

Somers Point School District



Curriculum

Mathematics

Grade Two

July 2016

Board Approved: September 2016

Table of Contents

Monroe Township Schools Administration and Board of Education Members

Page 3

Acknowledgments

Page 4

District Vision, Mission, and Goals

Page 5

Introduction/Philosophy/Educational Goals

Page 6

National and State Standards

Page 7

SOMERS POINT SCHOOL DISTRICT

Board of Education:

Board of Education

Mr. Richard Gray, President

Mr. Wes Kazmarck, Vice President

Mrs. Karen Broomall

Mr. John Conover

Mr. Todd Fath

Mrs. Staci Endicott

Mr. Michael O'Brien

Mr. Michael Sweeder

Mr. Nicholas Wagner

Interim Superintendent of Schools

Dr. Thomas Baruffi

Secretary to the Superintendent:

Mrs. Mary Ann Duffey

Business Administrator/Board Secretary:

Ms. Suzanne Keller

Acknowledgments

The following individuals are acknowledged for their assistance in the preparation of this Curriculum Management System:

Writers Names: Patty Jensen, Joan Timmons

Supervisor of Curriculum: Kim Tucker

Secretarial Staff: Suzanne Klotz

Somers Point Schools

This document reflects the collaboration of teachers, staff, students, parents, and the Board of Education to define our mission, vision and beliefs to guide our work.

Our Mission

Empower each student to make responsible choices, meet challenges, achieve personal success, and contribute to a global society as they apply the New Jersey Core Curriculum Standards to become autonomous, lifelong learners who are literate problem solvers across all disciplines. This is accomplished through:

- *Offering diverse, challenging, effective and progressive programs in a safe, nurturing environment*
- *Providing optimal facilities and resources*
- *Mastering the skills and tools needed for success*
- *Facilitating an educational partnership with home, school and community*

Our Beliefs

Beliefs: We believe that our empowered learners:

- Participate in educational programs that are designed to meet the needs of learners while providing challenging activities in the context of real life situations
- Are aware of community issues and take part in activities to better their community
- Acquire basic skills in obtaining information, thinking critically, solving problems and communicating effectively
- Develop intellectual curiosity and the ability to access information as needed
- Become reflective learners who have an understanding of their own strengths and weaknesses
- Develop the aptitudes and skills to adjust to a changing world and an unpredictable future
- Are lifetime learners who value and accept learning as a continuing and dynamic process affecting all aspects of life
- Value the integrity of all individuals and recognize their own ability to progress academically, socially, and emotionally

Our Vision

The students of the Somers Point School District will demonstrate personal growth over time in relation to individualized goals aligned to the New Jersey Student Learning Standards. Achievement is evident when students:

- Take academic risks
- Transfer or extend content area knowledge
- Are intrinsically motivated life-long learners
- Are global learners who collaborate beyond the confines of the classroom or school
- Demonstrate social growth
- Are meta-cognitive thinkers
- Solve real-world problems

To foster student achievement Somers Point Educators:

- Promote student-centered learning
- Explicitly communicate the purpose of the lesson and how it fits into students' broader learning
- Provide hands-on learning activities
- Encourage collaboration
- Cultivate a safe environment and a strong classroom community
- Differentiate instruction
- Know the content area, curriculum, and their students
- Integrate technology
- Uncover and capitalize on student interests
- Use assessment data to make instructional decisions
- Commit to life-long learning to improve their practice

INTRODUCTION, PHILOSOPHY OF EDUCATION, AND EDUCATIONAL GOALS

Philosophy

Mathematics is a universal language that allows us to make sense of fundamental principles, thoughts, ideas, patterns, problems, and phenomena surrounding us and to communicate our understanding and resolutions of these concepts to others. In order to develop and enrich student understanding of mathematics, the Somers Point School District will provide a comprehensive and cohesive mathematics curriculum in which mathematical topics are explored and analyzed with significant depth.

The environment in every mathematics classroom will provide the following: active and responsible engagement in the learning of mathematics, an atmosphere of risk taking, in-depth investigation and analysis of intriguing situations and problems, ample opportunities for reflection and interaction, and connections to everyday life.

Instruction in every mathematics classroom will provide a rich variety of cognitively appropriate strategies and resources so that all students have opportunities to experience both success and challenge.

As a result of this curriculum, environment and instruction, Somers Point School District students will experience the utility, power and beauty of mathematics as they become proficient in using and applying fundamental mathematical concepts and skills including: computation, critical thinking, reasoning, and resourceful problem solving.

Educational Goals

In Grade 2, instructional time should focus on four critical areas: (1) extending understanding of base-ten notation; (2) building fluency with addition and subtraction; (3) using standard units of measure; and (4) describing and analyzing shapes.

1. Students extend their understanding of the base-ten system. This includes ideas of counting in fives, tens, and multiples of hundreds, tens, and ones, as well as number relationships involving these units, including comparing. Students understand multi-digit numbers (up to 1000) written in base-ten notation, recognizing that the digits in each place represent amounts of thousands, hundreds, tens, or ones (e.g., 853 is 8 hundreds + 5 tens + 3 ones).
2. Students use their understanding of addition to develop fluency with addition and subtraction within 100. They solve problems within 1000 by applying their understanding of models for addition and subtraction, and they develop, discuss, and use efficient, accurate, and generalizable methods to compute sums and differences of whole numbers in base-ten notation, using their understanding of place value and the properties of operations. They select and accurately apply methods that are appropriate for the context and the numbers involved to mentally calculate sums and differences for numbers with only tens or only hundreds.
3. Students recognize the need for standard units of measure (centimeter and inch) and they use rulers and other measurement tools with the understanding that linear measure involves an iteration of units. They recognize that the smaller the unit, the more iterations they need to cover a given length.
4. Students describe and analyze shapes by examining their sides and angles. Students investigate, describe, and reason about decomposing and combining shapes to make 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.

Module 1: Sums and Differences to 100
Grade Level: Second Grade
Timeframe: 10 days

Essential Questions

How can strategies be used to quickly add and subtract?

Would drawings or concrete materials be helpful in this situation?

Which is the best strategy to use to solve addition or subtraction problems?

Standards

2.OAA.1 **Use** addition and subtraction within 100 to **solve** one- and two-step word problems involving situations of **adding to, taking from, putting together, taking apart, and comparing**, with unknowns in all positions, e.g., by **using** drawings and equations with a symbol for the unknown number to **represent** the problem.

2.OA.2 Fluently **add** and **subtract** within 20 **using** mental strategies. (See standard 1.OA.6 for a list of mental strategies.) By end of Grade 2, **know** from memory all sums of two one-digit numbers.

2.NBT.5 Fluently **add** and **subtract** within 100 **using strategies** based on place value, properties of operations, and/or the relationship between addition and subtraction.

Highlighted Career Ready Practices:

CRP2. Apply appropriate academic and technical skills

CRP4. Communicate clearly and effectively and with reason

CRP6. Demonstrate creativity and innovation.

CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.

CRP12. Work productively in teams while using cultural global competence.

--

Instructional Plan				Reflection
Pre-assessment				
SLO - WALT	Student Strategies	Formative Assessment	Activities and Resources	Reflection
SWBAT represent problems involving addition. SWBAT solve problems involving addition. SWBAT solve problems involving subtraction. SWBAT add within 20 using mental strategies. SWBAT subtract within 20 using mental strategies. SW know from memory sums of two one-digit numbers. SWBAT use strategies based on place value, properties of operations, or the relationship between addition and subtraction to add and subtract within 100.	Fluently add one-digit to two-digit numbers at least through 100 using place value understanding, properties of operations, and the relationship between addition and subtraction Represent and solve problems involving addition and subtraction Add and subtract within 20 Use place value understanding and properties of operations to add and subtract.	Problem Set Exit Ticket Homework Observation Application Problem Mid-Module Fluency	100-bead Rekenrek <i>f</i> 5-group column <i>f</i> Dice <i>f</i> Hide Zero cards (Lesson 2 Template 1) <i>f</i> Linking cubes <i>f</i> Number bond <i>f</i> Personal white boards <i>f</i> Place value chart <i>f</i> Quick ten (vertical line representing a unit of ten) <i>f</i> Ten-frame cards(Lesson 1 Fluency Template 1) Parent Homework Helper Parent Video Videos to introduce new concepts	
Summative Written Assessments				
See below				

Summative Performance Assessment	
<p>Daily, ongoing formative assessment strategies included in each module (ex. Activities, exit tickets, homework activities such as games, practice, and online learning, etc.).</p> <p>A Mid-Module assessment Task is provided for each module to address the first half of the student outcomes for each module.</p> <p>An End of the Module Assessment Task is provided to address the student outcomes for the module as a whole</p>	

Module 2 Title: Addition and Subtraction of Length Units Grade Level: Second Grade Timeframe: 12 Days	
Essential Questions	
<p>How can tools be used to determine measurement?</p> <p>How can lengths be compared and contrasted?</p>	
Standards	
<p>2.MD.1 Measure the <u>length</u> of an <u>object</u> by selecting and using appropriate <u>tools</u> such as <u>rulers</u>, <u>yardsticks</u>, <u>meter sticks</u>, and <u>measuring tapes</u>.</p> <p>2.MD.2 Measure the <u>length</u> of an <u>object</u> twice, using <u>length units</u> of different <u>lengths</u> for the two</p>	

measurements; describe how the two measurements **relate** to the size of the unit chosen.

2.MD.3 **Estimate** lengths using units of inches, feet, centimeters, and meters.

2.MD.4 **Measure** to **determine** how much longer one object is than another, **expressing** the length difference in terms of a standard length unit.

2.MD.5 Use addition and subtraction within 100 to **solve** word problems **involving** lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem.

2.MD.6 **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.

Highlighted Career Ready Practices:

CRP2. Apply appropriate academic and technical skills

CRP4. Communicate clearly and effectively and with reason

CRP6. Demonstrate creativity and innovation.

CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.

CRP12. Work productively in teams while using cultural global competence.

Instructional Plan				Reflection
Pre-assessment				
SLO - WALT	Student Strategies	Formative Assessment	Activities and Resources	Reflection

<p>SWBAT use Measurement and Data to Help Me Understand Math</p> <p>SWBAT use different tools to measure objects.</p> <p>SWBAT compare the length of an object using two different units of measurement.</p> <p>SWBAT estimate the lengths of objects.</p> <p>SWBAT compare the length of two different objects</p> <p>SWBAT use addition and subtraction to solve measurement problems. SWBAT make and use a number line.</p>	<p>Connect measurement with physical units by using multiple copies of the same physical unit to measure.</p> <p>Use iteration with one physical unit to measure.</p> <p>Apply concepts to create unit rulers and measure lengths using unit rulers.</p> <p>Measure various objects using centimeter rulers and meter sticks.</p> <p>Develop estimation strategies by applying prior knowledge of length and using mental benchmarks.</p> <p>Measure and compare lengths using centimeters and meters</p> <p>Solve addition and subtraction word problems using the ruler as a number line.</p>	<p>Problem Set Exit Ticket Homework Observation Application Problem Mid-Module Fluency</p>	<p>5-group formations: 5-groups (and 5-group cards), 5-group rows, 5-group column Hide Zero cards Number bonds Number path Rekenrek Homework White boards Parent Homework Helper Parent Video Videos to introduce new concepts Exit Tickets Problem Sets Application Problem/Notebook Fluency Practice</p>	
Summative Written Assessments				
See below				
Summative Performance Assessment				

Daily, ongoing formative assessment strategies included in each module (ex. Activities, exit tickets, homework activities such as games, practice, and online learning, etc.).

A Mid-Module assessment Task is provided for each module to address the first half of the student outcomes for each module.

An End of the Module Assessment Task is provided to address the student outcomes for the module as a whole

Module 3 Title: Place Value, Counting, and Comparison of Numbers to 1000

Grade Level: Second Grade

Timeframe: 25 days

Essential Questions

How can a number be represented in different ways?

How does the position of the digits in a number affect its value?

Standards

2.NBT.1 **Understand** that the three digits of a three-digit number **represent** amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. **Understand** the following as special cases: a. 100 can be thought of as a bundle of ten tens—called a "hundred." b. The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones).

2.NBT.2 **Count** within 1000; **skip-count** by 5s , 10s, and 100s.

2.NBT.3 **Read** and **write** numbers to 1000 **using** base-ten numerals, number names, and expanded form.

2.NBT.4 **Compare** two three-digit numbers based on meanings of the hundreds, tens, and ones digits, **using** $>$, $=$, and $<$ symbols to **record** the results of comparisons.

Highlighted Career Ready Practices:

CRP2. Apply appropriate academic and technical skills

CRP4. Communicate clearly and effectively and with reason

CRP6. Demonstrate creativity and innovation.

CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.

CRP12. Work productively in teams while using cultural global competence.

Instructional Plan				Reflection
Pre-assessment				
SLO - WALT	Student Strategies	Formative Assessment	Activities and Resources	Reflection
<p>SWBAT Use Number Sense and Place Value to Help Me Understand Math</p> <p>SWBAT understand and use hundreds, tens and ones.</p> <p>SWBAT count to 1,000 using 1s, 5s, 10s and 100s.</p> <p>SWBAT read and write numbers to 1,000 in different ways.</p> <p>SWBAT compare three-digit numbers</p>	<p>Bundle and count ones, tens, and hundreds to 1,000.</p> <p>Count up and down between 100 and 220 using ones and tens. Count up and down between 90 and 1,000 using ones, tens, and hundreds</p> <p>Write base ten three-digit numbers in unit form; show the value of each digit.</p> <p>Write base ten numbers</p>	<p>Problem Set</p> <p>Exit Ticket</p> <p>Homework</p> <p>Observation</p> <p>Application</p> <p>Problem</p> <p>Mid-Module Fluency</p>	<p>2 boxes of 1,000 straws per class of 25</p> <p>Clock number line (details in Lesson 1 Fluency Practice)</p> <p>Dice, 1 per pair</p> <p>Dienes blocks</p> <p>Hide Zero cards (also known as place value cards) showing numbers 1–5, 10–50, and 100—500 (1 small set per student) (Lesson 4 Template 1))</p> <p>Hundreds place value chart (Lesson 4 Template 2)</p> <p>Meter strip (Lesson 1 Template)</p> <p>Number spelling activity sheet (Lesson 7 Activity Sheet)</p> <p>Personal white boards</p> <p>Place value box (details in Lesson 4 Concept Development)</p> <p>Place value cards to 1,000, 1 large teacher set</p> <p>Place value disks: suggested minimum of one set per pair (18 ones, 18 tens, 18 hundreds, and 1 one thousand)</p> <p>Play money: \$1, \$5, \$10, and \$100 bills (10 ones, 1</p>	

<p>using $<$, $=$, and $>$.</p>	<p>in expanded form.</p> <p>Write, read, and relate base ten numbers in all forms.</p> <p>Count from \$10 to \$1,000 on the place value chart and the empty number line</p> <p>Count the total value of ones, tens, and hundreds with place value disks.</p> <p>Change 10 ones for 1 ten, 10 tens for 1 hundred, and 10 hundreds for 1 thousand.</p> <p>Compare two three-digit numbers using $<$, $>$, and $=$ when there are more than 9 ones or 9 tens.</p> <p>Model 1 more and 1 less, 10 more and 10 less, and 100 more and 100 less when changing the hundreds place.</p>		<p>five, 12 tens, and 10 hundreds per pair), and a single set of 16 pennies, 13 dimes Rubber bands, 16 per pair Small plastic bags (small resealable bags) Homework Parent Homework Helper Parent Video Videos to introduce new concepts Exit Tickets Problem Sets Application Problem/Notebook Fluency</p>	
--	--	--	--	--

	Complete a pattern counting up and down.			
Summative Written Assessments				
See Below				
Summative Performance Assessment				
<p>Daily, ongoing formative assessment strategies included in each module (ex. Activities, exit tickets, homework activities such as games, practice, and online learning, etc.).</p> <p>A Mid-Module assessment Task is provided for each module to address the first half of the student outcomes for each module.</p> <p>An End of the Module Assessment Task is provided to address the student outcomes for the module as a whole</p>				

<p>Module 4 Title: Addition and Subtraction Within 200 With Word Problems to 100</p> <p>Grade Level: Second Grade</p> <p>Timeframe: 35 days</p>
Essential Questions
<p>How can tools be used to determine measurement?</p> <p>How can lengths be compared and contrasted?</p>

What strategies can be used to add and subtract units of measure?

What tools help to organize data?

How can data be displayed in different ways?

How can graphs be used to organize and interpret data?

Standards

2.OA.1 Use addition and subtraction within 100 to **solve** one- and two-step word problems involving situations of **adding to, taking from, putting together, taking apart, and comparing**, with unknowns in all positions, e.g., by **using** drawings and equations with a symbol for the unknown number to represent the problem.

2.NBT.5 Fluently **add** and **subtract** within 100 using strategies based on place value, properties of operations, and/or the relationship between **addition** and **subtraction**.

2.NBT.6 **Add** up to four two-digit numbers **using** strategies based on place value and properties of Operations.

2.NBT.7 **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.

2.NBT.8 Mentally **add** 10 or 100 to a given number 100–900, and mentally **subtract** 10 or 100 from a given number 100–900.

2.NBT.9 **Explain** why **addition** and **subtraction** strategies work, using place value and the properties of operations. (Explanations may be supported by drawings or objects.)

Highlighted Career Ready Practices:

CRP2. Apply appropriate academic and technical skills

CRP4. Communicate clearly and effectively and with reason

CRP6. Demonstrate creativity and innovation.

CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.

CRP12. Work productively in teams while using cultural global competence.

Instructional Plan				Reflection
Pre-assessment				
SLO - WALT	Student Strategies	Formative Assessment	Activities and Resources	Reflection
SWBAT Use Measurement and Data to Help Me Understand Math	Relate 1 more, 1 less, 10 more, and 10 less to addition and subtraction of 1 and 10. Add and subtract multiples of	Problem Set Exit Ticket Homework Observation Application	Arrow notation (arrow way) Chip model Hide Zero cards Number bond Personal white boards Place value chart (Template in Lesson 1) Place	

<p>SWBAT use addition and subtraction to solve measurement problems.</p>	<p>10 and some ones within 100.</p> <p>Solve one- and two-step word problems within 100 using strategies based on place value.</p>	<p>Problem Mid-Module Fluency</p>	<p>value disk sets (19 ones, 19 tens, 18 hundreds, 1 one thousand per set) Rekenrek Tape diagram White Boards Homework Parent Homework Helper Parent Video Videos to introduce new concepts Exit Tickets Problem Sets Application Problem/Notebook Fluency</p>	
<p>SWBAT make and use a number line.</p>	<p>Use manipulatives to represent the composition of 10 ones as 1 ten with two-digit addends.</p>			
<p>SWBAT count money to help me solve word problems.</p>	<p>Relate addition using manipulatives to a written vertical method.</p>			
<p>SWBAT make a table to organize data.</p>	<p>Use math drawings to represent the composition when adding a two-digit to a three-digit addend.</p>			
<p>SWBAT use a table to make a line plot.</p>	<p>Represent subtraction with and without the decomposition of 1 ten as 10 ones with manipulatives.</p>			
<p>SWBAT Use Addition and Subtraction to Help Me Understand Math</p>	<p>Use math drawings to represent subtraction with and without decomposition and relate drawings to a written method.</p>			
<p>SWBAT use strategies to solve addition word problems.</p>	<p>Represent subtraction with and without the decomposition when there is a three-digit</p>			

SWBAT use strategies to solve subtraction word problems.	minuend.			
Summative Written Assessments				
See Below				
Summative Performance Assessment				
<p>Daily, ongoing formative assessment strategies included in each module (ex. Activities, exit tickets, homework activities such as games, practice, and online learning, etc.).</p> <p>A Mid-Module assessment Task is provided for each module to address the first half of the student outcomes for each module.</p> <p>An End of the Module Assessment Task is provided to address the student outcomes for the module as a whole.</p>				

<p>Module 5 Title: Addition and Subtraction Within 1000 with Word Problems to 100</p> <p>Grade Level: Second Grade</p> <p>Timeframe: 24 days</p>
Essential Questions
<p>How can strategies help to quickly add and subtract?</p> <p>Would drawings or concrete materials be helpful in this situation?</p> <p>Which is the best strategy to use to solve this addition or subtraction problem?</p> <p>How do I explain my mathematical thinking?</p>

Why is it important to explain mathematical thinking?

Standards

Use place value understanding and properties of operations to add and subtract.

2.NBT.7 **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.

2.NBT.8 Mentally **add** 10 or 100 to a given number 100–900, and mentally **subtract** 10 or 100 from a given number 100–900.

2.NBT.9 Explain why addition and subtraction strategies work, using place value and the properties of operations. (Explanations may be supported by drawings or objects.)

Highlighted Career Ready Practices:

CRP2. Apply appropriate academic and technical skills

CRP4. Communicate clearly and effectively and with reason

CRP6. Demonstrate creativity and innovation.

CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.

CRP12. Work productively in teams while using cultural global competence.

Instructional Plan		Reflection
Pre-assessment		

SLO - WALT	Student Strategies	Formative Assessment	Activities and Resources	Reflection
<p>SWBAT Use Number Sense and Place Value to Help Me Understand Math</p> <p>SWBAT add and subtract with regrouping.</p> <p>SWBAT explain why I need to use addition or subtraction to help me solve problems.</p>	<p>Relate 10 more, 10 less, 100 more, and 100 less to addition and subtraction of 10 and 100.</p> <p>Add and subtract multiples of 100, including counting on to subtract.</p> <p>Add multiples of 100 and some tens within 1,000.</p> <p>Subtract multiples of 100 and some tens within 1,000.</p> <p>Use the associative property to make a hundred in one addend.</p> <p>Use the associative property to subtract from three-digit numbers and verify solutions with addition.</p> <p>Relate manipulative representations to the addition algorithm.</p> <p>Use math drawings to represent additions with up to two compositions and relate drawings to the addition algorithm.</p> <p>Relate manipulative representations to the subtraction algorithm, and use addition to explain why the subtraction method works.</p>	<p>Problem Set</p> <p>Exit Ticket</p> <p>Homework</p> <p>Observation</p> <p>Application Problem</p> <p>Mid-Module Fluency</p>	<p>Arrow notation, arrow way</p> <p>Chip model</p> <p>Hide Zero cards</p> <p>Number bond</p> <p>Personal white boards</p> <p>Place value charts</p> <p>Place value disk sets (19 ones, 19 tens, 10 hundreds, 1 one thousand per set) Tape diagram</p> <p>Homework</p> <p>Parent Homework Helper</p> <p>Parent Video</p> <p>Videos to introduce new concepts</p> <p>Exit Tickets</p> <p>Problem Sets</p> <p>Application Problem/Notebook</p> <p>Fluency</p>	

	<p>Use math drawings to represent subtraction with up to two decompositions, relate drawings to the algorithm, and use addition to explain why the subtraction method works.</p> <p>Subtract from multiples of 100 and from numbers with zero in the tens place.</p> <p>Apply and explain alternate methods for subtracting from multiples of 100 and from numbers with zero in the tens place.</p>			
--	---	--	--	--

Summative Written Assessments

See below	
-----------	--

Summative Performance Assessment

<p>Daily, ongoing formative assessment strategies included in each module (ex. Activities, exit tickets, homework activities such as games, practice, and online learning, etc.).</p> <p>A Mid-Module assessment Task is provided for each module to address the first half of the student outcomes for each module.</p> <p>An End of the Module Assessment Task is provided to address the student outcomes for the module as a whole.</p>	
---	--

Module 6 Title: Foundations of Multiplication and Division
Grade Level: Second Grade
Timeframe: 24 days

Essential Questions

How can geometry help understand math?

What strategies can be used to understand parts and whole?

How does repeated addition and portioning shapes lead to multiplication?

Standards

Work with equal groups of objects to gain foundations for multiplication.

2.OA.3 **Determine** whether a group of objects (up to 20) has an odd or even number of members, e.g., by **pairing objects** or **counting** them by 2s; **write** an equation to **express** an even number as a sum of two equal addends.

2.OA.4 **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.

Reason with shapes and their attributes.

2.G.2 **Partition** a rectangle into rows and columns of same-size squares and **count** to find the total number of them.

Highlighted Career Ready Practices:

CRP2. Apply appropriate academic and technical skills

CRP4. Communicate clearly and effectively and with reason

CRP6. Demonstrate creativity and innovation.

CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.

CRP12. Work productively in teams while using cultural global competence.

Instructional Plan				Reflection
Pre-assessment				
SLO - WALT	Student Strategies	Formative Assessment	Activities and Resources	Reflection

<p>SWBAT Use Addition and Subtraction to Help Me Understand Math I can group objects to tell if a number is odd or even.</p> <p>SWBAT use repeated addition to help me understand multiplication.</p> <p>SWBAT Use Geometry to Help Me Understand Math</p> <p>SWBAT divide shapes into equal parts</p> <p>SWBAT use fractions to describe the equal parts of a shape.</p>	<p>Use manipulatives to create equal groups.</p> <p>Use math drawings to represent equal groups, and relate to repeated addition.</p> <p>Represent equal groups with tape diagrams, and relate to repeated addition.</p> <p>Compose arrays from rows and columns, and count to find the total using objects.</p> <p>Decompose arrays into rows and columns, and relate to repeated addition.</p> <p>Represent arrays and distinguish rows and columns using math drawings.</p> <p>Create arrays using square tiles with gaps.</p> <p>Solve word problems involving addition of equal groups in rows and columns.</p> <p>Use square tiles to compose a rectangle, and relate to the array model.</p>	<p>Problem Set Exit Ticket Homework Observation Application Problem Mid-Module Fluency</p>	<p>Counters Number bond Number path Personal white board Rectangular array Square tiles Homework Parent Homework Helper Parent Video Videos to introduce new concepts Exit Tickets Problem Sets Application Problem/Notebook Fluency</p>	
---	---	--	--	--

	<p>Use scissors to partition a rectangle into same-size squares, and compose arrays with the squares.</p> <p>Use math drawings to partition a rectangle with square tiles, and relate to repeated addition.</p> <p>Use grid paper to create designs to develop spatial structuring.</p> <p>Relate doubles to even numbers, and write number sentences to express the sums.</p> <p>Pair objects and skip-count to relate to even numbers.</p> <p>Investigate the pattern of even numbers: 0, 2, 4, 6, and 8 in the ones place, and relate to odd numbers.</p> <p>Use rectangular arrays to investigate odd and even numbers.</p>			
Summative Written Assessments				
See below				
Summative Performance Assessment				

Daily, ongoing formative assessment strategies included in each module (ex. Activities, exit tickets, homework activities such as games, practice, and online learning, etc.).

A Mid-Module assessment Task is provided for each module to address the first half of the student outcomes for each module.

An End of the Module Assessment Task is provided to address the student outcomes for the module as a whole.

Module 7 Title: Problem Solving with Length, Money, and Data

Grade Level: Second Grade

Timeframe: 30 days

Essential Questions

How can tools be used to determine measurement?

How can lengths be compared and contrasted?

What strategies can be used to add and subtract units of measure?

How are clocks used to tell time to the five minutes?

How can time be determined using either a digital or an analog clock?

How can A.M. and P.M. be distinguished when using a 12 hour clock?

How can events be put in order based on time?

How much money is represented?

How much money is needed to purchase?

When should money be spent, saved, or shared?

Standards

2.NBT.5 Fluently **add** and **subtract** within 100 **using** strategies based on place value, properties of operations, and/or the relationship between **addition** and **subtraction**.

2.MD.1 Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.

2.MD.2 **Measure** the length of an **object** twice, using length units of different lengths for the two measurements; **describe** how the two measurements **relate** to the size of the unit chosen. A STORY OF UNITS ©2015 Great Minds. eureka-math.org G2-M7-TE-1.3.0-08.2015 4 Module Overview 2 7 Module 7: Problem Solving with Length, Money, and Data

2.MD.3 **Estimate** lengths using inches, feet, centimeters, and meters.

2.MD.4 **Measure** to determine how much longer one object is than another, **expressing** the length difference in terms of a standard length unit.

2.MD.5 Use **addition** and **subtraction** within 100 to solve word problems involving lengths that are given in the same units, e.g., by **using** drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem.

2.MD.6 **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.

2.MD.8 **Solve** word problems involving dollar bills, quarters, dimes, nickels, and pennies, **using** \$ and ¢ **symbols** appropriately. Example: If you have 2 dimes and 3 pennies, how many cents do you have?

2.MD.9 **Generate** measurement data by **measuring** lengths of several objects to the nearest whole unit, or by **making** repeated measurements of the same object. **Show** the measurements by making a line plot, where the horizontal scale is marked off in whole-number units.

2.MD.10 **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 a bar graph.

Highlighted Career Ready Practices:

CRP2. Apply appropriate academic and technical skills

CRP4. Communicate clearly and effectively and with reason

CRP6. Demonstrate creativity and innovation.

CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.

CRP12. Work productively in teams while using cultural global competence.

Instructional Plan				Reflection
Pre-assessment				
SLO - WALT	Student Strategies	Formative Assessment	Activities and Resources	Reflection
<p>SWBAT use different tools to measure objects.</p> <p>SWBAT compare the length of an object using two different units of measurement.</p> <p>SWBAT estimate the lengths of objects.</p>	<p>Sort and record data into a table using up to four categories; use category counts to solve word problems.</p> <p>Draw and label a bar graph to represent data; relate the count scale to the number line.</p> <p>Solve word problems using data presented in a bar graph.</p>	<p>Problem Set</p> <p>Exit Ticket</p> <p>Homework</p> <p>Observation</p> <p>Application</p> <p>Problem</p> <p>Mid-Module</p> <p>Fluency</p>	<p>Bar graph (representation of data)</p> <p>Centimeter cube</p> <p>Centimeter ruler</p> <p>Dice</p> <p>Grid paper</p> <p>Inch and centimeter ruler</p> <p>Inch tiles</p> <p>Line plot</p> <p>Measuring tape</p>	

<p>SWBAT compare the length of two different objects.</p> <p>SWBAT use addition and subtraction to solve measurement problems.</p> <p>SWBAT make and use a number line.</p>	<p>Recognize the value of coins and count up to find their total value.</p> <p>Solve word problems involving the total value of a group of coins</p> <p>Solve word problems involving the total value of a group of bills.</p> <p>Solve word problems involving different combinations of coins with the same total value.</p> <p>Use different strategies to make \$1 or make change from \$1.</p> <p>Solve word problems involving different ways to make change from \$1.</p> <p>Connect measurement with physical units by using iteration with an inch tile to measure.</p> <p>Apply concepts to create inch rulers; measure lengths using inch rulers.</p> <p>Develop estimation strategies by applying prior knowledge of length and using mental benchmarks.</p> <p>Measure an object twice using different</p>		<p>Meter stick Money (i.e., dollars, coins) Number bond Number line Personal white board Picture graph Table Tape diagram Yardstick Homework Parent Homework Helper Parent Video Videos to introduce new concepts Exit Tickets Problem Sets Application Problem/Notebook Fluency</p>	
---	---	--	---	--

	<p>length units and compare; relate measurement to unit size.</p> <p>Solve two-digit addition and subtraction word problems involving length by using tape diagrams and writing equations to represent the problem.</p> <p>Collect and record measurement data in a table; answer questions and summarize the data set.</p> <p>Draw a line plot to represent a given data set; answer questions and draw conclusions based on measurement data.</p>			
Benchmark Assessment:				
Benchmark Assessment:				
Summative Written Assessments				
See below				
Summative Performance Assessment				
Daily, ongoing formative assessment strategies included in each module (ex. Activities, exit tickets, homework activities such as games, practice, and online learning, etc.).				

<p>A Mid-Module assessment Task is provided for each module to address the first half of the student outcomes for each module.</p> <p>An End of the Module Assessment Task is provided to address the student outcomes for the module as a whole.</p>	
---	--

<p>Module 8 Title: Time, Shapes, and Fractions as Equal Parts of Shapes Grade Level: Second Grade Timeframe: 20 days</p>	
<p>Essential Questions</p>	
<p>What attributes are important for naming shapes? How can plane and solid shapes be described?</p> <p>How do units within a system relate to each other?</p> <p>How are various representations of time related?</p>	
<p>Standards</p>	
<p>Work with time and money.</p> <p>2.MD.7 Tell and write <u>time</u> from analog and digital <u>clocks</u> to the nearest five <u>minutes</u>, using <u>a.m.</u> and <u>p.m.</u></p> <p>Reason with shapes and their attributes.</p> <p>2.G.1 Recognize and draw <u>shapes</u> having specified <u>attributes</u>, such as a given number of <u>angles</u> or a given number of equal <u>faces</u>. Identify <u>triangles</u>, <u>quadrilaterals</u>, <u>pentagons</u>, <u>hexagons</u>, and <u>cubes</u>. (Sizes are compared directly or visually, not compared by measuring.)</p> <p>2.G.3 Partition <u>circles</u> and <u>rectangles</u> into two, three, or four equal <u>shares</u>, describe the <u>shares</u> using the words <u>halves</u>, <u>thirds</u>, <u>half of</u>, <u>a third of</u>, etc., and describe the whole as <u>two halves</u>, <u>three thirds</u>, <u>four fourths</u>. Recognize that equal <u>shares</u> of identical <u>wholes</u> need not have the same <u>shape</u>.</p>	

Highlighted Career Ready Practices:

CRP2. Apply appropriate academic and technical skills

CRP4. Communicate clearly and effectively and with reason

CRP6. Demonstrate creativity and innovation.

CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.

CRP12. Work productively in teams while using cultural global competence.

Instructional Plan				Reflection
Pre-assessment				
SLO - WALT	Student Strategies	Formative Assessment	Activities and Resources	Reflection
SWBAT tell time to five minutes.	Describe two-dimensional shapes based on attributes.	Problem Set Exit Ticket Homework Observation Application Problem Mid-Module Fluency	Cube: a three-dimensional shape (real-world examples such as a die, alphabet blocks, or a box) Geoboards Large instructional geared clock Pattern blocks Personal white boards Rulers Spaghetti Student clocks, preferably those with gears that can provide the appropriate hour-hand alignment Tangrams Toothpicks	
SWBAT understand a.m. and p.m.	Build, identify, and analyze two-dimensional shapes with specified attributes.			
SWBAT name and draw shapes. (I know triangles, quadrilaterals, pentagons, hexagons and cubes.)	Use attributes to draw different polygons including triangles, quadrilaterals, pentagons, and hexagons.			
SWBAT divide shapes into equal parts.	Use attributes to identify and draw different quadrilaterals including rectangles, rhombuses,			
SWBAT use fractions to				

<p>describe the equal parts of a shape.</p>	<p>parallelograms, and trapezoids.</p> <p>Interpret equal shares in composite shapes as halves, thirds, and fourths.</p> <p>Partition circles and rectangles into equal parts, and describe those parts as halves, thirds, or fourths.</p> <p>Describe a whole by the number of equal parts including 2 halves, 3 thirds, and 4 fourths.</p> <p>Tell time to the nearest five minutes.</p> <p>Tell time to the nearest five minutes; relate a.m. and p.m. to time of day.</p> <p>Solve elapsed time problems involving whole hours and a half hour.</p>		<p>Homework Parent Homework Helper Parent Video Videos to introduce new concepts Exit Tickets Problem Sets Application Problem/Notebook Fluency</p>	
Summative Written Assessments				
See below				
Summative Performance Assessment				
<p>Daily, ongoing formative assessment strategies included in each module (ex. Activities, exit tickets, homework activities such as games, practice, and online learning, etc.).</p> <p>A Mid-Module assessment Task is provided for each module to address the first half of the student outcomes for each</p>				

module.

An End of the Module Assessment Task is provided to address the student outcomes for the module as a whole.