449534?mt=8">https://itunes.apple.com/us/app/microsoft-powerpoint/id586449534?mt=8</a>	<a href="https://play.google.com/store/apps/details?id=com.microsoft.office.powerpoint&amp;hl=en">https://play.google.com/store/apps/details?id=com.microsoft.office.powerpoint&amp;hl=en</a>
<b>Lines of Symmetry</b>	In this lesson, you will recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into mirroring parts. Identify line-symmetric figures and draw lines of symmetry (up to two lines of symmetry).	<b>LEARN</b> the basic definition of a line of symmetry.		<a href="http://www.mathisfun.com/geometry/symmetry-reflection.html">http://www.mathisfun.com/geometry/symmetry-reflection.html</a>	
		<b>PRACTICE</b> creating a symmetrical figure.	Use a rubber band to split the geoboard in half vertically. Use a rubber band on each side of the vertical line to create a symmetrical design.	<a href="https://itunes.apple.com/us/app/geoboard-by-math-learning/id519896952?mt=8">https://itunes.apple.com/us/app/geoboard-by-math-learning/id519896952?mt=8</a>	<a href="https://www.mathlearningcenter.org/web-apps/geoboard/">https://www.mathlearningcenter.org/web-apps/geoboard/</a>
		<b>PRACTICE</b> finding the lines of symmetry.	Import a screenshot of each task into the Explain Everything app and draw in the lines of symmetry.	<a href="https://www.illustrativemathematics.org/content-standards/4/G/A/3/tasks/676">https://www.illustrativemathematics.org/content-standards/4/G/A/3/tasks/676</a>	Finding Lines of Symmetry task
				<a href="https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8">https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8</a>	<a href="https://play.google.com/store/apps/details?id=com.explaineverything.explaineverything&amp;hl=en">https://play.google.com/store/apps/details?id=com.explaineverything.explaineverything&amp;hl=en</a>
				<a href="https://www.illustrativemathematics.org/content-standards/4/G/A/3/tasks/1059">https://www.illustrativemathematics.org/content-standards/4/G/A/3/tasks/1059</a>	Lines of Symmetry for quadrilaterals task
				<a href="https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8">https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8</a>	<a href="https://play.google.com/store/apps/details?id=com.explaineverything.explaineverything&amp;hl=en">https://play.google.com/store/apps/details?id=com.explaineverything.explaineverything&amp;hl=en</a>

TOPIC/TITLE	MESSAGE	ASSIGNMENT (CALL TO ACTION)	CONTENT DIRECTIONS	URL	Alternatives to IOS or Notes
Extending Your Learning	In this lesson, you will demonstrate application of skills presented throughout Module 4.	<b>CONSTRUCT</b> geometric objects to demonstrate knowledge of geometric lines and angles, two-dimensional figures, and unknown angles. <b>APPLY</b> concepts by providing evidence of learning using iMovie or Keynote.		Extend your learning pdf	

Module 5: Order and Operations with Fractions

TOPIC/TITLE	MESSAGE	ASSIGNMENT (CALL TO ACTION)	CONTENT DIRECTIONS	URL	Alternatives to IOS or Notes
<b>Module 5: Order and Operations with Fractions</b>	<p>This module explores the understanding of a fraction <math>a/b</math> as a multiple of <math>1/b</math>. (for example: model the product of <math>\frac{3}{4}</math> as <math>3 \times \frac{1}{4}</math>). It will teach representations of simple equivalent fractions, understanding a multiple of <math>a/b</math> as a multiples of <math>1/b</math>, and will use this understanding to multiply a fraction by a whole number, including solving word problems involving multiplication of a fraction by a whole number, e.g., by using visual fraction models and equations to represent the problem.</p> <p><b>Focus Standards in Module 5</b>  <a href="#">CC.2.1.4.C.1</a> - Extend the understanding of fractions to show equivalence and ordering.  <a href="#">CC.2.1.4.C.2</a> - Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.</p> <p><b>Important Standards in Module 5</b>  <a href="#">CC.2.2.4.A.1</a> - Represent and solve problems involving the four operations.  <a href="#">CC.2.4.4.A.2</a> - Translate information from one type of data display to another.  <a href="#">CC.2.4.4.A.4</a> - Represent and interpret data involving fractions using information provided in a line plot.</p>				
	<p>Standards for Mathematical Practice MP# 1. Make sense of problems and persevere in solving them.                      MP# 2. Reason abstractly and quantitatively.                      MP# 4. Model with mathematics.                      MP# 5. Use appropriate tools strategically.                      MP# 6. Attend to precision                      MP# 7. Look for and make use of structure                      Mathematical Practices resource page on SAS</p>				
		ACCESS Module 5: Order and Operations with Fractions.		<a href="http://www.pdesas.org/module/cm/Cmap/View/16863">http://www.pdesas.org/module/cm/Cmap/View/16863</a>	
<b>Decomposing Fractions</b>	In this lesson, you will decompose a fraction or a mixed number into a sum of fractions with the same denominator. The denominators will be limited to 2, 3, 4, 5, 6, 8, 10, 12, and 100. You will record the decomposition by an equation and justify your decompositions (e.g., by using a visual fraction model).	<b>LEARN</b> how to decompose fractions into unit fractions using addition.		<a href="https://learnzillion.com/lesson_plans/1827-5-alexa-s-sand-designs-understand-that-fractions-can-be-decomposed-in-multiple-ways">https://learnzillion.com/lesson_plans/1827-5-alexa-s-sand-designs-understand-that-fractions-can-be-decomposed-in-multiple-ways</a>	
		<b>LEARN</b> how fractions are decomposed into unit fractions through visual representations.		<a href="https://www.youtube.com/watch?v=xo9wL5vgIxA">https://www.youtube.com/watch?v=xo9wL5vgIxA</a>	
		<b>DECOMPOSE</b> fractions into a sum of fractions using visual models.	Use fraction bars to show three different ways to decompose $\frac{7}{8}$ into the sum of fractions with different denominators. Include a model and an equation. Choose another fraction and repeat the process. Take a screenshot and import into Explain Everything.	<a href="https://www.mathlearningcenter.org/web-apps/fractions/">https://www.mathlearningcenter.org/web-apps/fractions/</a>	
		<b>DECOMPOSE</b> fractions into a sum of fractions using visual models.	Demonstrate your thinking for each task within the Explain Everything app.	<a href="http://www.k-5mathteachingresources.com/support-files/pizza-share.pdf">http://www.k-5mathteachingresources.com/support-files/pizza-share.pdf</a>	
				<a href="https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8">https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8</a>	<a href="https://play.google.com/store/apps/details?id=com.explaineverything.explaineverything&amp;hl=en">https://play.google.com/store/apps/details?id=com.explaineverything.explaineverything&amp;hl=en</a>

TOPIC/TITLE	MESSAGE	ASSIGNMENT (CALL TO ACTION)	CONTENT DIRECTIONS	URL	Alternatives to IOS or Notes
<b>Equivalent Fractions</b>	In this lesson, you will recognize and generate equivalent fractions.	<b>DEMONSTRATE</b> an understanding of equivalent fractions.	Import the task into the Explain Everything app and provide a written explanation of why they are equivalent.	<a href="https://www.illustrativemathematics.org/content-standards/4/NF/A/1/tasks/743">https://www.illustrativemathematics.org/content-standards/4/NF/A/1/tasks/743</a>	Explaining Fraction Equivalence with Pictures task
				<a href="https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8">https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8</a>	<a href="https://play.google.com/store/apps/details?id=com.explaineverything.explaineverything&amp;hl=en">https://play.google.com/store/apps/details?id=com.explaineverything.explaineverything&amp;hl=en</a>
		<b>DISCOVER</b> patterns in equivalent fractions.	Use the fraction manipulatives app to find all the different ways to create 1/2. Take a screenshot of the different models of 1/2. Do the same for 1/3, 1/4, and 1/5. Import the screen shots of each set of equivalent fractions into the Explain Everything app and write a final explanation of any patterns you see.	<a href="https://itunes.apple.com/us/app/fraction-manipulatives/id998968073?mt=8">https://itunes.apple.com/us/app/fraction-manipulatives/id998968073?mt=8</a>	<a href="http://www.glencoe.com/sites/common_assets/mathematics/ebook_assets/vmf/VMF-Interface.html">http://www.glencoe.com/sites/common_assets/mathematics/ebook_assets/vmf/VMF-Interface.html</a> - Choose Fraction Circles from drop down under Manipulatives
				<a href="https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8">https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8</a>	<a href="https://play.google.com/store/apps/details?id=com.explaineverything.explaineverything&amp;hl=en">https://play.google.com/store/apps/details?id=com.explaineverything.explaineverything&amp;hl=en</a>
		<b>CONFIRM</b> the patterns you may have seen regarding equivalent fractions.	Go the Slide an Equivalent Fraction section to see if your conjectures about equivalent fractions are true.	<a href="https://itunes.apple.com/us/app/picturing-equivalent-fractions/id891042813?mt=8">https://itunes.apple.com/us/app/picturing-equivalent-fractions/id891042813?mt=8</a>	<a href="http://downloads.bbc.co.uk/bitesize/ks3/maths/activities/numbers/fractions.swf">http://downloads.bbc.co.uk/bitesize/ks3/maths/activities/numbers/fractions.swf</a>
		<b>LEARN</b> how to recognize and generate equivalent fractions.	Watch the videos and complete the practice exercises.	<a href="https://www.khanacademy.org/math/cc-fourth-grade-math/cc-4th-fractions-topic/cc-4th-visualizing-equiv-frac">https://www.khanacademy.org/math/cc-fourth-grade-math/cc-4th-fractions-topic/cc-4th-visualizing-equiv-frac</a>	
		<b>PRACTICE</b> concepts of equivalent fractions through interactive application.		<a href="https://itunes.apple.com/us/app/practising-equivalent-fractions/id896829806?mt=8">https://itunes.apple.com/us/app/practising-equivalent-fractions/id896829806?mt=8</a>	<a href="http://media.abcya.com/games/equivalent_fractions_bingo/flash/equivalent_fractions_bingo.swf">http://media.abcya.com/games/equivalent_fractions_bingo/flash/equivalent_fractions_bingo.swf</a>
<b>Comparing Fractions with Unlike Numerators and Denominators</b>	In this lesson, you will compare two fractions with different numerators and different denominators. Denominators are limited to 2, 3, 4, 5, 6, 8, 10, 12, and 100. You will use the symbols >, =, or < and justify the conclusions.	<b>COMPARE</b> fractions visually.	Watch the series of videos and complete the practice exercises.	<a href="https://www.khanacademy.org/math/cc-fourth-grade-math/cc-4th-fractions-topic/cc-4th-comparing-fractions-visually">https://www.khanacademy.org/math/cc-fourth-grade-math/cc-4th-fractions-topic/cc-4th-comparing-fractions-visually</a>	
		<b>COMPARE</b> fractions using benchmark fractions.	Complete the task within the Explain Everything app.	<a href="https://www.illustrativemathematics.org/content-standards/4/NF/A/2/tasks/812">https://www.illustrativemathematics.org/content-standards/4/NF/A/2/tasks/812</a>	Using Benchmarks to Compare Fractions task
				<a href="https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8">https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8</a>	<a href="https://play.google.com/store/apps/details?id=com.explaineverything.explaineverything&amp;hl=en">https://play.google.com/store/apps/details?id=com.explaineverything.explaineverything&amp;hl=en</a>
		<b>COMPARE</b> fractions to discover which is larger or smaller.	Complete the task within the Explain Everything app.	<a href="http://www.k-5mathteachingresources.com/support-files/birthday-fractions.pdf">http://www.k-5mathteachingresources.com/support-files/birthday-fractions.pdf</a>	
				<a href="https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8">https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8</a>	<a href="https://play.google.com/store/apps/details?id=com.explaineverything.explaineverything&amp;hl=en">https://play.google.com/store/apps/details?id=com.explaineverything.explaineverything&amp;hl=en</a>
		<b>COMPARE</b> fractions to discover which is larger or smaller.		<a href="http://www.professorgarfield.org/KBKids/video/kbs2012.swf">http://www.professorgarfield.org/KBKids/video/kbs2012.swf</a>	
<b>Adding and Subtracting Fractions</b>	In this lesson, you will add and subtract fractions with a common denominator. The denominators will be limited to 2, 3, 4, 5, 6, 8, 10, 12, and 100. Answers do not need to be simplified and no improper fractions will be used as the final answer.	<b>DISCOVER</b> the rules for adding and subtracting fractions with like denominators.	Import the document into the Explain Everything app. Complete pages 1 and 2. Reflect in writing on any patterns you see in adding fractions with like denominators.	<a href="http://www.visualfractions.com/worksheets/add/addworksheets.pdf">http://www.visualfractions.com/worksheets/add/addworksheets.pdf</a>	
				<a href="https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8">https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8</a>	<a href="https://play.google.com/store/apps/details?id=com.explaineverything.explaineverything&amp;hl=en">https://play.google.com/store/apps/details?id=com.explaineverything.explaineverything&amp;hl=en</a>

TOPIC/TITLE	MESSAGE	ASSIGNMENT (CALL TO ACTION)	CONTENT DIRECTIONS	URL	Alternatives to IOS or Notes
		<b>READ</b> and <b>PRACTICE</b> adding and subtracting fractions with common denominators.	Complete sections 1.6 and 1.7 only.	<a href="https://itunes.apple.com/us/book/fractions/id517968787?mt=13">https://itunes.apple.com/us/book/fractions/id517968787?mt=13</a>	
		<b>PRACTICE</b> adding and subtracting fractions with common denominators.	Choose the adding fractions with like denominators option.	<a href="https://itunes.apple.com/us/app/thinking-blocks-fractions/id670767677?mt=8">https://itunes.apple.com/us/app/thinking-blocks-fractions/id670767677?mt=8</a>	<a href="http://www.mathplayground.com/tb_fractions/thinking_blocks_fractions.html">http://www.mathplayground.com/tb_fractions/thinking_blocks_fractions.html</a>
		<b>PRACTICE</b> adding fractions with common denominators.	Choose Level 1a	<a href="https://www.sheppardsoftware.com/mathgames/fractions/FruitShootFractionsAddition.swf">https://www.sheppardsoftware.com/mathgames/fractions/FruitShootFractionsAddition.swf</a>	
		<b>PRACTICE</b> subtracting fractions with common denominators.	Choose Level 1a	<a href="https://www.sheppardsoftware.com/mathgames/fractions/FruitShootFractionsSubtraction.swf">https://www.sheppardsoftware.com/mathgames/fractions/FruitShootFractionsSubtraction.swf</a>	
		<b>PRACTICE</b> adding and subtracting fractions with common denominators.		<a href="http://www.ixl.com/math/grade-5/add-and-subtract-fractions-with-like-denominators-word-problems">http://www.ixl.com/math/grade-5/add-and-subtract-fractions-with-like-denominators-word-problems</a>	
		<b>PRACTICE</b> adding and subtracting fractions with common denominators.		<a href="https://www.khanacademy.org/math/cc-fourth-grade-math/cc-4th-fractions-topic/cc-4th-add-sub-word-problems/e/fraction_word_problems_1">https://www.khanacademy.org/math/cc-fourth-grade-math/cc-4th-fractions-topic/cc-4th-add-sub-word-problems/e/fraction_word_problems_1</a>	
<b>Adding and Subtracting Mixed Numbers</b>	In this lesson, you will add and subtract mixed numbers with a common denominator. Denominators will be limited to 2, 3, 4, 5, 6, 8, 10, 12, and 100. Answers will need no regrouping with subtraction. The fractions do not need to be simplified and no improper fractions will be used as the final answer.	<b>LEARN</b> how to add mixed numbers with common denominators.		<a href="https://learnzillion.com/lessons/1711">https://learnzillion.com/lessons/1711</a>	
		<b>PRACTICE</b> adding mixed numbers with common denominators.		<a href="http://www.visualfractions.com/AddEasy/">http://www.visualfractions.com/AddEasy/</a>	
		<b>PRACTICE</b> adding mixed numbers with common denominators.	Solve the task within the Explain Everything app including a diagram and written explanation.	<a href="https://www.illustrativemathematics.org/content-standards/4/NF/B/3/tasks/874">https://www.illustrativemathematics.org/content-standards/4/NF/B/3/tasks/874</a>	Cynthia's Perfect Punch task
				<a href="https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8">https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8</a>	
		<b>LEARN</b> how to subtract mixed numbers with common denominators.		<a href="https://learnzillion.com/lessons/1712">https://learnzillion.com/lessons/1712</a>	
		<b>PRACTICE</b> subtracting mixed numbers with common denominators.	Solve each task within the Explain Everything app including a diagram and written explanation.	<a href="https://www.illustrativemathematics.org/content-standards/4/NF/B/3/tasks/968">https://www.illustrativemathematics.org/content-standards/4/NF/B/3/tasks/968</a>	Peaches task
				<a href="https://www.illustrativemathematics.org/content-standards/4/NF/B/3/tasks/856">https://www.illustrativemathematics.org/content-standards/4/NF/B/3/tasks/856</a>	Plastic Building Blocks task
				<a href="https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8">https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8</a>	<a href="https://play.google.com/store/apps/details?id=com.explaineverything.explaineverything&amp;hl=en">https://play.google.com/store/apps/details?id=com.explaineverything.explaineverything&amp;hl=en</a>
<b>Multiplying Whole Numbers by a Fraction</b>	In this lesson, you will multiply a whole number by a fraction. The denominators will be limited to 2, 3, 4, 5, 6, 8, 10, 12, and 100. Final answers do not need to be simplified or written as a mixed number.	<b>LEARN</b> how to multiply a whole number by a fraction using models.		<a href="https://learnzillion.com/lessons/126-multiply-fractions-by-whole-numbers-using-models">https://learnzillion.com/lessons/126-multiply-fractions-by-whole-numbers-using-models</a>	
		<b>LEARN</b> how to multiply a whole number by a fraction using number lines.		<a href="https://learnzillion.com/lessons/2938-use-a-number-line-for-multiplication-of-fractions-and-whole-numbers">https://learnzillion.com/lessons/2938-use-a-number-line-for-multiplication-of-fractions-and-whole-numbers</a>	

TOPIC/TITLE	MESSAGE	ASSIGNMENT (CALL TO ACTION)	CONTENT DIRECTIONS	URL	Alternatives to IOS or Notes
		<b>PRACTICE</b> multiplying a whole number by a unit fraction.		<a href="http://www.ixl.com/math/grade-4/multiply-unit-fractions-by-whole-numbers-using-number-lines">http://www.ixl.com/math/grade-4/multiply-unit-fractions-by-whole-numbers-using-number-lines</a>	
				<a href="https://www.khanacademy.org/math/arithmetic/fractions/multiplying_fractions/e/multiplying_fractions_by_integers">https://www.khanacademy.org/math/arithmetic/fractions/multiplying_fractions/e/multiplying_fractions_by_integers</a>	
<b>Solving Word Problems with Fractions and Whole Numbers</b>	In this lesson, you will solve word problems involving multiplication of a whole number by a fraction. Denominators are limited to 2,3,4,5,6,8,10,12, and 100.	<b>LEARN</b> how to use Thinking Blocks to solve word problems involving multiplying a whole number by a fraction.		<a href="https://www.youtube.com/watch?v=yI8emxFGLiA">https://www.youtube.com/watch?v=yI8emxFGLiA</a>	
		<b>PRACTICE</b> multiplying fractions by whole numbers within word problems.	Choose the Find a Fraction of a Number option.	<a href="https://itunes.apple.com/us/app/thinking-blocks-fractions/id670767677?mt=8">https://itunes.apple.com/us/app/thinking-blocks-fractions/id670767677?mt=8</a>	<a href="http://www.mathplayground.com/tb_fractions/thinking_blocks_fractions.html">http://www.mathplayground.com/tb_fractions/thinking_blocks_fractions.html</a>
				<a href="http://www.ixl.com/math/grade-5/multiply-fractions-by-whole-numbers-word-problems">http://www.ixl.com/math/grade-5/multiply-fractions-by-whole-numbers-word-problems</a>	
		<b>PRACTICE</b> multiplying fractions by a whole number.	<b>SOLVE</b> the problem using the Explain Everything app.	<a href="https://www.illustrativemathematics.org/content-standards/4/NF/B/4/tasks/857">https://www.illustrativemathematics.org/content-standards/4/NF/B/4/tasks/857</a>	Sugar in six cans of soda task
				<a href="https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8">https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8</a>	<a href="https://play.google.com/store/apps/details?id=com.explaineverything.explaineverything&amp;hl=en">https://play.google.com/store/apps/details?id=com.explaineverything.explaineverything&amp;hl=en</a>

Module 6: Decimal Fraction

TOPIC/TITLE	MESSAGE	ASSIGNMENT (CALL TO ACTION)	CONTENT DIRECTIONS	URL	Alternatives to IOS or Notes
<b>Module 6: Decimal Fraction</b>	<p>Module 6, on decimal fractions, starts with the realization that decimal place value units are simply special fractional units: 1 tenth = <math>1/10</math>, 1 hundredth = <math>1/100</math>, etc. Fluency plays an important role in this topic as students learn to relate <math>3/10 = 0.3 = 3</math> tenths.</p> <p><b>Focus Standards in Module 6</b>  <a href="#">CC.2.1.4.C.1</a> - Extend the understanding of fractions to show equivalence and ordering.  <a href="#">CC.2.1.4.C.2</a> - Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.  <a href="#">CC.2.1.4.C.3</a> - Connect decimal notation to fractions, and compare decimal fractions (base 10 denominator, e.g., <math>19/100</math>).  <a href="#">CC.2.4.4.A.1</a> - Solve problems involving measurement and conversions from a larger unit to a smaller unit.</p> <p><b>Important Standards in Module 6</b>  <a href="#">CC.2.2.4.A.1</a> - Represent and solve problems involving the four operations.  <a href="#">CC.2.2.4.A.2</a> - Develop and/or apply number theory concepts to find factors and multiples.</p> <p><b>Standards for Mathematical Practice</b>                      MP# 1. Make sense of problems and persevere in solving them.                      MP# 2. Reason abstractly and quantitatively.                      MP# 4. Model with mathematics.</p>				
		ACCESS Module 6: Decimal Fraction.		<a href="http://www.pdesas.org/module/cm/Cmap/View/16864">http://www.pdesas.org/module/cm/Cmap/View/16864</a>	
<b>Fractions</b>	In this lesson, you will add two fractions with respective denominators 10 and 100.	<b>LEARN</b> how to add tenths and hundredths.		<a href="https://learnzillion.com/lessons/1428">https://learnzillion.com/lessons/1428</a>	
		<b>ADD</b> tenths and hundredths.	Solve the following problems within the Explain Everything app.	<a href="https://www.illustrativemathematics.org/content-standards/4/NF/C/5/tasks/153">https://www.illustrativemathematics.org/content-standards/4/NF/C/5/tasks/153</a>	Adding Tenths and Hundredths task
				<a href="https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8">https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8</a>	<a href="https://play.google.com/store/apps/details?id=com.explaineverything.explaineverything&amp;hl=en">https://play.google.com/store/apps/details?id=com.explaineverything.explaineverything&amp;hl=en</a>
<b>Fractions and Decimals</b>	In this lesson, you will understand decimal place value.	<b>LEARN</b> about decimal place value.		<a href="https://www.khanacademy.org/math/cc-fourth-grade-math/cc-4th-decimals/cc-4th-decimals-intro/v/introduction-to-decimals">https://www.khanacademy.org/math/cc-fourth-grade-math/cc-4th-decimals/cc-4th-decimals-intro/v/introduction-to-decimals</a>	
		<b>REPRESENT</b> words with decimal numbers.		<a href="https://www.khanacademy.org/math/cc-fourth-grade-math/cc-4th-decimals/cc-4th-decimals-intro/e/decimals-in-words">https://www.khanacademy.org/math/cc-fourth-grade-math/cc-4th-decimals/cc-4th-decimals-intro/e/decimals-in-words</a>	
<b>Decimals Notation for Fractions with Denominators of 10 or 100</b>	In this lesson, you will use decimal notation for fractions with denominators 10 or 100.	<b>REPRESENT</b> decimals with base ten blocks.	Use the base ten blocks as specified to represent 5 decimal numbers. Take a screenshot of each number representation and its corresponding forms.	<a href="http://www.k-5mathteachingresources.com/support-files/representing-decimals.pdf">http://www.k-5mathteachingresources.com/support-files/representing-decimals.pdf</a>	
				<a href="https://itunes.apple.com/us/app/number-pieces-basic-by-math/id611452042?mt=8">https://itunes.apple.com/us/app/number-pieces-basic-by-math/id611452042?mt=8</a>	<a href="https://www.mathlearningcenter.org/web-apps/number-pieces/">https://www.mathlearningcenter.org/web-apps/number-pieces/</a>
		<b>REPRESENT</b> fractions in decimal form.	Complete the table within an Excel spreadsheet.	<a href="https://www.illustrativemathematics.org/content-standards/4/NF/C/5/tasks/145">https://www.illustrativemathematics.org/content-standards/4/NF/C/5/tasks/145</a>	Expanded Fractions and Decimals task

TOPIC/TITLE	MESSAGE	ASSIGNMENT (CALL TO ACTION)	CONTENT DIRECTIONS	URL	Alternatives to IOS or Notes
				<a href="https://itunes.apple.com/us/app/microsoft-excel/id586683407?mt=8">https://itunes.apple.com/us/app/microsoft-excel/id586683407?mt=8</a>	<a href="https://play.google.com/store/apps/details?id=com.microsoft.office.excel&amp;hl=en">https://play.google.com/store/apps/details?id=com.microsoft.office.excel&amp;hl=en</a>
<b>Comparing Decimals</b>	In this lesson, you will compare two decimals to hundredths using the symbols $>$ , $=$ , or $<$ , and justify the conclusions.	<b>LEARN</b> how to compare decimals on a number line.		<a href="https://www.khanacademy.org/math/cc-fourth-grade-math/cc-4th-decimals/cc-4th-decimals-number-line/v/decimals-on-a-number-line">https://www.khanacademy.org/math/cc-fourth-grade-math/cc-4th-decimals/cc-4th-decimals-number-line/v/decimals-on-a-number-line</a>	
		<b>PRACTICE</b> plotting decimals on a number line.		<a href="https://www.khanacademy.org/math/cc-fourth-grade-math/cc-4th-decimals/cc-4th-decimals-number-line/e/decimals_on_the_number_line_1">https://www.khanacademy.org/math/cc-fourth-grade-math/cc-4th-decimals/cc-4th-decimals-number-line/e/decimals_on_the_number_line_1</a>	
				<a href="https://www.khanacademy.org/math/cc-fourth-grade-math/cc-4th-decimals/cc-4th-decimals-number-line/e/decimals_on_the_number_line_2">https://www.khanacademy.org/math/cc-fourth-grade-math/cc-4th-decimals/cc-4th-decimals-number-line/e/decimals_on_the_number_line_2</a>	
		<b>COMPARE</b> decimals to benchmark numbers.	Create a table within an Excel spreadsheet with three columns entitled Near 0, About 1/2, and Close to 1. Place the decimals from the decimal list document into the correct columns. Add two more decimal amounts to each column.	Decimal list	
				<a href="https://itunes.apple.com/us/app/microsoft-excel/id586683407?mt=8">https://itunes.apple.com/us/app/microsoft-excel/id586683407?mt=8</a>	<a href="https://play.google.com/store/apps/details?id=com.microsoft.office.excel&amp;hl=en">https://play.google.com/store/apps/details?id=com.microsoft.office.excel&amp;hl=en</a>
<b>Money</b>	Solve word problems involving money.	<b>APPLY</b> your learning about decimals to a problem involving money.	Demonstrate your thinking within the Explain Everything app.	<a href="https://www.illustrativemathematics.org/content-standards/4/NF/C/5/tasks/152">https://www.illustrativemathematics.org/content-standards/4/NF/C/5/tasks/152</a>	Dimes and Pennies task
				<a href="https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8">https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8</a>	<a href="https://play.google.com/store/apps/details?id=com.explaineverything&amp;hl=en">https://play.google.com/store/apps/details?id=com.explaineverything&amp;hl=en</a>

Module 7: Data Analysis

TOPIC/TITLE	MESSAGE	ASSIGNMENT (CALL TO ACTION)	CONTENT DIRECTIONS	URL	Alternative to IOS or Notes
<b>Module 7: Data Analysis</b>	<p>The year ends with a module involving data analysis. Students will be constructing and interpreting line plots. This will further secure their ability to work with fractions.</p> <p><b>Focus Standards for Module 7</b>  <a href="#">CC.2.4.4.A.4</a>                      Represent and interpret data involving fractions using information provided in a line plot.</p> <p><b>Standards for Mathematical Practice</b>                      MP# 2. Reason abstractly and quantitatively.                      MP# 4. Model with mathematics.                      MP# 5. Use appropriate tools strategically.                      MP# 7. Look for and make use of structure.                      Mathematical Practices resource page on SAS</p>				
		ACCESS Module 6: Decimal Fraction.		<a href="http://www.pdesas.org/module/cm/Cmap/View/16864">http://www.pdesas.org/module/cm/Cmap/View/16864</a>	
Creating Line Plots	In this lesson, you will make a line plot to display a data set of measurements in fractions of a unit (e.g., intervals of $\frac{1}{2}$ , $\frac{1}{4}$ , or $\frac{1}{8}$ ).	<b>LEARN</b> how to construct line plots.		<a href="https://learnzillion.com/lessons/3303-create-a-line-plot-using-a-data-set-of-fractional-measures">https://learnzillion.com/lessons/3303-create-a-line-plot-using-a-data-set-of-fractional-measures</a>	
		<b>LEARN</b> how to interpret data from line plots.		<a href="https://learnzillion.com/lessons/3476-interpret-data-on-a-line-plot-by-making-observations">https://learnzillion.com/lessons/3476-interpret-data-on-a-line-plot-by-making-observations</a>	
		<b>CONSTRUCT</b> a line plots of measured objects.	Create the line plot using the Number Line app. Take a screenshot of the final plot.	<a href="http://www.k-5mathteachingresources.com/support-files/objects-in-my-desk-line-plot.pdf">http://www.k-5mathteachingresources.com/support-files/objects-in-my-desk-line-plot.pdf</a>	
				<a href="https://itunes.apple.com/us/app/number-line-manipulative/id805013846?mt=8">https://itunes.apple.com/us/app/number-line-manipulative/id805013846?mt=8</a>	<a href="https://www.mathlearningcenter.org/web-apps/number-line/">https://www.mathlearningcenter.org/web-apps/number-line/</a>
Solving Word Problems Using Line Plots	In this lesson, you will solve problems involving addition and subtraction of fractions by using information presented in line plots. The line plots must be labeled with common denominators, such as $\frac{1}{4}$ , $\frac{2}{4}$ , $\frac{3}{4}$ .	<b>WATCH</b> the video about the addition of fractions using line plots.		<a href="https://learnzillion.com/lessons/3382-solve-addition-problems-using-data-from-line-plots">https://learnzillion.com/lessons/3382-solve-addition-problems-using-data-from-line-plots</a>	
		<b>WATCH</b> the video about the subtraction of fractions using line plots.		<a href="https://learnzillion.com/lessons/3492-solve-subtraction-problems-using-data-from-line-plots">https://learnzillion.com/lessons/3492-solve-subtraction-problems-using-data-from-line-plots</a>	
		<b>PLAY</b> app "Line Plots 4" to reinforce understanding of line plots.		<a href="https://itunes.apple.com/us/app/line-plots-4/id912631663?mt=8">https://itunes.apple.com/us/app/line-plots-4/id912631663?mt=8</a>	<a href="https://wqed.pbslearningmedia.org/resource/mmp1-math-ee-intsurvey1/displaying-data-with-line-plots/#.WQejrFdllmA">https://wqed.pbslearningmedia.org/resource/mmp1-math-ee-intsurvey1/displaying-data-with-line-plots/#.WQejrFdllmA</a>
		<b>PRACTICE</b> interpreting and solving problems based on information presented in line plots.		<a href="https://www.khanacademy.org/math/cc-fourth-grade-math/cc-4th-measurement-topic/cc-4th-line-plots-with-fractions/e/interpreting-line-plots-with-fraction-addition-and-subtraction">https://www.khanacademy.org/math/cc-fourth-grade-math/cc-4th-measurement-topic/cc-4th-line-plots-with-fractions/e/interpreting-line-plots-with-fraction-addition-and-subtraction</a>	

Teacher Tools

TEACHER TOOLS	MODULE 1	MODULE 2	MODULE 3	MODULE 4	MODULE 5	MODULE 6	MODULE 7
		Lesson plan about elapsed time - <a href="http://illuminations.nctm.org/Lesson.aspx?id=2336">http://illuminations.nctm.org/Lesson.aspx?id=2336</a>	Task for solving multi-step word problems - <a href="http://www.insidemathematics.org/assets/common-core-math-tasks/the%20baker.pdf">http://www.insidemathematics.org/assets/common-core-math-tasks/the%20baker.pdf</a>		Extension Project for Module 5: <a href="http://www.instructables.com/id/Building-with-Fractions-Kitchen-Dilemma/">http://www.instructables.com/id/Building-with-Fractions-Kitchen-Dilemma/</a>		