HARFORD COUNTY PUBLIC SCHOOLS
GRADE 2 MATHEMATICS CURRICULUM

CLICK HERE for the Maryland College and Career Ready Standards for Grade 2 Mathematics.

Topic 1: Fluently Add and Subtract Within 20

Primary Resource: *enVisionmath2.0 Grade 2,* Savvas Learning Company, 2016.

Enduring Understandings

- **Operations Meanings and Relationships -** There are multiple interpretations of addition and subtraction of rational numbers, and the operations are related.
- **Basic Facts and Algorithms -** Some strategies for basic facts and most algorithms for operations with rational numbers, both mental math and paper and pencil, use equivalence to transform calculations into simpler ones.
- **Practices, Processes, and Proficiencies -** Mathematics content and processes are applied to solve problems.

Essential Question

- What are strategies for finding addition and subtraction facts?

Lesson Title	Lesson Overview	Standards
Addition Fact Strategies	Counting on is a strategy that can be used to find sums. The order of the addends does not change the sum.	2.OA.B.2
Doubles and Near Doubles	Basic addition facts that are near doubles can be found using a related doubles fact.	2.OA.B.2
Make a 10 to Add	Some addition facts can be found by changing to an equivalent fact with 10.	2.OA.B.2
Addition Fact Patterns	Patterns in 0-10 addition facts table are useful for adding numbers and for developing mental math strategies and number sense.	2.OA.B.2

Count on and Back to Subtract	A number line is a tool you can use to help you count on or count back to subtract.	2.OA.B.2
Think Addition to Subtract	Addition and subtraction have an inverse relationship. The inverse relationship between addition and subtractions can be used to find subtraction facts; every subtraction fact has a related addition fact.	2.OA.B.2
Make a 10 to Subtract	Some subtraction facts can be simplified by making use of the numbers' relationship to 10.	2.OA.B.2
Practice Addition and Subtraction Facts	The addends determine efficient strategies, such as making 10 or using doubles facts, for finding addition facts. "Think of a related addition fact" is an efficient strategy for finding a subtraction fact.	2.OA.B.2
Solve Addition and Subtraction Work Problems	Objects, diagrams, and equations can help you solve different types of word problems.	2.OA.B.1 2.OA.B.2
Math Practices and Problem Solving: Construct Arguments	Good math thinkers use math to explain why they are right. They can talk about the math that others do, too.	MP.3

Topic 2: Work with Equal Groups

Primary Resource: *enVisionmath2.0 Grade 2,* Savvas Learning Company, 2016.

Enduring Understandings

- **Equivalence -** Any number, measure, numerical expression, algebraic expression, or equation can be represented in an infinite number of ways that have the same value. A whole number can be broken into groups, but the total stays the same. For example, 12 is equivalent to 3 groups of 4 and 4 groups of 3. An array can be used to illustrate this equivalence.
- **Practices, Processes, and Proficiencies** - Mathematics content and processes are applied to solve problems.

Essential Questions

- How can you show even and odd numbers?
- How do arrays relate to repeated addition?

Lesson Title	Lesson Overview	Standards
Even and Odd Numbers	Numbers can be classified as even or odd by showing numbers as two equal parts.	2.OA.C.3 2.OA.B.2
Continue Even and Odd Numbers	A group of objects (or numbers) can also be classified as even or odd by analyzing skip-counting patterns. An even number can be written as a sum of equal addends.	2.OA.C.3 2.OA.B.2
Use Arrays to Find Totals	An array shows equal groups, so you can write equations using repeated addition to find the total number of objects in an array.	2.OA.C.3 2.OA.B.2
Make Arrays to Find Totals	You can make arrays and write equations using repeated addition to solve problems.	2.OA.C.3 2.OA.B.2
Math Practices and Problem Solving: Model with Math	Good math thinkers use math what they know to show and solve problems.	2.OA.A.1 2.OA.C.4

Topic 3: Add Within 100 Using Strategies

Primary Resource: *enVisionmath2.0 Grade 2,* Savvas Learning Company, 2016.

Enduring Understandings

- **The Base Ten Numeration System -** The base ten numeration system is a scheme for recording numbers using digits 0-9, groups of ten, and place value. An understanding of the base ten numeration system is essential for using various addition and subtraction strategies.
- **Basic Facts and Algorithms -** There is more than one algorithm for each of the operations with rational numbers. Some strategies for basic facts and most algorithms for operations with rational numbers, both mental math and paper and pencil, use equivalence to transform calculations into simpler ones.
- **Practices, Processes, and Proficiencies** - Mathematics content and processes are applied to solve problems.

Essential Question

- What are strategies for adding numbers to 100?

Lesson Title	Lesson Overview	Standards
Add Tens and Ones on a Hundred Chart	Patterns on a hundred chart can be used to add numbers and to develop mental math strategies and number sense.	2.NBT.B.5 2.NBT.B.9
Add Tens on an Open Number Line	Two-digit numbers can be broken apart and added in different ways. You can represent how you break apart and add numbers with hops or jumps on an open number line.	2.NBT.B.5 2.NBT.B.9
Add Tens and Ones on an Open Number Line	Two-digit numbers can be broken apart using tens and ones and added in different ways. You can represent how you break apart and add numbers with hops or jumps on an open number line.	2.NBT.B.5 2.NBT.B.9
Break Apart Numbers to Add	Two-digit numbers can be broken apart using tens and ones and added in different ways.	2.NBT.B.5 2.NBT.B.9
Continue to Break Apart Numbers to Add	Two-digit numbers can be broken apart using tens and ones and added in different ways.	2.NBT.B.5 2.NBT.B.9

Add Using Compensation	When adding two-digit numbers, you can add an amount to one addend and subtract the same amount from another addend to make addition easier.	2.NBT.B.5
Practice Adding Using Strategies	There are different ways to add two-digit numbers. Certain strategies may be better to use for a problem than others.	2.NBT.B.5 2.NBT.B.6 2.NBT.B.9
Solve One-Step and Two-Step Problems	Some problems can be solved in one step. Other problems can be solved in two-steps- first by solving a sub-problem or by answering a hidden question, and then by using that answer to solve the original problem.	2.OA.A.1
Math Practices and Problem Solving: Use Appropriate Tools	Good math thinkers know how to pick the right tools to solve math problems.	MP.5

Topic 4: Fluently Add Within 100

Primary Resource: *enVisionmath2.0 Grade 2,* Savvas Learning Company, 2016.

Enduring Understandings

- **The Base Ten Numeration System -** The base ten numeration system is a scheme for recording numbers using digits 0-9, groups of ten, and place value. An understanding of the base ten numeration system is essential for using various addition and subtraction strategies.
- **Basic Facts and Algorithms -** There is more than one algorithm for each of the operations with rational numbers. Some strategies for basic facts and most algorithms for operations with rational numbers, both mental math and paper and pencil, use equivalence to transform calculations into simpler ones.
- **Practices, Processes, and Proficiencies** - Mathematics content and processes are applied to solve problems.

Essential Question

- What are strategies for adding numbers to 100?

Lesson Title	Lesson Overview	Standards
Add with Partial Sums	When adding two-digit numbers, you can add the ones and tens separately and then add these partial sums to find the total sums. Partial sums addition provides a bridge between mental addition and the standard algorithm.	2.NBT.B.5 2.NBT.B.9
Continue to Add with Partial Sums	When adding two-digit numbers, you can add the ones and tens separately and then add these partial sums to find the total sums. Partial sums addition provides a bridge between mental addition and the standard algorithm.	2.NBT.B.5 2.NBT.B.9
Models to Add 2-Digit Numbers	The standard addition algorithm for two-digit numbers breaks the calculations into simpler calculations using place value, starting with ones and then tens. Answers to the simpler calculations are used to find the final sum.	2.NBT.B.5 2.NBT.B.9
Add 2-Digit Numbers	The standard addition algorithm for two-digit numbers breaks the calculations into simpler calculations using place value, starting with ones and then tens. Answers to the simpler calculations are used to find the final sum.	2.NBT.B.5 2.NBT.B.9

Add More than 2-Digit Numbers	Addition algorithms and addition strategies can be used to add more than two 2-digit numbers; and number can be added in any order.	2.NBT.B.5 2.NBT.B.9
Practice Adding	Addition algorithms and addition strategies can be used to add more than two numbers; and number can be added in any order.	2.NBT.B.5 2.NBT.B.6 2.NBT.B.9
Solve one-Step and Two-Step Problems	Some problems can be solved in one step. Other problems can be solved in two-steps- first by solving a sub-problem or by answering a hidden question, and then by using that answer to solve the original problem.	2.OA.A.1
Math Practices and Problem Solving: Model with Math	Good math thinkers use math what they know to show and solve problems.	MP.4

Topic 5: Subtract Within 100 Using Strategies

Primary Resource: *enVisionmath2.0 Grade 2,* Savvas Learning Company, 2016.

Enduring Understandings

- **The Base Ten Numeration System -** The base ten numeration system is a scheme for recording numbers using digits 0-9, groups of ten, and place value. An understanding of the base ten numeration system is essential for using various addition and subtraction strategies.
- **Basic Facts and Algorithms -** There is more than one algorithm for each of the operations with rational numbers. Some strategies for basic facts and most algorithms for operations with rational numbers, both mental math and paper and pencil, use equivalence to transform calculations into simpler ones.
- **Practices, Processes, and Proficiencies** - Mathematics content and processes are applied to solve problems.

Essential Question

- What are strategies for subtracting numbers to 100?

Lesson Title	Lesson Overview	Standards
Subtract Tens and Ones on a Hundred Chart	Patterns on a hundred chart can be used to subtract numbers and to develop mental math strategies and number sense.	2.NBT.B.5 2.NBT.B.9
Count Back to Subtract on an Open Number Line	You can represent how to subtract tens from a two-digit number with hops or jumps on an open number line.	2.NBT.B.5 2.NBT.B.9
Continue to Count Back to Subtract on an Open Number Line	Two-digit numbers can be broken apart using tens and ones to subtract in different ways. You can represent how your break apart and subtract numbers with hops or jumps on an open number line.	2.NBT.B.5 2.NBT.B.9
Add up to Subtract Using an Open Number Line	Two-digit numbers can be broken apart using tens and ones to subtract in different ways. You can represent how you break apart and subtract numbers with hops or jumps on an open number line. You can count back or count up to subtract.	2.NBT.B.5 2.NBT.B.9
Break Apart Numbers to Subtract	One-digit numbers can be broken apart to make it easier to subtract them mentally.	2.NBT.B.5 2.NBT.B.9

Continue to Break Apart Numbers to Subtract	Two-digit numbers can be broken apart to make it easier to subtract them mentally.	2.NBT.B.5 2.NBT.B.9
Subtract Using Compensation	When subtracting two-digit numbers, you can add the same amount to both numbers in the problem, or you can subtract the same amount from both numbers in the problem, to make subtraction easier.	2.NBT.B.5 2.NBT.B.9
Solve One-Step and Tow-Step Problems	You can use bar diagram, equations, and the relationship between addition and subtraction to help you solve one- and two-step word problems. In the case of two-step problems, you need to find the answer to the first step, and then use it to solve the second step.	2.OA.A.1
Math Practices and Problem Solving: Critique Reasoning	Good Math thinkers use math to explain why they are right. They can talk about the math that others do, too.	MP.3

Topic 6: Fluently Subtract Within 100

Primary Resource: *enVisionmath2.0 Grade 2,* Savvas Learning Company, 2016.

Enduring Understandings

- **The Base Ten Numeration System -** The base ten numeration system is a scheme for recording numbers using digits 0-9, groups of ten, and place value. An understanding of the base ten numeration system is essential for using various addition and subtraction strategies.
- **Basic Facts and Algorithms -** There is more than one algorithm for each of the operations with rational numbers. Some strategies for basic facts and most algorithms for operations with rational numbers, both mental math and paper and pencil, use equivalence to transform calculations into simpler ones.
- **Practices, Processes, and Proficiencies** - Mathematics content and processes are applied to solve problems.

Essential Question

- What are strategies for subtracting numbers to 100?

Lesson Title	Lesson Overview	Standards
Regroup 1 Ten for 10 Ones	To subtract, sometimes it is necessary to regroup 1 ten as 10 ones.	2.NBT.B.5 2.NBT.B.9
Models to Subtract 2-Digit and 1-Digit Numbers	You can use pencil and paper to subtract and to record the regrouping in the tens and ones places.	2.NBT.B.5 2.NBT.B.9
Subtract 2-Digit and 1-Digit Numbers	The standard subtraction algorithm can be used to break the calculation into simpler steps, starting with the ones and then moving to the tens.	2.NBT.B.5 2.NBT.B.9
Models to Subtract 2-Digit Numbers	The standard algorithm for subtracting a two-digit number from a two-digit number is just an extension of the algorithm for subtracting.	2.NBT.B.5 2.NBT.B.9
Subtract 2-Digit Numbers	You can use pencil and paper to subtract a two-digit number from a two-digit number.	2.NBT.B.5 2.NBT.B.9
Use Addition to Check Subtraction	The inverse relationship between addition and subtraction can be used to solve and check subtraction.	2.NBT.B.5 2.NBT.B.9

Practice Subtracting	Subtraction problems involving two-digit numbers can be solved using subtraction strategies or the standard subtraction algorithm. When using the algorithm, if there are not enough ones to subtract, then regroup 1 ten as 10 ones before subtracting the ones, and then the tens.	2.NBT.B.5 2.NBT.B.9
Solve One-Step and Two-Step Problems	You can use bar diagrams, equations, and objects to help you solve one- and two-step word problems. In the case of two-step problems, the answer to the first step must be found before solving the second step.	2.OA.A.1
Math Practices and Problem Solving: Reasoning	Good math thinkers know how to think about words and numbers to solve problems.	MP.2

Topic 7: More Solving Problems Involving Addition and Subtraction

Primary Resource: *enVisionmath2.0 Grade 2,* Savvas Learning Company, 2016.

Enduring Understandings

- **The Base Ten Numeration System -** The base ten numeration system is a scheme for recording numbers using digits 0-9, groups of ten, and place value. An understanding of the base ten numeration system is essential for using various addition and subtraction strategies.
- **Basic Facts and Algorithms -** There is more than one algorithm for each of the operations with rational numbers. Some strategies for basic facts and most algorithms for operations with rational numbers, both mental math and paper and pencil, use equivalence to transform calculations into simpler ones.
- **Practices, Processes, and Proficiencies** - Mathematics content and processes are applied to solve problems.

Essential Question

- How can you solve word problems that involve adding and subtracting?

Lesson Title	Lesson Overview	Standards
Represent Addition and Subtraction Problems	You can write equations to model and solve word problems using a symbol, such as a question mark (*?),* to represent the unknown.	2.OA.A.1
Mixed Practice: Solve Addition and Subtraction Problems	You can use drawings and equations to make sense of the words in word problems; and you can use strategies and algorithms to solve the problems and to check your work.	2.OA.A.1
Continue Practice with Addition and Subtraction Problems	You can use drawings and equations to make sense of the words in word problems; and you can use strategies and algorithms to solve the problems and to check your work.	2.OA.A.1
Solve Two-Step Problems	Sometimes a problem has an unstated, or hidden, question that you need to answer before you can find the final answer.	2.OA.A.1
Continue to Solve Two-Step Problems	Sometimes the answer to one problem is needed to find the answer to another problem.	2.OA.A.1
Math Practices and Problem Solving: Reasoning	Good Math thinkers know how to think about words and numbers to solve problems.	MP.2

Topic 8: Work with Time and Money

Primary Resource: *enVisionmath2.0 Grade 2,* Savvas Learning Company, 2016.

Enduring Understandings

- **Measurement -** Some attributes of objects are measurable and can be quantified using unit amounts. Time can be measured and expressed using the units of hours and minutes. Specific coins and bills have unique values expressed as a certain number of cents or a certain number of dollars.
- **Equivalence** - Any number, measure, numerical expression, algebraic expression, or equation can be represented in an infinite number of ways that have the same value. There are different ways to show the same amount of money and the same amount of time.
- **Practices, Processes, and Proficiencies** - Mathematics content and processes are applied to solve problems.

Essential Questions

- How can you solve problems about counting money or telling time to the nearest 5 minutes?

Lesson Title	Lesson Overview	Standards
Solve Problems with Coins	Each kind of coin has a specific value unrelated to its physical size.	2.MD.C.8 2.NBT.A.2
Continue to Solve Problems with Coins.	Money is measurable and the value of coins can be quantified using cent amounts.	2.MD.C.8 2.NBT.A.2
Solve Problems with Dollar Bills	Money is measurable and can be quantified using dollar and cent amounts. Each kind of bill has a specific value. You can count to find the total value of a group of dollar bills.	2.MD.C.8 2.NBT.A.2
Continue to Solve Problems with Dollar Bills	Each kind of bill has a specific value, and the value of the bills can be used to solve problems about money. Word problems about money can often be solved by adding and subtracting.	2.MD.C.8 2.OA.A.1
Math Practices and Problem Solving: Reasoning	Good Math thinkers know how to think about words and numbers to solve problems.	MP.2
Tell Time to Five Minutes	Time can be told to the nearest 5 minutes. Time can be expressed using different units that are related to each other.	2.MD.C.7 2.NBT.A.2

Tell Time Before and After the Hour	Time can be described before and after the hour in different ways.	2.MD.C.7 2.NBT.A.2
A.M. and P.M.	Certain time periods can be described using the abbreviations a.m. or p.m.	2.MD.C.7 2.NBT.A.2

Topic 9: Numbers to 1,000

Primary Resource: *enVisionmath2.0 Grade 2,* Savvas Learning Company, 2016.

Enduring Understandings

- **The Base Ten Numeration System -** The base ten numeration system is a scheme for recording numbers using digits 0-9, groups of ten, and place value.
- **Practices, Processes, and Proficiencies -** Mathematics content and processes are applied to solve problems.

Essential Question

- How can you count, read, and show numbers to 1,000?

Lesson Title	Lesson Overview	Standards
Understand Hundreds	Number can be used to tell how many. The number system is based on groups of ten. Whenever there are 10 in one place value, you move to the next greater place value.	2.NBT.A.1a 2.NBT.A.1b
Models and 3-Digit Numbers	The number system is based on groups of ten. Whenever there are 10 in one place value, you move to the next greater place value. Place-value blocks and drawings can be used to model and write three-digit numbers.	2.NBT.A.1 2.NBT.A.3
Name Place Value	The position of a digit in a number tells its value. It takes 10 of a number in one place value to make a number in the next greater place value.	2.NBT.A.1 2.NBT.A.3
Read and Write 3-Digit Numbers	There are three common ways to write numbers- standard form, word form and expanded form. Each way involves using place value to tell the value of each digit.	2.NBT.A.3 2.NBT.A.1
Different Ways to Name the Same Number	Numbers can be named in many ways. Recalling and using facts about equal amounts (such as 100 is equal to 10 tens, and 10 is equal to 10 ones) can help you name numbers in different ways.	2.NBT.A.3 2.NBT.A.1a
Place-Value Patterns with Numbers	Place-value patterns can help you mentally count by 1s and 10s from a given number.	2.NBT.A.2 2.NBT.B.8

Skip count by 5s, 10s, and 100s to 1,000	Place-value patterns and number lines can be used to help you skip count by 5s, 10s and 100s.	2.NBT.A.2
Compare Numbers Using Place Value	Place-value strategies can be used to compare numbers. They symbols >, =, and < can be used to show how the numbers are related.	2.NBT.A.4
Compare Numbers on the Number Line	Number lines go on forever in both directions. For every number, there is another number that is greater than it, and another number that is less than it. A number line can be used to help you find numbers that are greater than or less than a given number.	2.NBT.A.4
Math Practices and problem Solving: Look for and Use Structure	Good math thinkers look for patterns in math to help solve problems.	MP.7

Topic 10: Add Within 1,000 Using Models and Strategies

Primary Resource: *enVisionmath2.0 Grade 2,* Savvas Learning Company, 2016.

Enduring Understandings

- **The Base Ten Numeration System -** The base ten numeration system is a scheme for recording numbers using digits 0-9, groups of ten, and place value. An understanding of the base ten numeration system is essential for using various addition and subtraction strategies.
- **Basic Facts and Algorithms -** There is more than one algorithm for each of the operations with rational numbers. Some strategies for basic facts and most algorithms for operations with rational numbers, both mental math and paper and pencil, use equivalence to transform calculations into simpler ones.
- **Practices, Processes, and Proficiencies** - Mathematics content and processes are applied to solve problems.

Essential Question

- What are strategies for adding numbers to 1,000?

Lesson Title	Lesson Overview	Standards
Add 10 and 100	Place-value patterns and basic facts can be used to help you mentally add 10 or 100 to any given three-digit number.	2.NBT.B.8 2.NBT.B.9
Add on an Open Number Line	Three-digit numbers can be broken apart using hundreds, tens and ones and added in different ways. You can represent how you break apart and add numbers with hops or jumps on an open number line.	2.NBT.B.7 2.NBT.B.9
Add Using Mental Math	Three-digit numbers can be broken apart using hundreds, tens and ones, and added in different ways. You can change the numbers to make it easier to add mentally, without changing the sum.	2.NBT.B.7
Add Using Partial Sums	When adding three-digit numbers, you can add the hundreds, the tens, and the ones separately, and then add the partial sums to find the total sum. Partial sums addition provides a bridge between mental addition and the standard algorithm.	2.NBT.B.7 2.NBT.B.9
Use Models to Add	The standard addition algorithm for three-digit numbers breaks the calculations into simpler calculations, using place value, starting with the ones, then the tens, and then the hundreds. Answers to the simpler calculations are used to find the final sum.	2.NBT.B.7 2.NBT.B.9

Explain Addition Strategies	Addition algorithms and addition strategies can be used to add two (or more) three-digit numbers; the sum is the same no matter which strategy you use. You can use place value and properties of operations to explain why the strategies work.	2.NBT.B.9 2.NBT.B.7
Math Practices and problem Solving: Repeated Reasoning	Good math thinkers look for things that repeat in a problem. They use what they learn from one problem to help them solve other problems.	MP.8

Topic 11: Subtract Within 1,000 Using Models and Strategies

Primary Resource: *enVisionmath2.0 Grade 2,* Savvas Learning Company, 2016.

Enduring Understandings

- **The Base Ten Numeration System -** The base ten numeration system is a scheme for recording numbers using digits 0-9, groups of ten, and place value. An understanding of the base ten numeration system is essential for using various addition and subtraction strategies.
- **Basic Facts and Algorithms -** There is more than one algorithm for each of the operations with rational numbers. Some strategies for basic facts and most algorithms for operations with rational numbers, both mental math and paper and pencil, use equivalence to transform calculations into simpler ones.
- **Practices, Processes, and Proficiencies -** Mathematics content and processes are applied to solve problems.

Essential Question

- What are strategies for subtracting numbers to 1,000?

Lesson Title	Lesson Overview	Standards
Subtract 10 and 100	Place-value patterns and basic facts can be used to help you mentally subtract 10 or 100 to any given three-digit number.	2.NBT.B.8 2.NBT.B.9
Count Back to Subtract on an Open Number Line	Three-digit numbers can be broken apart using hundreds, tens and ones to subtract in different ways. You can represent how you break apart and subtract numbers with hops or jumps on an open number line.	2.NBT.B.7 2.NBT.B.9
Add Up to Subtract on an Open Number Line	Three-digit numbers can be broken apart using hundreds, tens and ones to subtract in different ways. You can represent how you break apart and subtract numbers with hops or jumps on an open number line. You can count back or add up to subtract.	2.NBT.B.7 2.NBT.B.9
Subtract Using Mental Math	Three-digit numbers can be broken apart using hundreds, tens and ones, and subtracted in different ways. You can change the numbers to make it easier to subtract mentally, without changing the difference.	2.NBT.B.7 2.NBT.B.9
Use Models to Subtract	The standard addition algorithm for three-digit numbers breaks the calculations into simpler calculations using place value, starting with the ones, then the tens, and then the hundreds. Answers to the simpler calculations are used to find the final difference.	2.NBT.B.7 2.NBT.B.9

Explain Subtraction Strategies	The standard subtraction algorithm and subtraction strategies can be used to subtract with 3-digit numbers; the difference is the same no matter which strategy you use. You can use place value and properties of operations to explain why the strategies work.	2.NBT.B.7 2.NBT.B.9
Math Practices and Problem Solving: Make Sense and Persevere	Good math thinkers know what the problem is about. They have a plan to solve it. They keep trying if they get stuck.	MP.1

Topic 12: Measuring Length

Primary Resource: *enVisionmath2.0 Grade 2,* Savvas Learning Company, 2016.

Enduring Understandings

- **Measurement -** Some attributes of objects are measurable and can be quantified using unit amounts. Length is the distance along an object measured end-to-end, which involves both a number and a unit. Students need to be engaged in learning situations where they measure length using customary and metric units.
- **Practices, Processes, and Proficiencies** - Mathematics content and processes are applied to solve problems.

Essential Question

- What are ways to measure length?

Lesson Title	Lesson Overview	Standards
Estimating Length	The length of a known object can be used to estimate the length of another object to the nearest inch, foot, or yard.	2.MD.A.3
Measure with Inches	Length and height are measurable in inches.	2.MD.A.3 2.MD.A.2
Inches, Feet, and Yards	Length and height are measurable in inches, feet, and yards.	2.MD.A.1 2.MD.A.2
Measure Length Using Different Customary Units	When measuring length, the longer the chosen unit, the fewer units are needed; The shorter the unit, the more units are needed.	2.MD.A.1 2.MD.A.2
Measure with Centimeters	Length and height are measurable in centimeters.	2.MD.A.1 2.MD.A.3
Centimeters and Meters	Length and height are measurable in centimeters and meters.	2.MD.A.1 2.MD.A.3
Measure Length Using Different Metric Units	When measuring length, the longer the chosen unit, the fewer units are needed; The shorter the unit, the more units are needed.	2.MD.A.1 2.MD.A.2

Compare Lengths	The lengths of two objects can be compared by subtracting to find the difference.	2.MD.A.4 2.MD.A.5
Math Practices and Problem Solving: Precision	Good math thinkers are careful about what they write and say, so their ideas about math are clear.	MP.6

Topic 13: More Addition, Subtraction, and Length

Primary Resource: *enVisionmath2.0 Grade 2,* Savvas Learning Company, 2016.

Enduring Understandings

- **Measurement -** Some attributes of objects are measurable and can be quantified using unit amounts.
- **Practices, Processes, and Proficiencies -** Mathematics content and processes are applied to solve problems.

Essential Question

- How can you add and subtract lengths?

Lesson Title	Lesson Overview	Standards
Add and Subtract with Measurements	Measurements in the same unit, such as inches, can be added or subtracted in the same way as adding and subtracting whole numbers. The measurement unit needs to be written with the sum or difference.	2.MD.B.5
Find Unknown Measurements	Pictures and equations can be used to solve word problems involving measurements. Measurements can be added and subtracted in the same way as other whole numbers.	2.MD.B.5 2.OA.A.1
Continue to Find Unknown Measurements	Pictures and equations can be used to solve word problems involving measurements. Measurements can be added and subtracted in the same way as other whole numbers.	2.MD.B.5 2.OA.A.1
Add and Subtract on a Number Line	A sum can be represented as the total length of two line segments on a number line. A subtraction problem can be represented as the difference of two line segments on a number line.	2.MD.B.6
Math Practices and Problem Solving: Use Appropriate Tools	Good math thinkers know how to pick the right tools to solve math problems.	MP.5

Topic 14: Graphs and Data

Primary Resource: *enVisionmath2.0 Grade 2,* Savvas Learning Company, 2016.

Enduring Understandings

- **Data Collection and Representation -** Some questions can be answered by collecting and analyzing data, and the question to be answered determines the data that needs to be collected and how best to collect the data. Data can be represented visually using tables, charts, and graphs. The type of data determines the best choice of visual representation.
- **Practices, Processes, and Proficiencies** - Mathematics content and processes are applied to solve problems.

Essential Question

- How can line plots, bar graphs, and picture graphs be used to show data and answer questions?

Lesson Title	Lesson Overview	Standards
Line Plots	The lengths of objects can be organized in different ways. A line plot can be used as a visual representation of the relative lengths of objects.	2.MD.D.9 2.MD.A.1
More Line Plots	Different types of data can be displayed on a line plot. Line plots are useful for organizing large sets of data.	2.MD.D.9 2.MD.A.1
Bar Graphs	Bar graphs can be used to organize and display data. The height, or length, of bars in a bar graph makes it easy to compare data.	2.MD.D.10
Picture Graphs	Picture graphs use a single symbol to show data. This makes it easy to compare two or more categories.	2.MD.D.10
Draw Conclusions from Graphs	Picture graphs and bar graphs are useful tools for comparing data and drawing conclusions.	2.MD.D.10 2.OA.A.1
Math Practices and Problem Solving: Reasoning	Good math thinkers know how to think about words and numbers to solve problems.	MP.2

Topic 15: Shapes and Their Attributes

Primary Resource: *enVisionmath2.0 Grade 2,* Savvas Learning Company, 2016.

Enduring Understandings

- **Geometric Figures -** Two- and three-dimensional geometric figures can be described, classified, and analyzed by their attributes. Students come to understand that geometric shapes have attributes that distinguish one from another.

Essential Question

- How can shapes be described, compared, and broken into parts?

Lesson Title	Lesson Overview	Standards
2-Dimensional Shapes	Two-dimensional shapes can be classified and sorted based on their attributes.	2.G.A.1
Polygons and Angles	Polygons can be described by their number of sides and angles.	2.G.A.1
Draw 2-Dimensional Shapes	Two-dimensional shapes can be defined and differentiated based on attributes. These attributes can be used to draw a specific two-dimensional shape.	2.G.A.1
Cubes	You can describe a cube by talking about its faces, edges, and vertices. Knowing these attributes helps you draw a cube.	2.G.A.1
Divide Rectangles into Equal Squares	A rectangle can be divided into rows and columns of squares that are all the same size; you can count or add in different ways to find the total number of squares.	2.G.A.2 2.OA.C.4
Partition Shapes	A whole can have equal shares called halves, thirds, and fourths. You can show halves, thirds, and fourths of the same whole in different ways.	2.G.A.3
Equal Shares, Different Shapes	You can divide a whole into equal shares in different ways. Equal shares of the same whole do not have to have the same shape.	2.G.A.3
Math Practices and Problem Solving: Repeated Reasoning	Good math thinkers look for things that repeat in a problem. They use what they learn from one problem to help them solve other problems.	MP.8