HARFORD COUNTY PUBLIC SCHOOLS
GRADE 3 MATHEMATICS CURRICULUM

CLICK HERE for the Maryland College and Career Ready Standards for Grade 3 Mathematics.

Topic 1: Understanding Multiplication and Division of Whole Numbers

Primary Resource: *enVision Mathematics Grade 3,* Savvas Learning Company, 2024.

Enduring Understandings

- **Operations Meanings and Relationships -** There are multiple interpretations of multiplication and division. The lessons in Topics 1 and 2 present various multiplication and division situations. These situations can be used to help students understand that an operation can have various interpretations.
- **Properties –** For a given set of numbers there are relationships that are always true, called properties, and these are the rules that govern arithmetic and algebra.
- **Practices, Processes, and Proficiencies -** Mathematics content and processes are applied to solve problems.

Essential Question

- How can thinking about equal groups help you understand the connection between multiplication and division?

Lesson Title	Lesson Overview	Standards
Relate Multiplication and Addition	Some real-world problems that involve joining or separating equal groups or making comparisons can be solved using multiplication. Repeated addition that involves joining equal groups is one way to think about multiplication.	3.OA.A.1 3.OA.A.3
Multiplication on the Number Line	Some real-world problems that involve joining or separating equal groups or making comparisons can be solved using multiplication. Multiplication on the number line can involve joining equal groups and is one way to think about multiplication.	3.OA.A.1 3.OA.A.3
Arrays and Properties	Some real-world problems that involve joining or separating equal groups or making comparisons can be solved using multiplication. An array involves displaying objects in equal rows and columns and is one way to think about multiplication. Two numbers can be multiplied in any order and the product remains the same.	3.OA.A.1 3.OA.A.3 3.OA.B.5

Division: How Many in Each Group?	Sharing involves separating equal groups and is one way to think about division.	3.OA.A.2 3.OA.A.3
Division: How Many Equal Groups?	Some real-world problems that involve joining or separating equal groups or making comparisons can be solved using multiplication and division. Repeated subtraction involves separating equal groups and is one way to think about division.	3.OA.A.2 3.OA.A.3
Problem Solving: Using Appropriate Tools	Good math thinkers know how to pick the right tools to solve math problems.	MP.5

Topic 2: Multiplication Facts: Use Patterns

Primary Resource: *enVision Mathematics Grade 3,* Savvas Learning Company, 2024.

Enduring Understandings

- **Operations Meanings and Relationships -** There are multiple interpretations of multiplication and division. The lessons in Topics 1 and 2 present various multiplication and division situations. These situations can be used to help students understand that an operation can have various interpretations.
- **Patterns, Relationships, and Functions –** Relationships can be described and generalizations made for mathematical situations that have numbers or objects repeat in predictable ways.
- **Practices, Processes, and Proficiencies -** Mathematics content and processes are applied to solve problems.

Essential Question

- How can I use what I know about equal groups to help multiply numbers?

Lesson Title	Lesson Overview	Standards
2 and 5 as Factors	There are patterns in the products for multiplication with factors of 2 or 5.	3.OA.A.3 3.OA.A.1 3.OA.D.9
9 as a Factor	There are patterns in the products for multiplication with factors of 9.	3.OA.A.3 3.OA.A.1 3.OA.D.9
Apply Properties: Multiply by 0 and 1	There are patterns in the products for multiplication with factors of 0 or 1. The product of 0 and any number is 0. The product of 1 and any number is that same number.	3.OA.B.5 3.OA.A.3 3.OA.A.1 3.OA.C.7
Multiply by 10	Patterns can be used to solve multiplication problems with a factor of 10.	3.OA.A.3 3.OA.A.1 3.OA.D.9

Multiplication Facts: 0, 1, 2, 5, 9, and 10	Basic multiplication facts can be found by identifying patterns.	3.OA.A.3 3.OA.A.1 3.OA.D.9
Problem Solving: Model with Math	Good math thinkers choose and apply math they know to show and solve problems from everyday life.	MP.4

Topic 3: Apply Properties: Multiplication Facts for 3, 4, 6, 7 & 8

Primary Resource: *enVision Mathematics Grade 3,* Savvas Learning Company, 2024.

Enduring Understandings

- **Operations Meanings and Relationships -** There are multiple interpretations of addition, subtraction, multiplications, and division of rational numbers, and each operation is related to other operations.
- **Properties -** For a given set of numbers there are relationships that are always true, called properties, and these are the rules that govern arithmetic and algebra. The Distributive Property, the Commutative Property of Multiplication, the Associative Property of Multiplication, and the properties or rules involving division by 0 and 1 are used in Topics 3 and 4.
- **Basic Facts and Algorithms –** There is more than on 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 use known multiplication facts to solve unknown facts?

Lesson Title	Lesson Overview	Standards
The Distributive Property	The Distributive Property can be used to break a large array into smaller arrays.	3.OA.B.5 3.OA.C.7
Apply Properties: 3 and 4 as a Factor	Basic multiplication facts with 3 and 4 as a factor can be found by breaking apart the unknown fact into known facts. The answers to the known facts are added to get the final product.	3.OA.B.5 3.OA.A.3 3.OA.D.9 3.OA.C.7
Apply Properties: 6 and 7 as a Factor	Basic multiplication facts with 6 or 7 as a factor can be found by breaking apart the unknown fact into known facts. The answers to the known facts are added to get the final product.	3.OA.B.5 3.OA.A.3 3.OA.D.9 3.OA.C.7
Apply Properties: 8 as a Factor	Basic multiplication facts with 8 as a factor can be found by breaking apart the unknown fact into known facts. The answers to the known facts are added to get the final product.	3.OA.B.5 3.OA.A.3 3.OA.D.9 3.OA.C.7

Practice Multiplication Facts	Strategies such as bar diagrams and arrays with known facts can be used to solve multiplication problems.	3.OA.B.5 3.OA.A.3 3.OA.C.7
The Associative Property: Multiply with 3 Factors	Three or more numbers can be grouped and multiplied in any order.	3.OA.B.5 3.OA.A.3 3.OA.C.7
Problem Solving: Repeated Reasoning	Good math thinkers look for things that repeat and then make generalizations.	MP.8

Topic 4: Use Multiplication to Divide: Division Facts

Primary Resource: *enVision Mathematics Grade 3,* Savvas Learning Company, 2024.

Enduring Understandings

- **Operations Meanings and Relationships -** There are multiple interpretations of addition, subtraction, multiplications, and division of rational numbers, and each operation is related to other operations.
- **Properties -** For a given set of numbers there are relationships that are always true, called properties, and these are the rules that govern arithmetic and algebra. The Distributive Property, the Commutative Property of Multiplication, the Associative Property of Multiplication, and the properties or rules involving division by 0 and 1 are used in Topics 3 and 4.
- **Basic Facts and Algorithms –** There is more than on 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.
- **Variables, Expressions, and Equations –** Letters and symbols, called variables, can be used to stand for a number or any number from a set of numbers. Some mathematical and real-world situations can be represented using variables, operations, and numbers in expressions and equations.
- **Patterns, Relationships, and Functions –** Relationships can be described and generalizations made for mathematical situations that have numbers or objects repeat in predictable ways.
- **Practices, Processes, and Proficiencies** - Mathematics content and processes are applied to solve problems.

Essential Question

- How can you use known multiplication facts to find unknown division facts? How are multiplication and division related?

Lesson Title	Lesson Overview	Standards
Relate Multiplication and Division	Multiplication and division have an inverse relationship.	3.OA.B.6 3.OA.A.3 3.OA.C.7
Use Multiplication to Divide with 2, 3, 4, and 5	The inverse relationship between multiplication and division can be used to find division facts; every division fact has a related multiplication fact.	3.OA.B.6 3.OA.A.3 3.OA.C.7
Use Multiplication to Divide with 6 and 7	The inverse relationship between multiplication and division can be used to find division facts; every division fact has a related multiplication fact.	3.OA.B.6 3.OA.A.3 3.OA.C.7

Use Multiplication to Divide with 8 and 9	The inverse relationship between multiplication and division can be used to find division facts; every division fact has a related multiplication fact.	3.OA.B.6 3.OA.A.3 3.OA.C.7
Multiplication Patterns: Even and Odd Numbers	Factors and products can be identified by patterns as well as other characteristics, such as even or odd.	3.OA.D.9 3.OA.A.3 3.OA.C.7
Division Involving 0 and 1	Any number (except 0) divided by itself is equal to 1. Any number divided by 1 is that number. 0 divided by any number (except 0) is 0. 0 cannot be a divisor.	3.OA.B.5 3.OA.B.6 3.OA.A.3 3.OA.C.7
Practice Multiplication and Division Facts	Patterns and known facts can be used to find unknown multiplication facts. Division facts can be found by thinking of a related multiplication fact.	3.OA.C.7 3.OA.B.6 3.OA.A.3 3.OA.A.4
Solve Multiplication and Division Equations	You can use a multiplication or division fact to find the unknown value in an equation.	3.OA.A.4 3.OA.A.3 3.OA.C.7
Problem Solving: Make Sense and Persevere	Good math thinkers make sense of problems and think of ways to solve them. If they get stuck, they don’t give up.	MP.1

Topic 5: Fluently Multiply and Divide Within 100

Primary Resource: *enVision Mathematics Grade 3,* Savvas Learning Company, 2024.

Enduring Understandings

- **Operations Meanings and Relationships -** There are multiple interpretations of addition, subtraction, multiplications, and division of rational numbers, and each operation is related to other operations.
- **Properties -** For a given set of numbers there are relationships that are always true, called properties, and these are the rules that govern arithmetic and algebra.
- **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. More difficult products can be transformed into simpler ones by relating them to repeated addition or by breaking them apart into simpler ones.
- **Variables, Expressions, and Equations –** Letters and symbols, called variables, can be used to stand for a number or any number from a set of numbers. Some mathematical and real-world situations can be represented using variables, operations, and numbers in expressions and equations.
- **Practices, Processes, and Proficiencies** - Mathematics content and processes are applied to solve problems.

Essential Question

- What are strategies to solve multiplication and division facts?

Lesson Title	Lesson Overview	Standards
Patterns for Multiplication Facts	There are patterns in the factors and the products for multiplication facts.	3.OA.D.9 3.OA.C.7
Use a Table to Multiply and Divide	Any division problem can be thought of as a missing factor multiplication problem. Strategies and reasoning can be used to recall multiplication and division basic facts.	3.OA.C.7
Use Strategies to Multiply	Strategies such as using properties of operations, drawings, and skip counting can be used to multiply.	3.OA.C.7 3.OA.A.3
Solve Word Problems: Multiplication and Division Facts	Some real-world problems can be represented and solved using different multiplication and division strategies.	3.OA.C.7 3.OA.A.3

Write Multiplication and Division Math Stories	Some real-world problems that involve equal groups can be solved using multiplication.	3.OA.C.7 3.OA.A.3 3.OA.A.1 3.OA.A.2
Problem Solving: Look for and Use Structure	Good math thinkers look for relationships in math to help solve problems.	MP.7

Topic 6: Connect Area to Multiplication & Addition

Primary Resource: *enVision Mathematics Grade 3,* Savvas Learning Company, 2024.

Enduring Understandings

- **Operations Meanings and Relationships -** There are multiple interpretations of addition, subtraction, multiplications, and division of rational numbers, and each operation is related to other operations.
- **Measurement -** Some attributes of geometric 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 does area connect to multiplication and addition?

Lesson Title	Lesson Overview	Standards
Cover Regions	The amount of space inside a shape is its area, and area can be found or estimated using unit squares.	3.MD.C.5a 3.MD.C.5b 3.MD.C.6
Area: Nonstandard Units	Area can be measured using nonstandard units, including unit squares of different sizes.	3.MD.C.6 3.MD.C.5a 3.MD.C.5b
Area: Standard Units	Standard measurement units are used for consistency in finding and communicating measurements.	3.MD.C.6 3.MD.C.5a 3.MD.C.5b
Area of Squares and Rectangles	The amount of space inside a region is its area, and area can be found by counting unit squares or by multiplying the side lengths.	3.MD.C.7a 3.MD.C.7b 3.OA.A.4 3.OA.C.7
Apply Properties: Area and the Distributive Property	The areas of rectangles can be used to model the Distributive Property.	3.MD.C.7c 3.OA.C.7
Apply Properties: Area of Irregular Shapes	The area of some irregular shapes can be found by dividing the original shape into rectangles, finding the area of each rectangle, and adding all of the areas.	3.MD.C.7d 3.OA.C.7
Problem Solving: Look for and Use Structure	Good math thinkers look for relationships in math to help solve problems.	MP.7

Topic 7: Represent and Interpret Data

Primary Resource: *enVision Mathematics Grade 3,* Savvas Learning Company, 2024.

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 need 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. Students learn to read and make scaled picture graphs and scaled bar graphs, and then solve problems using the data that is represented. Students choose the scale to be used based on the data.
- **Practices, Processes, and Proficiencies** - Mathematics content and processes are applied to solve problems.

Essential Question

- How can data be represented, analyzed, and interpreted?

Lesson Title	Lesson Overview	Standards
Read Picture Graphs and Bar Graphs	Certain types of graphs are appropriate for certain kinds of data. Picture graphs and bar graphs make it easy to compare data.	3.MD.B.3 3.OA.A.3 3.OA.D.8
Make Picture Graphs	The type of graph used is based on the data being presented. The key for a picture graph determines the number of pictures needed to represent the data.	3.MD.B.3 3.OA.A.3
Make Bar Graphs	The type of graph used is based on the data being presented. In a scaled bar graph, the scale determines how long each bar needs to be to represent every number in the data set.	3.MD.B.3 3.OA.A.3
Solve Word Problems Using Information in Graphs	Some problems can be solved by making, reading, and analyzing a graph.	3.MD.B.3 3.OA.A.3 3.OA.D.8
Problem Solving: Precision	Good math thinkers are careful about what they write and say, so their ideas about math are clear.	MP.6

Topic 8: Use Strategies and Properties to Add and Subtract

Primary Resource: *enVision Mathematics Grade 3,* Savvas Learning Company, 2024.

Enduring Understandings

- T**he Base-Ten Numeration System –** The base-ten numerations system is a scheme for recording numbers using digits 0-9, groups of ten, and place value.
- **Equivalence** – Any number, measure, numerical express, algebraic expression, or equation can be represented in an infinite number of ways that have the same value.
- **Operations Meanings and Relationships -** There are multiple interpretations of addition, subtraction, multiplications, and division of rational numbers, and each operation is related to other operations.
- **Estimation –** Numbers can be approximated by numbers that are close. Numerical calculations can be approximated by replacing numbers with other numbers that are close and easy to compute with mentally.
- **Properties -** For a given set of numbers there are relationships that are always true, called properties, and these are the rules that govern arithmetic and algebra.
- **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.
- **Variables, Expressions, and Equations –** Letters and symbols, called variables, can be used to stand for a number or any number from a set of numbers. Some mathematical and real-world situations can be represented using variables, operations, and numbers in expressions and equations.
- **Practices, Processes, and Proficiencies** - Mathematics content and processes are applied to solve problems.

Essential Questions

- How can sums and differences be estimated and found mentally?

Lesson Title	Lesson Overview	Standards
Addition Properties	Some real-world problems that involve joining, separating, part-part whole, or comparing can be solved using addition. Two or more numbers can be added in any order, and the sum of any number and 0 is that number.	3.NBT.A.2 3.OA.D.8
Algebra: Addition Patterns	Generalizations about how addition works emerge from investigating patterns and reasoning about mathematical relationships.	3.OA.D.9

Mental Math Addition	There is more than one way to do mental math. Techniques involve changing the numbers or the expressions so that calculations are easy to do mentally.	3.NBT.A.2 3.OA.C.7 3.OA.D.8
Mental Math Subtraction	There is more than one way to do mental math. Techniques involve changing the numbers or the expressions so that calculations are easy to do mentally.	3.NBT.A.2 3.OA.D.8
Round Whole Numbers	Rounding is a process for finding multiples of 10 and 100 closest to a given number.	3.NBT.A.1 3.OA.D.8
Estimate Sums	There is more than one way to estimate a sum. Two ways to estimate are rounding and using compatible numbers.	3.NBT.A.2 3.NBT.A.1 3.MD.A.2
Estimate Differences	There is more than one way to estimate a difference. Two ways to estimate are rounding and using compatible numbers.	3.NBT.A.2 3.OA.C.7 3.OA.D.8
Problem Solving: Model with Math	Good math thinkers choose and apply math they know to show and solve problems from everyday life.	MP.4

Topic 9: Fluently Add and Subtract within 1,000

Primary Resource: *enVision Mathematics Grade 3,* Savvas Learning Company, 2024.

Enduring Understandings

- T**he Base-Ten Numeration System –** The base-ten numerations system is a scheme for recording numbers using digits 0-9, groups of ten, and place value.
- **Equivalence** – Any number, measure, numerical express, algebraic expression, or equation can be represented in an infinite number of ways that have the same value.
- **Operations Meanings and Relationships -** There are multiple interpretations of addition, subtraction, multiplications, and division of rational numbers, and each operation is related to other operations.
- **Estimation –** Numbers can be approximated by numbers that are close. Numerical calculations can be approximated by replacing numbers with other numbers that are close and easy to compute with mentally.
- **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.
- **Variables, Expressions, and Equations –** Letters and symbols, called variables, can be used to stand for a number or any number from a set of numbers. Some mathematical and real-world situations can be represented using variables, operations, and numbers in expressions and equations.
- **Practices, Processes, and Proficiencies** - Mathematics content and processes are applied to solve problems.

Essential Question

- What are procedures for adding and subtracting whole numbers?

Lesson Title	Lesson Overview	Standards
Use Partial Sums to Add	The expanded algorithm for adding 3-digit numbers breaks the addition problem into a series of easier problems based on place value. Answers to the simpler problems are then used to find the final sum.	3.NBT.A.2 3.OA.D.8
Use Regrouping to Add	The process for regrouping and adding 3-digit numbers is an extension of the process for regrouping and adding 2-digit numbers.	3.NBT.A.2 3.OA.D.8
Add 3 or More Numbers	The addition of adding three or more numbers is an extension of adding two numbers.	3.NBT.A.2 3.OA.C.7 3.OA.D.8

Use Partial Differences to Subtract	The expanded algorithm for subtracting multi-digit numbers breaks a larger subtraction problem into a series of easier problems based on place value. Answers to the simpler problems are then used to find the final difference.	3.NBT.A.2 3.OA.C.7 3.OA.D.8
Use Regrouping to Subtract	The process for regrouping and adding 3-digit numbers is an extension of the process for regrouping and adding 2-digit numbers.	3.NBT.A.2 3.OA.D.8
Use Strategies to Add and Subtract	There are a variety of strategies that can be used to add or subtract 3-digit numbers.	3.NBT.A.2 3.OA.D.8
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 10: Multiply by Multiples of 10

Primary Resource: *enVision Mathematics Grade 3,* Savvas Learning Company, 2024.

Enduring Understandings

- T**he Base-Ten Numeration System –** The base-ten numerations system is a scheme for recording numbers using digits 0-9, groups of ten, and place value.
- **Equivalence** – Any number, measure, numerical express, algebraic expression, or equation can be represented in an infinite number of ways that have the same value.
- **Operations Meanings and Relationships -** There are multiple interpretations of addition, subtraction, multiplications, and division of rational numbers, and each operation is related to other operations.
- **Properties -** For a given set of numbers there are relationships that are always true, called properties, and these are the rules that govern arithmetic and algebra.
- **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 strategies can be used to multiplying by multiples of 10?

Lesson Title	Lesson Overview	Standards
Use Patterns to Multiply	Patterns can be used to find products when one factor is a multiple of 10.	3.NBT.A.3 3.OA.D.8
Use Mental Math to Multiply	Different strategies can be used to find products when one factor is a multiple of 10.	3.NBT.A.3 3.OA.A.3
Use Properties to Multiply	Basic multiplication facts and properties of multiplication can be used to find products when one factor is a multiple of 10.	3.NBT.A.3 3.OA.B.4
Problem Solving: Look For and Use Structure	Good math thinkers look for relationships in math to help solve problems.	MP.7

Topic 11: Use Operations with Whole Numbers to Solve Problems

Primary Resource: *enVision Mathematics Grade 3,* Savvas Learning Company, 2024.

Enduring Understandings

- **Operations Meanings and Relationships -** There are multiple interpretations of addition, subtraction, multiplications, and division of rational numbers, and each operation is related to other operations.
- **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.
- **Variables, Expressions, Equations -** Some mathematical and real-world situations can be represented using variables, expressions, and equations.
- **Solving Equations –** Rules of arithmetic and algebra can be used together with notions of equivalence to transform equations so solutions can be found.
- **Practices, Processes, and Proficiencies** - Mathematics content and processes are applied to solve problems.

Essential Question

- What are ways to solve two-step problems?

Lesson Title	Lesson Overview	Standards
Solve 2-Step Word Problems: Addition and Subtraction	Bar diagrams show relationships in a two-step word problem and help identify the operation or operations needed to solve the problem.	3.OA.D.8 3.NBT.A.2
Solve 2-Step Word Problems: Multiplication and Division	Bar diagrams show relationships in a two-step word problem and help identify the operation or operations needed to solve the problem.	3.OA.D.8 3.OA.C.7
Solve 2-Step Word Problems: All Operations	The way quantities in a two-step problem are related determines the operations used to solve the problem. Equations show these relationships.	3.OA.D.8 3.OA.C.7 3.NBT.A.2 3.MD.B.3
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 12: Understand Fractions as Numbers

Primary Resource: *enVision Mathematics Grade 3,* Savvas Learning Company, 2024.

Enduring Understandings

- **Numbers -** The set of real numbers is infinite and ordered. Whole numbers, integers, and fractions are real numbers. Each real number can be associated with a unique point on the number line.
- **Comparison and Relationships** – Numbers, expressions, measures, and objects can be compared and related to other numbers, expressions, measures, and objects in different ways.
- **Data Collection and Representation -** Some questions can be answered by collecting and analyzing data, and the question to be answered determines the data that need 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. Students learn to read and make line plots, and solve problems using data represented on line plots.
- **Practices, Processes, and Proficiencies** - Mathematics content and processes are applied to solve problems.

Essential Question

- What are different interpretations of a fraction?

Lesson Title	Lesson Overview	Standards
Partition Regions into Equal Parts	A unit fraction represents one part of a whole that has been divided into equal parts. A fraction can represent multiple copies of a unit fraction.	3.NF.A.1 3.G.A.2
Fractions and Regions	A unit fraction represents one part of a whole that has been divided into equal parts. A fraction can represent multiple copies of a unit fraction.	3.NF.A.1 3.G.A.2
Understand the Whole	The whole can be found given a fractional part.	3.NF.A.3c 3.NF.A.1
Number Line: Fractions Less Than 1	Points on a number line can represent fractions. The denominator represents the number of equal parts between 0 and 1, and the numerator represents the number of parts between 0 and the point.	3.NF.A.2a 3.NF.A.2b
Number Line: Fractions Greater Than 1	A number line can be used to represent fractions greater than 1.	3.NF.A.2b 3.NF.A.2a
Line Plots and Length	A line plot is a way to organize data on a number line.	3.MD.B.4 3.NF.A.2a 3.NF.A.2b

More Line Plots and Length	A line plot is a way to organize data on a number line.	3.MD.B.4 3.NF.A.2a 3.NF.A.2b
Problem Solving: Make Sense and Persevere	Good math thinkers make sense of problems and think of ways to solve them.	MP.1

Topic 13: Fraction Equivalence and Comparison

Primary Resource: *enVision Mathematics Grade 3,* Savvas Learning Company, 2024.

Enduring Understandings

- **Numbers -** The set of real numbers is infinite and ordered. Whole numbers, integers, and fractions are real numbers. Each real number can be associated with a unique point on the number line.
- **Equivalence** – Any number, measure, numerical express, algebraic expression, or equation can be represented in an infinite number of ways that have the same value.
- **Comparison and Relationships** – Numbers, expressions, measures, and objects can be compared and related to other numbers, expressions, measures, and objects in different ways.
- **Practices, Processes, and Proficiencies** - Mathematics content and processes are applied to solve problems.

Essential Question

- What are different ways to compare fractions?

Lesson Title	Lesson Overview	Standards
Equivalent Fractions: Use Models	The same fractional amount can be represented by an infinite set of different but equivalent fractions.	3.NF.A.3b 3.NF.A.3a
Equivalent Fractions: Use the Number Line	There are a limitless number of fraction names for each point on a number line. These points can be used to name equivalent fractions.	3.NF.A.3a 3.NF.A.3b
Use Models to Compare Fractions: Same Denominator	If two fractions have the same denominator, the fraction with the greater numerator is the greater fraction.	3.NF.A.3d
Use Models to Compare Fractions: Same Numerator	If two fractions have the same numerator, the fraction with the greater denominator is less than the other fraction.	3.NF.A.3d
Compare Fractions: Use Benchmarks	Benchmark numbers such as 0, ½, and 1 can be used to compare fractions.	3.NF.A.3d
Compare Fractions: Use the Number Line	You can use a number line to compare fractions.	3.NF.A.3a
Whole Numbers and Fractions	Whole numbers can be represented by many different fraction names.	3.NF.A.3c 3.NF.A.3a
Problem Solving: Construct Arguments	Good math thinkers use math to explain why they are right. They also talk about the math that others do.	MP.3

Topic 14: Solve Time, Capacity and Mass Problems

Primary Resource: *enVision Mathematics Grade 3,* Savvas Learning Company, 2024.

Enduring Understandings

- **Comparison and Relationships** – Numbers, expressions, measures, and objects can be compared and related to other numbers, expressions, measures, and objects in different ways.
- **Estimation –** Numbers can be approximated by numbers that are close. Numerical calculations can be approximated by replacing numbers with other numbers that are close and easy to compute with mentally. Some measurements can be approximated using known referentsas the unit in the measurement process.
- **Measurement -** Some attributes of objects are measurable and can be quantified using unit amounts. In grade 3, students work with time and elapsed time, liquid volume /capacity, and mass.
- **Practices, Processes, and Proficiencies** - Mathematics content and processes are applied to solve problems.

Essential Question

- How can time, capacity, and mass be measured and found?

Lesson Title	Lesson Overview	Standards
Time to the Minute	Clocks can be used to tell time to the nearest minute.	3.MD.A.1
Units of Time: Measure Elapsed Time	Elapsed time can be found by finding the total amount of time that passes between a starting time and an ending time.	3.MD.A.1
Units of Time: Solve Word Problems	Time intervals can be added or subtracted to solve problems.	3.MD.A.1 3.NBT.A.2
Estimate Liquid Volume	Benchmarks can be used to estimate capacity (liquid volume).	3.MD.A.2
Measure Liquid Volume	Capacity (liquid volume) is a measure of the amount of liquid a container can hold.	3.MD.A.2
Estimate Mass	Mass is a measure of the quantity of matter in an object.	3.MD.A.2
Measure Mass	Mass is a measure of the quantity of matter in an object.	3.MD.A.2
Solve Word Problems Involving Mass and Liquid Volume	Problems involving mass and volume can often be solved with a picture or a diagram.	3.MD.A.2 3.OA.A.3 3.OA.C.7
Problem Solving: Reasoning	Good math thinkers know how to think about words and numbers to solve problems.	MP.2

Topic 15: Attributes of Two-Dimensional Shapes

Primary Resource: *enVision Mathematics Grade 3,* Savvas Learning Company, 2024.

Enduring Understandings

- **Comparison and Relationships -** Numbers, expressions, measures, and objects can be compared and related to other numbers, expressions, measures, and objects in different ways.
- **Geometric Figures -** Two- and three- dimensional objects with or without curved surfaces can be described, classified, and analyzed by their attributes. An object's location in space can be described quantitatively.

Essential Question

- How can two-dimensional shapes be described, analyzed, and classified?

Lesson Title	Lesson Overview	Standards
Describe Quadrilaterals	Quadrilaterals can be described and classified by their sides and angles.	3.G.A.1 3.NF.A.1 3.G.A.2
Classify Shapes	Shapes can be classified by their attributes.	3.G.A.1 3.NF.A.1 3.G.A.2
Analyze and Compare Quadrilaterals	Quadrilaterals can be classified by their attributes.	3.G.A.1 3.MD.C.5b
Problem Solving: Precision	Good math thinkers are careful about what they write and say, so their ideas about math are clear.	MP.6

Topic 16: Solve Perimeter Problems

Primary Resource: *enVision Mathematics Grade 3,* Savvas Learning Company, 2024.

Enduring Understandings

- **Comparison and Relationships -** Numbers, expressions, measures, and objects can be compared and related to other numbers, expressions, measures, and objects in different ways.
- **Measurement** - Some attributes of objects are measurable and can be quantified using unit amounts. For example, perimeter is the measure of the distance around a polygon, and it can be represented by the sum of the lengths of all its sides. Different shapes can have the same perimeter and/or the same area.

Essential Question

- How can perimeter be measured and found?

Lesson Title	Lesson Overview	Standards
Understand Perimeter	The distance around a figure is its perimeter.	3.MD.D.8
Perimeter of Common Shapes	To find the perimeter of a polygon, add the lengths of the sides.	3.MD.D.8 3.OA.A.3 3.OA.C.7
Perimeter and Unknown Side Lengths	To find the perimeter of a polygon, add the lengths of the sides.	3.MD.D.8 3.OA.D.8 3.NBT.A.2
Same Perimeter, Different Area	Polygons with the same perimeter may have different areas.	3.MD.D.8 3.MD.C.7 3.OA.C.7
Same Area, Different Perimeter	Polygons with the same area may have different perimeters.	3.MD.D.8 3.MD.C.7b 3.OA.C.7
Problem Solving: Reasoning	Good math thinkers know how to think about words and numbers to solve problems.	MP.2