

INTRODUCTION

This Pennsylvania Learns iTunes U course is a collection of resources to support teaching and learning in the Grade 2 classroom. The content of this course is organized around the Grade 2 Mathematics Pennsylvania Core Instructional Framework. We believe that Pennsylvania teachers know what is needed to support their instructional design and delivery as well as what engages students in their own learning. For those reasons, the materials and resources provided in this course were curated by teachers. This course is not a curriculum. It is a collection of assets aligned to Pennsylvania Core Standards to support teaching and learning.

SETTING THE STAGE

		Assignment/Call to Action	Resource/URL	Resource introduction listed under "I" in the assignment.	Notes (for publication)
	<p>Welcome to the Grade 2 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.</p>				
	<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>	<p>REVIEW the "Teacher Resources" and "Student Resources" section of the PA Core Implementation section of the SAS Portal.</p>	<p>http://www.pdesas.org/Standard/PACore</p>		

Standards for Mathematical Practice and Content

Module Title	Message	Assignment / Call to Action	Content Directions	Resource / URL	Info about the URL (published on the "i" button of a resource/uri)	Copyright Notes
About the Standards for Mathematical Practice and Content	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 <i>Adding It Up</i> : 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)					
Standards for Mathematical Practice	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.	https://itunes.apple.com/us/itunes-u/hunt-institute-ccss-series/id461816983?mt=10		
Standards for Mathematical Content	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.					

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		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.	https://itunes.apple.com/us/course/ccss-for-teachers-math-shifts/id679843407		

GRADE 2 MODULE 1

Module Title	Message	Assignment / Call to Action (200 Character Max)	Content Directions	Resource / URL	Alternative to IOS or Notes
Module 1: Addition and Fluency of Sums and Differences to 20 and Word Problems to 100					
About Module 1	<p>Students begin Grade 2 with extensive experience working with numbers to 10. Module 1 establishes a motivating, differentiated fluency program in the first few weeks to provide each student with enough practice to achieve mastery of the expected fluencies (i.e., adding and subtracting within 20 and within 100) by the end of the year. Students learn to represent and solve problems using addition and subtraction: a practice that will also continue throughout the year.</p> <p>Focus Standards for Module 1</p> <ul style="list-style-type: none"> • <u>CC.2.2.A.1</u> - Represent and solve problems involving addition and subtraction within 100. <p>Important Standards for Module 1</p> <ul style="list-style-type: none"> • <u>CC.2.2.A.2</u> - Use mental strategies to add and subtract within 20. 				
	<p>Standards for Mathematical Practice</p> <ul style="list-style-type: none"> • MP# 1. Make sense of problems and persevere in solving them • MP# 2. Reason abstractly and quantitatively • MP# 3. Construct viable arguments and critique the reasoning of others • MP# 5. Use appropriate tools strategically • MP# 6. Attend to precision <p><u>Mathematical Practices</u> resource page on SAS</p>				
	In Module 1, students will focus on addition and subtraction strategies for numbers up to 20 using mental math, properties of operations, and place value.				
	<p>In Module 1, students will be able to:</p> <ul style="list-style-type: none"> • Add and Subtract within 20. *Apply properties of operations as strategies to add and subtract. • Explain why addition and subtraction strategies work, using place value and the properties of operations. • Fluently add and subtract within 20 using mental strategies. • Understand subtraction as an unknown-addend problem. • Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20. 				
	Click on the "i" button beside each resource/url to find additional information and/or step by step instructions. Watch You Tube videos on Viewpure.com to eliminate ads.				
Numbers and Operations: Add and Subtract Within 20.	In this lesson, students add and subtract within 20. They use strategies such as counting on, making ten, decomposing a number leading to a ten, using the relationship between addition and subtraction, and creating equivalent but easier or known sums.				
		TEACHING mathematical reasoning to add and subtract within 20.	Refer to pages 9 & 10 of the North Carolina standards.	http://www.dpi.state.nc.us/docs/curriculum/mathematics/scos/2.pdf	
		TEACHING adding and subtracting within 100 using mental strategies.	This is an excellent resource to support the teaching of mathematical reasoning. The video teaches numbers up to 100 and provides a good example of students explaining the strategies they used solve problems.	https://www.teachingchannel.org/videos/grade-1-math	
		TEACHING strategies to add and subtract within 20.	View the videos on this page that give strategies for adding and subtracting numbers to 20. **You will need to create a FREE account in order to access videos**	https://learnzillion.com/lesson_plans/5964-use-doubles-to-add-and-subtract-within-20	
				https://learnzillion.com/lesson_plans/7021-add-within-20-by-regrouping-on-a-ten-frame	

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				https://learnzillion.com/lesson_plans/7800-subtract-within-20-using-10-frames	
		TEACHING the relationship between addition and subtraction.	Use this link to view a video on subtracting.	https://www.khanacademy.org/math/early-math/cc-early-math-add-sub-topic/cc-early-math-add-subtract-20/v/subtracting-within-20	
		TEACHING students to solve addition and subtraction number stories with manipulatives.	Use this lesson as a guide to teach addition and subtraction stories with manipulatives. Use larger numbers than examples given.	http://illuminations.nctm.org/Lesson.aspx?id=679	
		TEACHING students to understand that addition and subtraction are inverse operations.	This lesson reinforces addition and subtraction as inverse operations. There are problems to solve as well as a rubric for grading and samples of student work.	http://www.insidemathematics.org/assets/common-core-math-tasks/incredible%20equations.pdf	
		TEACHING students to explain the math strategy used to solve an addition or subtraction problem within 20.	Use the Incredible Equations lesson above to provide an equation to students. Have students use the ShowMe App (or another creations app) to record their solution to the problem and the explanation of their work.	https://itunes.apple.com/us/app/showme-interactive-whiteboard/id445066279?mt=8	https://play.google.com/store/apps/details?id=com.morriscooke.explaineverything&hl=en
		TEACHING students to use mental math strategies to add and subtract within 20.	Use this lesson to help students develop number sense and reasoning skills.	https://www.illustrativemathematics.org/content-standards/tasks/1394	
		I CAN find the missing numbers to 10.	Use the APP 10 Frame Fill develop automaticity composing numbers to ten.	https://itunes.apple.com/us/app/10-frame-fill/id418083871?mt=8	
		I CAN add to 20 using a 10 Frame.	Play the add game to add to 20, using a 10 Frame as a model.	http://illuminations.nctm.org/Activity.aspx?id=3565	
		I CAN add and subtract within 20 using a number line.	Choose Medium level to use a number line to add and subtract within 20. Also offers an easy level to review adding and subtracting within 10.	http://www.funbrain.com/linejump/index.html	
		I CAN use mental math strategies to add and subtract within 20.	Use this website to practice making numbers to 20.	http://www.ixl.com/math/grade-2/addition-and-subtraction-ways-to-make-a-number-up-to-20	
		I CAN solve number stories.	Use the APP Math Word Problems to solve word problems with visuals.	https://itunes.apple.com/us/app/math-word-problems-addition/id703753981?mt=8	FREE version, can get upgrade for \$2.99.
Numbers and Operations: Properties of Operations	In this lesson, students apply properties of operations as strategies to add and subtract (commutative property of addition; associative property of addition).	TEACHING the properties of operations as strategies to add and subtract.	Watch this video to help students understand addition and subtraction facts and how they are related.	https://www.khanacademy.org/math/early-math/cc-early-math-add-sub-basics/cc-early-math-add-subtract-10/v/relating-addition-and-subtraction	
		I CAN solve related addition and subtraction problems.	Solve the addition and subtraction problems listed. Take a screen shot of one of the problems solved.	https://www.khanacademy.org/math/early-math/cc-early-math-add-sub-topic/cc-early-math-add-subtract-10/e/relate-addition-and-subtraction	
		I CAN explain how addition and subtraction are related.	Use the Show Me App (or any creations app). Bring in the screen shot. Explain how the two problems are related and how you know.	https://itunes.apple.com/us/app/showme-interactive-whiteboard/id445066279?mt=8	https://play.google.com/store/apps/details?id=com.morriscooke.explaineverything&hl=en
Numbers and Operations: Why Addition and Subtraction Strategies Work	In this lesson, students explain why addition and subtraction strategies work, using place value and the properties of operations.	TEACHING addition and subtraction strategies using place value and the commutative and associative properties.	North Carolina Department of Public Instruction Instructional Support Tools, 2nd gr. Mathematics Unpacked Standards. See pages 17-23.	http://www.dpi.state.nc.us/docs/curriculum/mathematics/scos/2.pdf	
		TEACHING students to use the properties of operations to compose a number within 20 and explain my reasoning.	Illustrative Mathematics activity that encourages students to use two or more digits to reach a target number and then explain their reasoning.	https://www.illustrativemathematics.org/illustrations/1396	

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		I CAN use place value and properties of operations to solve addition and subtraction problems.	Solve the subtraction number story. Take a screenshot of the 10th number story.	http://www.ixl.com/math/grade-2/write-the-subtraction-sentence-up-to-18	
		I CAN use place value and properties of operations to explain why addition and subtraction work.	Import the screen shot from the previous activity into the ShowMe App (or any creations app). Use the record feature to draw and explain your thinking.	https://itunes.apple.com/us/app/showme-interactive-whiteboard/id445066279?mt=8	https://play.google.com/store/apps/details?id=com.morriscooke.explaineverything&hl=en
		I CAN use place value and properties of operations to solve addition and subtraction problems.	Solve the addition number story. Take a screenshot of the 10th number story.	http://www.ixl.com/math/grade-2/addition-word-problems-up-to-two-digits	
		I CAN use place value and properties of operations to explain why addition and subtraction work.	Import the screen shot from the previous activity into the ShowMe App (or any creations app). Use the record feature to draw and explain your thinking.	https://itunes.apple.com/us/app/showme-interactive-whiteboard/id445066279?mt=8	https://play.google.com/store/apps/details?id=com.morriscooke.explaineverything&hl=en
Numbers and Operations: Subtraction As An Unknown-Addend Problem	In this lesson, students understand subtraction as an unknown-addend problem. For example, subtract 10 – 8 by finding the number that makes 10 when added to 8.	TEACHING about subtraction as an unknown-addend problem.	Watch this video that provides visuals to teach.	http://viewpure.com/jf43mac-ik	
		TEACHING how to solve missing addend problems with bar models.	Watch this video to help provide visuals for teaching missing addends.	https://learnzillion.com/lesson_plans/5183-solve-word-problem-with-missing-parts-by-drawing-bar-models	
		I CAN solve addition and subtraction problems with bar models.	Choose Number Up to 50 and Part-Whole Models (2 Parts)	https://itunes.apple.com/us/app/thinking-blocks-addition/id668450919?mt=8	http://www.mathplayground.com/tb_addition_thinking_blocks_addition_subtraction.html
		TEACHING students to find the missing number.	A game that students can play to demonstrate this skill. Teacher will need to explain.	https://www.illustrativemathematics.org/illustrations/1234	
		I CAN identify fact families.	Use the number frame app to model the different equations with colored chip. Write the equation to match each chip model and take a screen shot. Repeat for each part of the problem.	https://www.illustrativemathematics.org/illustrations/1612	
				https://itunes.apple.com/us/app/number-frames-by-math-learning/id873198123?mt=8	https://www.mathlearningcenter.org/web-apps/number-frames/
		I CAN solve facts by using fact families		https://itunes.apple.com/us/app/maths-facts-number-bonds-fact/id459281769?mt=8	https://play.google.com/store/apps/details?id=com.mathmunchkie.knowyourmathfacts&hl=en
Numbers and Operations: Using Mental Strategies	In this lesson, students fluently add and subtract within 20 using mental strategies.	TEACHING adding and subtracting within 20 using mental strategies.	North Carolina Department of Public Instruction Instructional Support Tools, 2nd gr. Mathematics Unpacked Standards. See page 9.	http://www.dpi.state.nc.us/docs/curriculum/mathematics/scos/2.pdf	
		I CAN add and subtract within 20.	Click on "Easy" level to practice & strengthen automaticity for numbers to 20.	https://itunes.apple.com/us/app/arithmeticmouse-addition-subtraction/id476631396?mt=8	https://play.google.com/store/apps/details?id=com.TinmanLearning.TheArithmeticMouse.AddSubGame&hl=en
		I CAN solve addition and subtraction problems.	Play Lord Voldermath. Begin by choosing + and the numbers 1-10. When finished, choose - and the numbers 1-10.	http://mrussbaum.com/becoming-lord-voldemath-ipad.html	
		I CAN use mental math to add and subtract within 20.		https://itunes.apple.com/us/app/add-and-subtract-within-20/id757149544?mt=8	https://play.google.com/store/apps/details?id=air.de.appsfuerkids.addandsubtractwithin20.demo&hl=en
		I CAN use mental math to add and subtract within 20.	Select "Add and Subtract" and then the first "Metal Math: Addition / Subtraction" for numbers to 20.	https://itunes.apple.com/us/app/myblee-math/id485439231?mt=8	http://www.mathplayground.com/tb_addition_jr_thinking_blocks_junior.html - Choose Biggest Number 20, Part Whole Model 2 parts or Comparison Model

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		I CAN use mental math to add and subtract within 20.	Select "Add within 20" or "Subtract within 20" and "Word Problems"	https://itunes.apple.com/us/app/2nd-grade-splash-math-worksheets/id463471155?mt=8	https://www.splashmath.com/math-skills/second-grade
Numbers and Operations: Solving Word Problems	In this lesson, students learn to solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20.	TEACHING students to solve word problems calling for the addition of three whole numbers whose sum is less than or equal to 20.	Lesson plan that provides lesson ideas as well as accommodations, extensions and center ideas.	http://www.cpalms.org/Public/PreviewResourceLesson/Preview/30038	
		TEACHING students how to solve addition and subtraction number stories.	View this video to gain more information about solving addition and subtraction number stories.	http://viewpure.com/IQA4kRhhRU	
		TEACHING students how to compose numbers to 20 using three digits.	NCTM lesson that involves adding the digits of a three digit number to equal a certain sum. Students must create different combinations of numbers that equal that sum. Can be adapted for sums to 20.	http://illuminations.nctm.org/Lesson.aspx?id=906	
		TEACHING how to write and solve word problems.	This lesson teaches students how to write and solve word problems. Students can use these strategies to create word problems with three whole numbers.	http://betterlesson.com/lesson/495542/the-recipe-for-a-great-word-problem	
		TEACHING students how to add three whole numbers whose sum is less than or equal to 20.	In this lesson teachers can access information on a lesson plan that describes a game. Use "Part A" for numbers to 20. Can be played as a game in partners. "Part B" can be used for sums to 100.	http://www.insidemathematics.org/assets/problems-of-the-month/got%20your%20number.pdf	
		I CAN create a word problem that involves adding three whole numbers whose sum is less than or equal to 20.	Use the digit cards from the lesson above. Have students open the ShowMe App (or any creations app), write their three digits on the screen, solve the addition problem, and record a story problem that uses the three digits.	https://itunes.apple.com/us/app/showme-interactive-whiteboard/id445066279?mt=8	https://play.google.com/store/apps/details?id=com.morriscooke.explaineverything&hl=en
		I CAN solve word problems with three addends whose sum is equal to or less than 20.	Choose Biggest Number 20, then Part Whole Model- 3 Parts	http://www.mathplayground.com/tb_addition_jr/thinking_blocks_junior.html	
				http://www.ixl.com/math/grade-2/add-three-one-digit-numbers-word-problems	

GRADE 2 MODULE 2

Module Title	Message	Assignment / Call to Action	Content Directions	Resource / URL	Alternative to IOS or Notes
Module 2: Addition/ Subtraction with Length, Weight, Capacity, /Time Measurement					
About Module 2	In Module 2, students learn to measure and estimate using standard units for length and solve measurement word problems involving addition and subtraction of length. A major objective is for students to use measurement tools with the understanding that linear measurement involves an iteration of units and that the smaller a unit, the more iterations are necessary to cover a given length. An underlying goal for this module is for students to learn the meaning of a "unit" in different contexts (e.g., capacity, length, weight). This understanding serves as the foundation of arithmetic, measurement, and geometry in elementary school. In particular, units play a central role in the next module and in the addition and subtraction algorithms of Module 4.				
	Focus Standards in Module 2				
	<ul style="list-style-type: none"> • CC.2.4.2.A.1 - Measure and estimate lengths in standard units using appropriate tools. • CC.2.4.2.A.6 - Extend the concepts of addition and subtraction to problems involving length. 				
	Standards for Mathematical Practice <ul style="list-style-type: none"> • MP# 1. Make sense of problems and persevere in solving them • MP# 3. Construct viable arguments and critique the reasoning of others • MP# 5. Use appropriate tools strategically • MP# 6. Attend to precision <p>Mathematical Practices resource page on SAS</p>				
	In Module 2, students will be able to: <ul style="list-style-type: none"> • Measure the length of an object by selecting and using appropriate tools.*Measure the same length with different-sized units. • Measure to determine how much longer one object is than another. • Estimate lengths using various units. • Use addition and subtraction within 100 to solve word problems involving lengths. • Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points. 				
	Click on the "i" button beside each resource/url to find additional information and/or step by step instructions. Watch You Tube videos on Viewpure.com to eliminate ads.				
Measurement, Data and Probability: Measuring Length Using the Appropriate Tool.	In this lesson, student measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.				
		TEACHING students how to measure to the nearest inch and centimeter.	Read Page 24 of the North Carolina unpacked standards for a detailed description of this Standard.	http://www.dpi.state.nc.us/docs/curriculum/mathematics/scos/2.pdf	
		TEACHING students how to measure to the nearest inch.	Watch video to learn about measuring to the nearest inch using a ruler.	https://learnzillion.com/lesson_plans/6036-measure-using-a-ruler	
		TEACHING to measure to the nearest centimeter.	Watch video on measuring to the nearest centimeter. Only watch to 3:18	http://www.virtualnerd.com/common-core/grade-2/2_MD-measurement-data/A/1/measure-ruler-centimeters	
		I CAN measure using the correct tool.	Choose the tool to correctly measure.	http://www.ixl.com/math/grade-2/choose-the-appropriate-measuring-tool	
		I CAN explain how to measure.	Use the Show Me APP (or another creation APP). Take a picture of at least 3 tools you would use to measure. Explain how these tools would be used. Give an example of something you would measure (you can take a picture and import) for each tool you used.	https://itunes.apple.com/us/app/showme-interactive-whiteboard/id445066279?mt=8 https://play.google.com/store/apps/details?id=com.morriscooke.explaineverything&hl=en	

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		I CAN measure to the nearest centimeter and meters.	Use this link to measure to the nearest centimeter.	https://www.khanacademy.org/math/early-math/cc-early-math-measure-data-topic/cc-early-math-measurement/e/measuring-lengths-2	
		I CAN measure myself to the nearest centimeter and compare.	Measure your ear, height of your body, and foot in centimeters. Then, look at what animal compared to your ear, height of your body, and foot measurements.	http://www.lawrencehallofscience.org/kidsite/activities/measures/	
Measurement, Data and Probability: Measuring the Same Length with Different Units.	In this lesson, students measure the same length with different-sized units then discuss why the measurement made with the smaller unit is more than the measurement made with the larger unit and vice versa.	TEACHING students how to measure using two different units.	Use this link to locate a lesson plan on measuring an object twice, using two different measuring tools.	http://www.insidemathematics.org/assets/common-core-math-tasks/high%20horse.pdf	
		I CAN measure objects in the classroom.	Use the camera on the device of your choice to take a picture of an object that you measured. Measure the object in inches and centimeters. When finished, open the APP Educreations (or any creation APP) and import the picture. Explain in words or by voice how your measurements are similar and different and why.	https://itunes.apple.com/us/app/educreations-interactive-whiteboard/id478617061?mt=8	https://play.google.com/store/apps/details?id=com.morriscooke.explaineverything&hl=en
Measurement, Data and Probability: Determine How Much Longer One Object is from Another	In this lesson, students measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.	TEACHING students how to compare lengths.	View this video to compare lengths.	https://www.youtube.com/watch?v=dQgWX8Q6f6E	
		TEACHING students to measure the lengths of arctic animals and then compare the measurements.	This link will take you to a blog that discusses how to draw arctic animals and compare the lengths of animals.	http://www.giftofcuriosity.com/comparing-arctic-animal-sizes/	
		I CAN compare lengths.	Use the APP Story Creator (or any creation APP). Find two objects. Measure each object to the nearest inch or centimeter. Take a picture of each object and import into each on a new page. Write the measurements of your objects. THEN find the difference between the two objects. Explain how you know your answer is correct?	https://itunes.apple.com/us/app/story-creator-easy-story-book/id545369477?mt=8	https://play.google.com/store/apps/details?id=net.redjumper.bookcreator&hl=en
		I CAN find the difference between two objects.	Use this site to find the difference in measurement between two objects.	http://mrmussbaum.com/grade_2_standards/incompare	
Measurement, Data and Probability: Estimating Length Using Different Units	In this lesson, students estimate lengths using units of inches, feet, centimeters, and meters.	TEACHING about estimating lengths using units of inches, feet, centimeters, and meters.	Read Page 24 & 25 of the North Carolina unpacked standards for a detailed description of this Standard.	http://www.dpi.state.nc.us/docs/curriculum/mathematics/scos/2.pdf	
		TEACHING students to estimate measurements and finding actual length of objects.	This lesson plan helps students estimate the length of objects and then find the actual length of the objects.	http://illuminations.nctm.org/Lesson.aspx?id=2120	
		I CAN estimate lengths of objects.	Use this link to solve the problems listed.	https://www.khanacademy.org/math/early-math/cc-early-math-measure-data-topic/cc-early-math-measurement/e/estimating-lengths	
		I CAN estimate lengths using the US customary and metric lengths.	Choose Grade 2, Measurement, Estimating Lengths	https://itunes.apple.com/us/app/2nd-grade-splash-math-worksheets/id463471155?mt=8	https://www.splashmath.com/math-skills/second-grade
Measurement, Data and Probability: Using Addition and Subtraction to Solve Word Problems	In this lesson, students use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units by using drawings and equations with a symbol for the unknown number to represent the problem.	TEACHING about addition and subtracting lengths.	Read Page 25 of the North Carolina unpacked standards for a detailed description of this Standard.	http://www.dpi.state.nc.us/docs/curriculum/mathematics/scos/2.pdf	

Module Title	Message	Assignment / Call to Action	Content Directions	Resource / URL	Alternative to IOS or Notes
		TEACHING about adding and subtracting using lengths.	Use this site for a suggested lesson plan	http://betterlesson.com/lesson/538099/adding-and-subtracting-with-lengths	
		TEACHING students to add and subtract involving length.	View this lesson plan to help students to solve word problems using length.	http://www.syracusecityschools.com/tfiles/folder740/Pages/%20from%20g2-m2-topicD.pdf	
		I CAN solve word problems using length.	Solve the word problems that involve length.	http://mrnussbaum.com/grade_2_standardslengthwordproblems	
Measurement, Data and Probability: Represent Whole Numbers as Lengths on a Number Line	Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, and represent whole-number sums and differences within 100 on a number line diagram.	TEACHING how to represent whole numbers as lengths.	Read Page 27 of the North Carolina unpacked standards for a detailed description of this Standard.	http://www.dpi.state.nc.us/docs/curriculum/mathematics/scos/2.pdf	
		I CAN use a number line to add numbers together.	Use the APP Number Lines, choose Jump Forward and solve the addition problems using the number line.	https://itunes.apple.com/us/app/teaching-number-lines/id492603378?mt=8	https://play.dreambox.com/student/dbl/TeacherTool_JumpsOften?atype=2&back=http%3A%2F%2Fwww.dreambox.com%2Fteachertools&eng=intermediate&ie_skin=paperfrenzy
		I CAN create a number story using length and solve it.	Write a number story using a Creation app of your choice (ex, Educreations, Doodlebuddy) for the number sentence, 35 feet+23 feet	https://itunes.apple.com/us/app/educreations-interactive-whiteboard/id478617061?mt=8	https://play.google.com/store/apps/details?id=com.morriscooke.explaineverything&hl=en
		I CAN use the number line to show my work for the number story.	Use the APP Number Line to demonstrate proper hops on the number line to solve the number story from above.	https://itunes.apple.com/us/app/number-line-by-math-learning/id751816884?mt=8	https://www.mathlearningcenter.org/web-apps/number-line/
		I CAN use a number line to solve problems involving length.	Import the task into Educreations and draw a number line to solve.	https://www.illustrativemathematics.org/content-standards/2/MD/B/6/tasks/1081	Frog and Toad on a Number Line
				https://itunes.apple.com/us/app/educreations-interactive-whiteboard/id478617061?mt=8	https://play.google.com/store/apps/details?id=com.morriscooke.explaineverything&hl=en

GRADE 2 MODULE 3

Module Title	Message	Assignment / Call to Action	Content Directions	Resource / URL	Alternative to IOS or Notes
Module 3: Place Value, Counting, and Comparison of Numbers to 1000					
About Module 3	All arithmetic algorithms are manipulations of place value units: ones, tens, hundreds, etc. In Module 3 students extend their understanding of base-ten notation and apply their understanding of place value to count and compare numbers to 1000.				
	Focus Standards in Module 3				
	<ul style="list-style-type: none"> CC.2.1.2.B.1 - Use place value concepts to represent amounts of tens and ones and to compare three digit numbers. CC.2.1.2.B.2 - Use place value concepts to read, write, and skip count to 1000. 				
	Standards for Mathematical Practice <ul style="list-style-type: none"> MP# 2. Reason abstractly and quantitatively MP# 7. Look for and make use of structure MP# 8. Look for and express regularity in repeated reasoning <p>Mathematical Practices resource page on SAS</p>				
	Students will focus on reading, writing, and counting numbers up to 1000. Students will also compare numbers up to three-digits.				
	In Module 3, students will be able to: <ul style="list-style-type: none"> Understand the place value of three digit numbers. Count and skip count within 1000. Read and write numbers to 1000. Compare two three-digit numbers. 				
	Click on the "i" button beside each resource/url to find additional information and/or step by step instructions. Watch You Tube videos on Viewpure.com to eliminate ads.				
Numbers and Operations: Place Value	In this lesson, students will understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones.				
		TEACHING that a three-digit number represents amounts of hundreds, tens and ones.	North Carolina Department of Public Instruction Instructional Support Tools, 2nd gr. Mathematics Unpacked Standards. See pages 13-15.	http://www.dpi.state.nc.us/docs/curriculum/mathematics/scos/2.pdf	
		TEACHING that a three-digit number represents amounts of hundreds, tens and ones.	Game idea for students to bundle sticks to make 10s and 100.	http://www.k-5mathteachingresources.com/support-files/make-ten-bundles.pdf	
		I CAN represent three-digit numbers using base ten blocks.	Click Arrow and then Go. Select Ones, Tens, and Hundreds.	http://www.abcya.com/base_ten_bingo.htm	
		I CAN represent three-digit numbers using base ten blocks.	Use the base ten blocks to represent numbers in 100s, 10s and 1s. Take a screen shot of your work.	https://itunes.apple.com/us/app/number-pieces-basic-by-math/id611452042?mt=8	https://www.mathlearningcenter.org/web-apps/number-pieces/
		I CAN represent three-digit numbers using base ten blocks and expanded form.	Use the Show Me App (or any creations app) and import the image of the base ten blocks (see above). Use the record feature to explain what the base ten blocks represent.	https://itunes.apple.com/us/app/showme-interactive-whiteboard/id445066279?mt=8	https://play.google.com/store/apps/details?id=com.morriscooke.explaineverything&hl=en
Numbers and Operations: Counting and Skip-Counting	In this lesson, students count within 1000; skip-count by 5s, 10s, and 100s.	TEACHING skip counting by 10s using the number line and 100s chart.	iTunes Podcast teaching skip counting by 10s using a number line and 100s chart. Designed for grade 1, but a good introduction to skip counting using a number line and 100s chart.	https://itunes.apple.com/us/podcast/skip-counting-by-10/id394007040?i=87594803&mt=2	
		I CAN skip count within 100 using a Hundreds Chart.	Practice counting by 5s using red circles and by 10s using blue circles. Take a screenshot of the finished product.	https://itunes.apple.com/us/app/hundred-board-manipulative/id9884445290?mt=8	https://play.google.com/store/apps/details?id=com.fuzzybees.BUILD100
		I CAN skip count within 1000 by 5s, 10s, and 100s.	Use the Number Line App to practice skip counting by 5s up to 20. Import a screen into the Show Me App to explain your thinking.	https://itunes.apple.com/us/app/number-line-by-math-learning/id751816884?mt=8	https://www.mathlearningcenter.org/web-apps/number-line/
				https://itunes.apple.com/us/app/showme-interactive-whiteboard/id445066279?mt=8	https://play.google.com/store/apps/details?id=com.morriscooke.explaineverything&hl=en
		I CAN skip count within 1000 by 5s, 10, and 100s.	IXL Website to practice skip counting by 2s, 5s and 10s to 100. Provides an example if the student makes an error.	http://www.ixl.com/math/grade-2/skip-counting	

Module Title	Message	Assignment / Call to Action	Content Directions	Resource / URL	Alternative to IOS or Notes
		I CAN skip count within 1000 by 2s, 5s, 10s, and 100s.	Choose Grade 2, Number Sense	https://itunes.apple.com/us/app/2nd-grade-splash-math-worksheets/id463471155?mt=8	https://www.splashmath.com/math-skills/second-grade
Numbers and Operations: Read and Write Numbers to 1000	In this lesson, students read and write numbers to 1000 using base-ten numerals, number names, and expanded form.	TEACHING reading and writing numbers to 1000 using base-ten numerals, number names and expanded form.	North Carolina Department of Public Instruction Instructional Support Tools, 2nd gr. Mathematics Unpacked Standards. See pages 16.	http://www.dpi.state.nc.us/docs/curriculum/mathematics/scos/2.pdf	
		TEACHING reading and writing numbers to 1000 using base ten and expanded form.	These videos use base ten blocks and expanded form to represent numbers in the hundreds.	https://learnzillion.com/lesson_plans/4828-read-numbers	
				https://learnzillion.com/lesson_plans/7302-write-numbers-in-expanded-form	
		TEACHING that a three-digit number represents amounts of hundreds, tens and ones.	NCTM Illuminations lesson plan that teaches students how to compose and decompose numbers using expanded and standard form.	http://illuminations.nctm.org/Lesson.aspx?id=3691	
		TEACHING that a three-digit number represents amounts of hundreds, tens and ones.	Lesson Plan / activity that demonstrates an understanding that the three digits of a three-digit number represent amounts of hundreds, tens, and ones.	https://www.illustrativemathematics.org/illustrations/144	
		I CAN read and write numbers to 1000 using number words.	Use this website to practice writing numbers to 1000 in words and numerals.	http://www.ixl.com/math/grade-2/writing-numbers-up-to-1000-in-words	
Numbers and Operations: Compare Two Three-Digit Numbers	In this lesson, students compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using $>$, $=$, and $<$ symbols to record the results of comparisons.	TEACHING the comparison of two and three-digit numbers using the $<$ = and $>$ symbols.	Read page 16 of the North Carolina Unpacked Standards.	http://www.dpi.state.nc.us/docs/curriculum/mathematics/scos/2.pdf	
		TEACHING the comparison of two and three-digit numbers using the $<$ = and $>$ symbols.	NCTM Illuminations lesson plan that teaching comparing numbers. Basic lesson will need to be adapted for 2nd grade. Printable materials available.	http://illuminations.nctm.org/Lesson.aspx?id=2657	
		TEACHING the greater than, less than, and equal sign.	This video reviews the greater than, less than, and equal sign.	https://www.youtube.com/watch?v=M6Efu2slal	
		TEACHING the comparison of two and three-digit numbers using the $<$ = and $>$ symbols.	Lesson plan contains a pre-assessment, guiding questions, practice opportunities, accommodations and extensions.	http://www.cpalms.org/Public/PreviewResourceLesson/Preview/32615	
		I CAN compare two numbers up to 1000 using the value of hundreds, tens and ones.	Choose Grade 2, Number Sense, Level 6	https://itunes.apple.com/us/app/2nd-grade-splash-math-worksheets/id463471155?mt=8	https://www.splashmath.com/math-skills/second-grade
		I CAN compare two three-digit numbers using $>$, $=$, and $<$ symbols.	This website provides practice for comparing numbers to 1000.	http://www.ixl.com/math/grade-3/compare-numbers	
		I CAN compare two three-digit numbers using $>$, $=$, and $<$ symbols, ordering from least to greatest, and identifying numbers that come next.	This website provides practice opportunities for comparing two three-digit numbers in a variety of ways. The website provides video tutorials for students to watch when the answer incorrectly.	http://www.adaptedmind.com/pgamev68full.php?utm_expid=33853517-86_Fy1oNph3TUKwaZkXQZc3xA.1&tagId=312&utm_referrer=http%3A%2F%2Fwww.adaptedmind.com%2Fgradelistresponsive.php%3Fgrade%3D1	

GRADE 2 MODULE 4

Module Title	Message	Assignment / Call to Action	Content Directions	Resource / URL	Alternative to IOS or Notes
Module 4: Addition and Subtraction of Numbers to 1000					
About Module 4	In Module 4, students continue to work with place value units to understand the addition and subtraction algorithms of numbers up to 1000. This work deepens their understanding of base-ten, place value, and properties of operations. It also challenges them to apply their knowledge to one-step and two-step word problems. During this module, students also continue to develop one of the required fluencies of the grade: addition and subtraction within 100.				
	Focus Standards in Module 4				
	<ul style="list-style-type: none"> • CC.2.1.2.B.3 - Use place value understanding and properties of operations to add and subtract within 1000. • CC.2.2.2.A.1 - Represent and solve problems involving addition and subtraction within 100. 				
	Standards for Mathematical Practice <ul style="list-style-type: none"> • MP# 1. Make sense of problems and persevere in solving them • MP# 2. Reason abstractly and quantitatively • MP# 3. Construct viable arguments and critique the reasoning of others • MP# 4. Model with mathematics • MP# 5. Use appropriate tools strategically • MP# 8. Look for and express regularity in repeated reasoning <p>Mathematical Practices resource page on SAS</p>				
	Students will be working on adding and subtracting numbers up to 1000. Students will also be able to solve one and two step work problems during this Module.				
	In Module 4, students will be: *Apply properties of operations as strategies to add and subtract to 100 (commutative property of addition; associative property of addition). *Use addition and subtraction within 100 to solve one- and two-step word problems by using drawings and equations with a symbol for the unknown number to represent the problem. *Add up to four two-digit numbers using strategies based on place value and properties of operations. *Add and subtract within 1000 using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method. Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds. *Explain why addition and subtraction strategies work, using place value and the properties of operations.				
Numbers and Operations: Applying Properties of Operations	In this lesson, students apply properties of operations as strategies to add and subtract (commutative property of addition; associative property of addition) up to 100.				
		TEACHING addition strategies using place value and the properties of operations.	Video introduces addition strategies using place value. Models the process and the importance of explaining your thinking.	https://learnzillion.com/lessons/3118-explain-addition-using-place-value	**Learnzillion requires a FREE teacher account.**
		I CAN explain why addition works using place value and the properties of operations.	Use the Learnzillion lesson noted above. Pause the video at a problem to be solved (eg. 2:00). Have students use the ShowMe App to solve the problem, record a verbal explanation of their solution and draw to explain their thinking.	https://itunes.apple.com/us/app/showme-interactive-whiteboard/id445066279?mt=8	https://play.google.com/store/apps/details?id=com.morriscooke.explaineverything&hl=en
		TEACHING addition and subtraction strategies using place value and properties of operations.	Instructional video models how to explain using addition to explain subtracting using number lines and place value.	https://learnzillion.com/lessons/3120-explain-subtraction-by-using-knowledge-of-addition	**Learnzillion requires a FREE teacher account.**

Module Title	Message	Assignment / Call to Action	Content Directions	Resource / URL	Alternative to IOS or Notes
		I CAN use place value and properties of addition and subtraction to explain my answer.	Use the Learnzillion lesson noted above. Pause the video at a problem to be solved (eg. 3:41). Have students use the ShowMe App to solve the problem, record a verbal explanation of their solution and draw to explain their thinking.	https://itunes.apple.com/us/app/showme-interactive-whiteboard/id445066279?mt=8	https://play.google.com/store/apps/details?id=com.morriscooke.explaineverything&hl=en
		TEACHING adding two-digit numbers with regrouping using place value and base ten.	NCTM Illuminations lesson plan that teaches students to add and represent numbers with base ten blocks. Assessments and extensions included.	http://illuminations.nctm.org/Lesson.aspx?id=3760	
		TEACHING adding two-digit numbers with regrouping using place value and base ten.	Instructional video teaching adding two-digit numbers with regrouping using place value and base ten blocks.	https://www.khanacademy.org/math/early-math/cc-early-math-add-sub-topic/cc-early-math-add-subtract-100/v/addition-with-regrouping	
		I CAN add two-digit numbers with and without regrouping.	Add two-digit numbers with and without regrouping.	https://www.khanacademy.org/math/early-math/cc-early-math-add-sub-topic/cc-early-math-add-subtract-100/e/addition_3	
Numbers and Operations: Solve One- and Two-Step Word Problems	In this lesson, students use addition and subtraction within 100 to solve one- and two-step word problems by using drawings and equations with a symbol for the unknown number to represent the problem.	TEACHING students how to add and subtract using multi-step word problems.	Use this video as a guide to teach students how to solve multi-step word problems.	https://www.khanacademy.org/math/early-math/cc-early-math-add-sub-topic/add-sub-100-word-problems/v/adding-and-subtracting-on-number-line-word-problems	
		TEACHING students to solve multi-step number stories.	Follow along in through the slides and work through solving the multi-step number stories.	https://learnzillion.com/lesson_plans/335	**For Learnzillion you will need to create a free account*
		I CAN solve one and two step word problems that involve addition and subtraction within 100.	Use the Number pieces app to write a number story for the number sentence: $35+42=?$ Write a word problem, solve it using the base ten blocks.	https://itunes.apple.com/us/app/number-pieces-by-math-learning/id605433778?mt=8	https://www.mathlearningcenter.org/web-apps/number-pieces/
		I CAN solve number stories using bar models.	Choose Number 1-50 and Part Whole Model - 2 Parts	https://itunes.apple.com/us/app/thinking-blocks-addition/id668450919?mt=8	http://www.mathplayground.com/tb_addition/thinking_blocks_addition_subtraction.html
		I CAN use mental strategies to solve word problems involving adding and subtracting within 100.	Click on "Add Within 100" and "Word Problems	https://itunes.apple.com/us/app/2nd-grade-splash-math-worksheets/id463471155?mt=8	https://www.splashmath.com/math-skills/second-grade
		I CAN solve number stories.	Use this link to solve addition and subtraction number stories.	http://www.ixl.com/math/grade-2/addition-and-subtraction-word-problems-up-to-100	
Numbers and Operations: Adding Up To Four Two-Digit Numbers	In this lesson, students add up to four two-digit numbers using strategies based on place value and properties of operations.	TEACHING adding up to four 2-digit numbers.	North Carolina Department of Public Instruction Instructional Support Tools, 2nd gr. Mathematics Unpacked Standards. See page 17.	http://www.dpi.state.nc.us/docs/curriculum/mathematics/scos/2.pdf	
		TEACHING students how to add four 2-digit numbers.	This provides teachers several videos to refer to when teaching adding 4-digit numbers.	https://learnzillion.com/resources/73021	
		TEACHING students to add three 2-digit numbers.	This is a game for students to practice adding three 2-digit numbers.	http://www.k-5mathteachingresources.com/support-files/make-100.pdf	
		I CAN solve number stories using bar models.	Choose Number 1-50 and Part Whole Model - 3 Parts	https://itunes.apple.com/us/app/thinking-blocks-addition/id668450919?mt=8	http://www.mathplayground.com/tb_addition/thinking_blocks_addition_subtraction.html
Numbers and Operations: Students Add and Subtract Within 1000	In this lesson, students add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method. The students demonstrate an understanding that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds.	TEACHING students about adding and subtracting within 1000.	View the North Carolina unpacked standards focusing on Page 19.	http://www.dpi.state.nc.us/docs/curriculum/mathematics/scos/2.pdf	

Module Title	Message	Assignment / Call to Action	Content Directions	Resource / URL	Alternative to IOS or Notes
		TEACHING students how to add or subtract within 1000.	This link provides teachers with many strategies for adding or subtracting within 1000.	https://learnzillion.com/resources/72274-use-models-and-drawing-strategies-to-add-and-subtract-within-1000-2-nbt-b-7	
		I CAN create a number using base ten blocks.	Use the Number pieces APP to build 432+135 using base-10 blocks. Take a screenshot. Use this APP to also build 872-354. Take a screenshot.	https://itunes.apple.com/us/app/number-pieces-basic-by-math/id611452042?mt=8	https://www.mathlearningcenter.org/web-apps/number-pieces/
		I CAN solve an addition and subtraction problem.	Use the Show Me app. Bring in the two screenshots from above (each on a new page). Solve the problems and record how you were able to solve them.	https://itunes.apple.com/us/app/showme-interactive-whiteboard/id445066279?mt=8	https://play.google.com/store/apps/details?id=com.morriscooke.explaineverything&hl=en
		I CAN use a bar model to represent addition or subtraction in a word problem.	Take a screenshot of the task and import into the Show Me app. Use the Show Me app to demonstrate your solution.	https://learnzillion.com/resources/86985	
				https://itunes.apple.com/us/app/showme-interactive-whiteboard/id445066279?mt=8	https://play.google.com/store/apps/details?id=com.morriscooke.explaineverything&hl=en
		I CAN solve number stories using bar models.	Choose Number 1-300 and any problem type	https://itunes.apple.com/us/app/thinking-blocks-addition/id668450919?mt=8	http://www.mathplayground.com/tb_addition/thinking_blocks_addition_subtraction.html
		I CAN add to 1000.	Practice adding numbers to 1000.	https://www.khanacademy.org/math/early-math/cc-early-math-add-sub-topic/cc-early-math-add-subtract-1000/e/add-within-1000--level-1	
		I CAN subtract within 1000.	Practice subtracting numbers to 1000.	https://www.khanacademy.org/math/early-math/cc-early-math-add-sub-topic/cc-early-math-add-subtract-1000/e/subtract-within-1000--level-1	

GRADE 2 MODULE 5

Module Title	Message	Assignment / Call to Action	Content Directions	Resource / URL	Alternative for IOS or Notes
Module 5: Preparation for Multiplication and Division					
About Module 5	In Module 5, students extend their understanding of a unit to build the foundation for multiplication and division. Making equal groups of "four apples each" establishes the unit "four apples" (or just four) that can then be counted: 1 four, 2 fours, 3 fours, etc. Relating the new unit to the one used to create it develops the idea of multiplication: 3 groups of 4 apples equal 12 apples (or 3 fours are 12).				
	Focus Standards in Module 5 CC.2.2.A.3 - Work with equal groups of objects to gain foundations for multiplication.				
	Standards for Mathematical Practice MP# 2. Reason abstractly and quantitatively MP# 3. Construct viable arguments and critique the reasoning of others MP# 7. Look for and make use of structure MP# 8. Look for and express regularity in repeated reasoning <u>Mathematical Practices</u> resource page on SAS				
	Teachers will find in Module 5 resources for making equal groups, odd and even numbers, and building arrays.				
	In Module 5 students will be able to: <ul style="list-style-type: none"> Determine whether a group of objects (up to 20) has an odd or even number. Make equal groups of objects and count them. Use addition to find the total number of objects arranged in rectangular arrays. 				
	Click on the "i" button beside each resource/url to find additional information and/or step by step instructions. Watch You Tube videos on Viewpure.com to eliminate ads.				
A Group of Objects (up to 20) Have An Odd or Even Number of Members?	In this lesson, students determine whether a group of objects (up to 20) has an odd or even number of members and write an equation to express an even number as a sum of two equal addends.	TEACHING students about odd and even numbers.	Read page 11 of the North Carolina unpacked standards.	http://www.dpi.state.nc.us/docs/curriculum/mathematics/scos/2.pdf	
		TEACHING students how to determine even numbers by dividing a number into pairs.		https://learnzillion.com/lesson_plans/691-determine-even-numbers-by-dividing-a-number-into-pairs	
		TEACHING students how to write an equation to express an even number as the sum of two equal addends.		https://learnzillion.com/lesson_plans/689-identify-quantities-that-can-create-equal-groups-by-using-doubles-facts	LearnZillion requires a FREE account.
		TEACHING students how to determine if a number is even or odd by looking at the ones place.		https://learnzillion.com/lesson_plans/702-determine-whether-a-number-is-odd-or-even-by-looking-at-the-ones-place	
		TEACHING students how to determine even numbers by dividing a number into pairs.	This is an activity for students to engage in to actively explore even and odd numbers.	http://www.k-5mathteachingresources.com/support-files/even-odd-scoop.pdf	
		I CAN GROUP sets of odd and even numbers and write the equation below the illustration.	1. Use Doodle Buddy to create groups of objects. 2. Below each group they should label if the group is "odd" or "even." 3. Write an equation below the representation.	https://itunes.apple.com/us/app/doodle-buddy-paint-draw-scribble/id313232441?mt=8	https://play.google.com/store/apps/details?id=drawingpad.doodle.vandu.doodlepad
Equal Groups of Objects	In this lesson, students make equal groups of objects and count them, partition a set into equal groups, and arrange a group of objects into an array.	TEACHING about arrays.	Read page 12 of NC unpacked standards.	http://www.dpi.state.nc.us/docs/curriculum/mathematics/scos/2.pdf	
		TEACHING students how to organize objects into arrays.	The lesson demonstrates how arrays are configured.	https://learnzillion.com/lesson_plans/8267-understanding-arrays	
		I CAN solve a real world problem using equal groups.	Do Level A only. Show your thinking in the Show Me App. You may use the number pieces app if that is helpful and import it into the Show Me App.	http://www.insidemathematics.org/assets/problems-of-the-month/the%20wheel%20shop.pdf	
				https://itunes.apple.com/us/app/number-pieces-basic-by-math/id611452042?mt=8	https://www.mathlearningcenter.org/web-apps/number-pieces/

Module Title	Message	Assignment / Call to Action	Content Directions	Resource / URL	Alternative for IOS or Notes
				https://itunes.apple.com/us/app/showme-interactive-whiteboard/id445066279?mt=8	https://play.google.com/store/apps/details?id=com.morriscooke.explaineverything&hl=en
Using addition to find the total number of objects.	In this lesson, students use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends.	TEACHING how to represent an array with addition equations.		https://learnzillion.com/lessons/3933-write-2-addition-sentences-using-an-array	
		TEACHING how to draw an array to match a repeated addition sentence.		https://learnzillion.com/lessons/3934-draw-an-array	
		TEACHING how to represent an array with repeated addition.	An activity for students where they build arrays.	http://www.k-5mathteachingresources.com/support-files/roll-a-rectangular-array.pdf	
		TEACHING how to represent an array with repeated addition.	A task for students to solve involving arrays.	https://www.illustrativemathematics.org/content-standards/2/OA/C/4/tasks/3	
		I CAN create an array using columns and rows with manipulatives.	Create an array with pieces of paper or blocks and take a picture.		
		I CAN express the representation of an array in an equations.	1. Import the picture into the Show Me app 2. Write an equation below array.	https://itunes.apple.com/us/app/showme-interactive-whiteboard/id445066279?mt=8	https://play.google.com/store/apps/details?id=com.morriscooke.explaineverything&hl=en

GRADE 2 MODULE 6

Module Title	Message	Assignment / Call to Action	Content Directions	Resource / URL	Alternative to IOS or Notes
Module 6: Comparison, Addition and Subtraction with Length and Money					
About Module 6	Module 6 provides another opportunity for students to practice their algorithms and problem-solving skills with perhaps the most well-known, interesting units of all: dollars, dimes, and pennies. As they study money and length, students represent data given by measurement and money data using picture graphs, bar graphs, and line plots. Students also delve into measuring time.				
	Focus Standards in Module 6 <u>CC.2.4.2.A.3</u> - Solve problems and make change using coins and paper currency with appropriate symbols. <u>CC.2.4.2.A.4</u> - Represent and interpret data using line plots, picture graphs, and bar graphs. <u>CC.2.4.2.A.2</u> - Tell and write time to the nearest five minutes using both analog and digital clocks.				
	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# 8. Look for and express regularity in repeated reasoning <u>Mathematical Practices</u> resource page on SAS				
Measurement Time and Money, Represent and Interpret Data	Students will be exploring time, money, and interpreting data throughout Module 6.				
	In Module 6, students will be able to: <ul style="list-style-type: none"> Solve word problems involving money. Make a line plot to show measurement data. Draw a picture graph and a bar graph to represent data. Tell and write time from analog and digital clocks to the nearest five minutes. 				
	Click on the "i" button beside each resource/url to find additional information and/or step by step instructions. Watch You Tube videos on Viewpure.com to eliminate ads.				
Measurement Time and Money, Represent and Interpret Data: Solve Word Problems	Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using \$ and ¢ symbols appropriately.				
		TEACHING students word problems involving dollar bills, quarters, dimes, nickels, and pennies using \$ and ¢ appropriately.	View the North Carolina Standards on page 29 for more information.	http://www.dpi.state.nc.us/docs/curriculum/mathematics/scos/2.pdf	
		TEACHING students word problems involving dollar bills, quarters, dimes, nickels, and pennies using \$ and ¢ appropriately.	A series of videos regarding solving money related math problems.	https://learnzillion.com/resources/72432-solve-word-problems-involving-money-using-skip-counting-mental-math-and-visual-representations-2-md-c-8	
		TEACHING students word problems involving dollar bills, quarters, dimes, nickels, and pennies using \$ and ¢ appropriately.	A game for students to play regarding money.	http://www.k-5mathteachingresources.com/support-files/money-board.pdf	
		TEACHING students how to solve number stories regarding money.	A task for students to solve regarding money and number sentences.	https://www.illustrativemathematics.org/illustrations/1071	
		I CAN solve addition and subtraction number stories using coins.	Use the link to solve addition and subtraction number stories	http://www.ixl.com/math/grade-2/purchases-do-you-have-enough-money-up-to-1-dollar	
		I CAN solve word problems using coins.	Use this link to solve number stories.	https://www.khanacademy.org/math/early-math/cc-early-math-measure-data-topic/cc-early-math-time-money-topic/e/counting-money--us-	

Module Title	Message	Assignment / Call to Action	Content Directions	Resource / URL	Alternative to IOS or Notes
Measurement Time and Money, Represent and Interpret Data: Line Plots and Measurement Data	Make a line plot to show measurement data of the lengths of several objects to the nearest whole-number unit.	TEACHING about line plots.	View this video for more information about creating a line plot from a set of data. Use the line plot to answer questions.	https://www.khanacademy.org/math/early-math/cc-early-math-measure-data-topic/cc-early-math-data/v/introduction-to-line-plots	
		I CAN analyze line plots to answer questions.	Use link to solve problems on line plots.	https://www.khanacademy.org/math/early-math/cc-early-math-measure-data-topic/cc-early-math-data/e/solving-problems-with-line-plots-1	
		I CAN interpret line plots.	Follow the link to solve line plot problems.	http://www.ixl.com/math/grade-2/interpret-line-plots	
		I CAN create line plots.		https://www.khanacademy.org/math/early-math/cc-early-math-measure-data-topic/cc-early-math-data/e/creating-line-plots-1	
		I CAN create line plots with information provided.	Follow this link to create line plots.	http://www.ixl.com/math/grade-2/create-line-plots	
		I CAN represent data on a line plot.	Choose 2nd Grade, Click *Data, *Represent Data on a Line Plot and answer the questions.	https://itunes.apple.com/us/app/2nd-grade-splash-math-worksheets/id463471155?mt=8	https://www.splashmath.com/math-skills/second-grade
Measurement Time and Money, Represent and Interpret Data: Represent A Data Set With Up To Four Categories.	In this lesson, students draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put together, take-apart, and compare problems using information presented in the graph.	I CAN create a line plot.	Measure everyone's pencil in the classroom to the nearest inch. Using the APP Doodlebuddy, create a line plot of the lengths. Choose stamps to use to create your line plot points and data.	https://itunes.apple.com/us/app/doodle-buddy-for-ipad-paint/id364201083?mt=8	https://play.google.com/store/apps/details?id=drawingpad.doodle.vandu.doodlepad
		TEACHING about picture and bar graphs to represent data.	View the North Carolina standards on pages 30-32 for detailed information.	http://www.dpi.state.nc.us/docs/curriculum/mathematics/scos/2.pdf	
		TEACHING about picture graphs.	View video to learn more about picture graphs.	https://learnzillion.com/lesson_plans/5697-read-a-picture-graph	
		TEACHING a lesson collecting data and creating a bar graph.	Use Part A of this lesson to help students collect data and create bar graphs.	http://www.insidemathematics.org/assets/problems-of-the-month/pick%20a%20pocket.pdf	
		I CAN solve bar graph problems.	Use the 2nd Grade Splash Math APP to solve picture and bar graph problems (click 2nd grade, Data, Represent data on picture or bar graph) Take a screenshot of one of the problems	https://itunes.apple.com/us/app/2nd-grade-splash-math-worksheets/id463471155?mt=8	https://www.splashmath.com/math-skills/second-grade
		I CAN compare the data on the bar graph.	Using the Show Me APP (or another creation APP), import the screenshot of the bar graph. Explain to your audience what number was the smallest and largest in your set of data. What was the difference between your two numbers?	https://itunes.apple.com/us/app/showme-interactive-whiteboard/id445066279?mt=8	https://play.google.com/store/apps/details?id=com.morriscooke.explaineverything&hl=en
Measurement Time and Money, Represent and Interpret Data: Telling and Writing Time	In this lesson, students tell and write time from analog and digital clocks to the nearest five minutes.	I CAN create bar graphs using the data provided.	Use the Kids Math Graphs APP to create bar graphs	https://itunes.apple.com/us/app/kids-math-graphs-data-worksheets/id635353629?mt=8	https://jr.brainpop.com/science/beascientist/tallychartsandbargraphs/picturemaker/
		TEACHING students how to tell time.	A series of videos regarding telling time.	https://learnzillion.com/resources/73046-tell-and-write-time-to-the-nearest-five-minutes-using-a-m-and-p-m-2-md-c-7	
		I CAN tell time.	View this video to tell time to the nearest hour.	https://www.youtube.com/watch?v=RBvmO7NgUp0#t=25	https://jr.brainpop.com/science/beascientist/tallychartsandbargraphs/easyquiz/

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		I CAN match analog clocks with the time.	Use the APP Telling Time Quiz to match a time with a digital clock.	https://itunes.apple.com/us/app/telling-time-digital-clock/id444923317?mt=8	https://play.google.com/store/apps/details?id=com.giggleup.ITTAFree
		I CAN match a digital clock with an analog clock.	Use this site to match a digital clock with an analog clock.	http://www.ixl.com/math/grade-2/match-analog-and-digital-clocks	
		I CAN tell time by waking the rooster.	Use the APP Wake the Rooster to set an alarm clock to wake the old rooster.	https://itunes.apple.com/us/app/wake-rooster-by-telling-time/id509803117?mt=8	http://www.abcya.com/telling_time.htm

GRADE 2 MODULE 7

Module Title	Message	Assignment / Call to Action	Content Directions	Resource / URL	Alternative to IOS or Notes
Module 7: Angles, Faces, and Vertices of Shapes, & Fractions of Shapes					
About Module 7	In Module 7, students investigate, describe, and reason about the composition and decomposition and of shapes to form other shapes. Through building, drawing, and analyzing two- and three-dimensional shapes, students develop a foundation for understanding area, volume, congruence, similarity, and symmetry in later grades.				
	Focus Standards in Module 7 <u>CC.2.3.2.A.1</u> - Analyze and draw two- and three-dimensional shapes having specified attributes. <u>CC.2.3.2.A.2</u> - Use the understanding of fractions to partition shapes into halves, quarters, and thirds.				
	Standards for Mathematical Practice MP# 2. Reason abstractly and quantitatively MP# 3. Construct viable arguments and critique the reasoning of others MP# 4. Model with mathematics MP# 6. Attend to precision <u>Mathematical Practices</u> resource page on SAS				
	In Module 7 students begin to explore two and three dimensional shapes. Students will also begin to develop their understanding of dividing circles and rectangles equally.				
	In Module 7, students will be able to: <ul style="list-style-type: none"> Recognize and draw shapes having specified attributes. Partition circles and rectangles into two,three, or four equal shares. 				
	Click on the "i" button beside each resource/url to find additional information and/or step by step instructions. Watch You Tube videos on Viewpure.com to eliminate ads.				
Geometry: Recognizing and Drawing Shapes	In this lesson, students recognize and draw shapes having specified attributes. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.				
		TEACHING identification of a triangle, quadrilateral, pentagon, hexagon, and cube.		http://viewpure.com/xgQJcN-hMpc	
		I CAN practice identifying shapes and their attributes.	Go to Geometry, then select two dimensional shapes	https://itunes.apple.com/us/app/2nd-grade-splash-math-worksheets/id463471155?mt=8	https://www.splashmath.com/math-skills/second-grade
		I CAN practice creating the shapes.	Choose Play.	http://mrnussbaum.com/shape-maker-ipad.html	
		I CAN form shapes to add to an independent glossary to demonstrate knowledge of the shapes.	Use the Geoboard App to form and take screenshots of shapes on the pegboard. Create a triangle, quadrilateral, pentagon, and hexagon.	https://itunes.apple.com/us/app/geoboard-by-math-learning/id519896952?mt=8	https://www.mathlearningcenter.org/web-apps/geoboard/
		I CAN create, label, and define shapes in a shape glossary.	Import screenshots of individual shapes into the Show Me App (or any "creation" app) and label shapes and their attributes.	https://itunes.apple.com/us/app/showme-interactive-whiteboard/id445066279?mt=8	https://play.google.com/store/apps/details?id=com.morriscooke.explaineverything&hl=en
Geometry: Partition Circles and Rectangles	In this lesson, students partition circles and rectangles into two,three, or four equal shares, recognize that equal shares of identical wholes need not have the same shape.	TEACHING students to partition circles and rectangles.	Refer to the North Carolina Unpacked standards for more information on this standard.	http://www.dpi.state.nc.us/docs/curriculum/mathematics/scos/2.pdf	
		TEACHING students the definition of partition and equal shares.		https://learnzillion.com/lesson_plans/2711-5-understand-that-shapes-can-be-partitioned-into-equal-parts-c?card=41370#esson	
		I CAN partition a circle and rectangle to display 2 equal halves and 4 equal quarters.	Save as an image and import into the Show Me App to color.	http://media-cache-ak0.pinimg.com/736x/de/e4/0a/dee40ab17f17095e2f77c4ed4241e946.jpg	
				https://itunes.apple.com/us/app/showme-interactive-whiteboard/id445066279?mt=8	https://play.google.com/store/apps/details?id=com.morriscooke.explaineverything&hl=en

Module Title	Message	Assignment / Call to Action	Content Directions	Resource / URL	Alternative to IOS or Notes
		I can partition a rectangle into halves and fourths.	Use the geoboard app to create a rectangle. Divide it into halves and fourths in different ways. Take a screenshot and share it with a partner.	https://itunes.apple.com/us/app/geoboard-by-math-learning/id519896952?mt=8	https://www.mathlearningcenter.org/web-apps/geoboard/