3-Math MLS

Mathematics

Grade(s) 3rd, Duration 1 Year, 1 Credit
Required Course

Course Description

Students will be be use place value understanding and properties of operations to perform multi-digit arithmetic, develop understanding of fractions as numbers, represent and solve problems involving multiplication and division, understand properties of multiplication and the relationship between multiplication and division, multiply and divide with 100, identify and explain arithmetic patterns, reason with shapes and their attributes, solve problems involving the measurement of time, liquid volumes and weights of objects, understand the concept of area and perimeter, and represent and analyze data,

Scope And Sequence

Timeframe	Unit	Instructional Topics
8 Week(s)	1: Number Sense: Place Value	1. Place Value to 100,000 place 2. Topic 8- Use Strategies and Properties to Add and Subtract 3. Topic 9- Fluently Add and Subtract within 1,000
6 Week(s)	2: Understanding the Relationships and Algebraic Thinking of Multiplication and Division	1. Topic 1: Understanding Multiplication & Division 2. Topic 2: Multiplication Facts, Use Patterns 3. Topic 3: Apply Properties: Multiplication Facts for 3, 4, 6, 7, 8 4. Topic 10: Multiply by Multiples of 10
8 Week(s)	3: Applying the Relationships and Algebraic Thinking of Multiplication and Division	1. Topic 4 - Use Multiplication to Divide: Division Facts 2. Topic 5: Fluently Multiply and Divide Within 100 3. Topic 6: Connect Area to Multiplication and Addition 4. Topic 16 Solve Perimeter Problems
2 Week(s)	4: Data and Statistics	1. Topic 7 - Represent and Interpret Data
6 Week(s)	5: Fractions	1. Topic 12 - Understand Fractions as Numbers 2. Topic 13 - Fraction Equivalence and Comparison
4 Week(s)	6: Geometry and Measurement	1. Topic 14: Solve Time, Capacity, and Mass Problems 2. Topic 15: Attributes of Two-Dimensional Shapes

Course Instructional Resources/Textbook

enVision math 2.0 (2 teacher's editions) by Scott Foresman/Addison Wesley.
Teacher's Edition Program Overview Grade 2 (1 thin manual)

Course Details

Unit: 1: Number Sense: Place Value

Duration: 8 Week(s)

Unit Description

In this unit students will continue to develop their skills with place value. Students will learn to identify place value to the hundred thousands place and identify and write numbers in standard, expanded and word form. Students will develop skills with rounding numbers to the nearest ten and hundred, as well as estimate sums through rounding. Students will understand and use properties of addition and the relationship between addition and subtraction. Students will use their developed knowledge of place value to add and subtract 3 and 4 digit numbers with regrouping.

Enduring Understandings/Essential Learner Outcomes

Why is understanding place value important?
What are the values of each digit in a number?
What clues help you determine how to round a number to the nearest 10? 100?
What do you notice about what happens to numbers as you move across the place value chart?
How do properties of addition help me understand how to add 3 and 4 digit numbers?
What mathematical relationship and patterns do you notice when adding?
Can I explain how to estimate sums? differences?
How are addition and subtraction related?

Academic Vocabulary

addend
add/addition
Associative (grouping) Property of Addition
bar diagram
Commutative (order) Property of Addition
compatible numbers
decrease
difference
digit
equation
estimate
even
expanded form

hundred thousands
hundreds
Identity (zero) Property of Addition
increase
inverse operations
odd
ones
place value
place value chart
regroup
round
standard form
subtraction
sum
ten thousands
tens
thousands
value
word form

Assessment

Throughout each topic, students will take formative assessments that will be a combination of multiple choice and constructed response questions that will gauge their understand of the concepts taught. Other quick formatives will be used to assess student understanding. At the end of each topic, students will take a summative assessment that will be a combination of multiple choice and constructed response questions that will gauge their overall understanding of the concepts taught in the topic.

Topic: Place Value to 100,000 place	Duration: 15 Day(s)

Description

In this topic, students will continue to develop their skills with place value. Students will learn to identify place value to the hundred thousands place and identify and write numbers in standard, expanded and word form. Students will develop skills with rounding numbers to the nearest ten and hundred, as well as estimate sums through rounding.

Academic Vocabulary (What terms will students need to know?)

place value
place value chart
ones
tens
hundreds
thousands
ten thousands
hundred thousands
value
expanded form
standard form
word form
digit
even
odd
increase
decrease

Definition of Mastery

Students will identify the value of a digit in a number up to the hundred thousands place.
Students will read and write numbers in standard, expanded and word form up to the hundred thousands place.
Students will compare numbers by reading and analyzing them to the hundred thousands place.

Learning Targets

I can read, write, and identify numbers up to the 100s place.

I can read, write, and identify numbers up to the 1,000s place.

I can compare numbers using greater than, less than, and equal to symbols.

I can read, write, and identify numbers up to the 10,000s place.

I can read, write, and identify numbers up to the 100,000s place.

I can compare numbers up to the 100,000s place.

Topic: Topic 8- Use Strategies and Properties to Add and Subtract	Duration: 12 Day(s)

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Mathematics

3rd, Duration 1 Year, 1 Credit
Required Course

Description

Students will continue to build their conceptual understanding of rounding and estimation. They use place-value concepts to determine which ten or hundred is closer to a given number. Students will recognize that they can add numbers in any order or group numbers in different ways and still get the same answer. Some mental math strategies rely on using the inverse relationship between addition and subtraction.

Academic Vocabulary (What terms will students need to know?)

Associative (Grouping) Property of Addition
bar diagram
Commutative (Order) Property of Addition
Identity (Zero) Property of Addition
round
equation
estimate
place value
compatible numbers
inverse operations

Definition of Mastery

Students can use knowledge of place value to round 3 and 4 digit numbers to the nearest 10's and 100's place.
Students can use knowledge of place value to round 3 and 4 digit numbers to the nearest 10's and 100's place to estimate sums and differences
Students can relate addition and subtraction by using subtraction to check addition problems and addition to check subtraction problems.

Learning Targets

I can use properties to understand addition.

I can find and explain addition patterns.

I can use mental math to add.

I can use mental math to subtract.

I can use what I know about addition and place value to estimate sums.

I can use what I know about subtraction and place value to estimate differences.

I can use the relationship between addition and subtraction to solve problems.

I can use bar diagrams to solve problems.

I can round to the 10s and 100s place.

I can use estimation and rounding to solve a word problem.

I can solve multi-step problems.

Topic: Topic 9- Fluently Add and Subtract within 1,000   **Duration:** 13 Day(s)

Description

Students will add and subtract 3 digit numbers, add 3 or more numbers and solve multistep word problems.

Academic Vocabulary (What terms will students need to know?)

addition
addend
sum
subtraction
difference
regroup

Definition of Mastery

Students will be able to use regrouping to fluently add and subtract 3 digit number.
Students will be able to use regrouping to add 3 or more 2 and 3 digit numbers fluently
Students will be able to identify the steps and solve each step in a multistep word problem

Learning Targets

I can use place value to break apart and add numbers.

I can use different strategies to regroup when adding 3-digit numbers.

I can use regrouping to add 3-digit numbers.

I can add three or more numbers.

I can use place value reasoning to subtract 3-digit numbers.

I can use place value reasoning to subtract 3-digit numbers.

I can construct math arguments using what I know about addition and subtraction.

I can use estimation to decide if my answer is reasonable.

I can solve multi-step problems.

Unit: 2: Understanding the Relationships and Algebraic Thinking of Multiplication and Division

Duration: 6 Week(s)

Unit Description

This unit will introduce the concepts of multiplication through skip counting, equal groups and repeated addition. The Commutative Property is introduced as students learn their multiplication facts. Division is also introduced through the concept of sharing equally and repeated subtraction. We will find patterns in multiplication facts and use the Distributive Property to solve harder multiplication facts. Multiplying with multiples of 10 will round out this unit.

Enduring Understandings/Essential Learner Outcomes

What is repeated addition?
How do you skip count on a number line?
Can you draw objects in rows to make an array?
What are the properties of multiplication?
How do you share equally?
How are subtraction and division related?
How do you decide which tool to use to solve problems?
How do you find a patterns in solving multiplication facts?
What is the difference between factors and products?
What are multiples of 10?

Academic Vocabulary

array
column
Commutative (Order) Property of Multiplication
Distributive Property
division
equal groups
equation
factors
fluency
Identity (One) Property of Multiplication
multiples
multiplication
number line
open number line
product
quotient
repeated addition
row
skip counting
unknown
Zero Property of Multiplication

Assessment

Throughout each topic, students will take in class formative assessments that will be a combination of multiple choice and constructed response questions that will gauge their understanding of the concepts taught.

At the end of each unit, students will take a summative assessment that will be a combination of multiple choice and constructed response questions that will gauge their overall understanding of the concepts taught in the topic.

Topic: Topic 1: Understanding Multiplication & Division

Duration: 8 Day(s)

Description

In this topic, students will learn strategies to solve multiplication equations and what it means to share equally for division.

Students will use repeated addition, number lines and arrays to solve multiplication equations. Students will also learn that division means to share equally and is the same as repeated subtraction. A connection will be made between subtraction and division just like addition and multiplication have a relationship. Students will apply the Commutative Property of Multiplication to find products.

Academic Vocabulary (What terms will students need to know?)

equal groups
multiplication
factors
product

equation
unknown
number line
array
row
column
Commutative (Order) Property of Multiplication
division
quotient

Definition of Mastery

Students will be able to use strategies of repeated addition, drawing equal groups, skip counting, or using a number line to solve multiplication equations.
Students will learn that the order in which they multiply the factors will get you the same product (Commutative Property).
Students will learn that sharing equally and repeated subtraction are strategies used to solve division equations.
Students will make the connection between addition and multiplication.
Students will make the connection between subtraction and division.

Learning Targets

I can use addition or multiplication to join equal groups.

I can use a number line to represent and solve multiplication facts.

I can use arrays to show and solve multiplication problems.

I can multiply factors in any order to solve multiplication problems.

I can use objects or pictures to show how objects can be divided into equal groups.

I can use repeated subtraction to understand and solve division problems.

I can think strategically to determine which tool will be more useful.

Topic: Topic 2: Multiplication Facts, Use Patterns	**Duration:** 8 Day(s)

Description

In this topic, students will learn to use properties of multiplication to solve multiplication equations.

Students will use patterns to find the products of multiplication facts for the factors of 0, 1, 2, 5, 9, and 10. Students will use properties of multiplication, including the Identify (One) Property of Multiplication, Zero Property of Multiplication and the Commutative Property of Multiplication.

Academic Vocabulary (What terms will students need to know?)

multiplication
fluency
multiples
factors
product
Identity (One) Property of Multiplication
Zero Property of Multiplication

Definition of Mastery

Students will use the Commutative Property to solve related multiplication equations.
Students will gain fluency when solving multiplication equations.
Students will use the Identify (One) Property of Multiplication to solve multiplication equations.
Students will use the Zero Property of Multiplication to solve multiplication equations.

Learning Targets

I can use patterns to multiply by 2 and 5.

I can use patterns to multiply by 9.

I can use patterns and properties to multiply by 0 and 1.

I can use patterns to multiply by 10.

I can use basic multiplication facts to solve problems.

I can use math I know to solve problems.

Topic: Topic 3: Apply Properties: Multiplication Facts for 3, 4, 6, 7, 8	**Duration:** 10 Day(s)

Description

Grade(s) 3rd, Duration 1 Year, 1 Credit
Required Course

Students will apply properties of multiplication to find the multiplication facts for 3, 4, 6, 7, and 8, specifically the distributive property of multiplication. The Associative (Grouping) Property of Multiplication will show how to multiply three factors. Students will use reasoning as they solve math problems.

Academic Vocabulary (What terms will students need to know?)
distributive property
associative (grouping) property of multiplication
factors
product

Definition of Mastery
Students will use the Distributive Property successfully when solving multiplication equations.
Students will use the Associative Property to group two factors together first before solving the multiplication equation.

Learning Targets
I can break apart unknown facts into known facts and solve multiplication problems.

I can use tools and properties strategically to solve problems when I multiply by 3.

I can use what I know about multiplying by 2's and properties to multiply by 4.

I can make and use models to solve multiplication problems that have 6 and 7 as factors.

I can use known facts and properties to multiply by 8.

I can use strategies and tools to represent and solve multiplication facts.

I can multiply 3 factors in any order to find a product.

I can use reasoning to look for and describe general strategies for finding products.

I can use patterns to describe the relationship between quantities.

Topic: Topic 10: Multiply by Multiples of 10   **Duration:** 4 Day(s)

Description
This topic builds on student's understanding of using a number line to show multiplication. An open number line will be used to find products when one factor is a multiple of 10. Then we will apply that information to use properties to multiply.

Academic Vocabulary (What terms will students need to know?)
open number line
multiples

Definition of Mastery
Students will use an open number line to find products for multiples of 10.
Students will use properties of multiplication to solve multiplication equations using multiples of 10.

Learning Targets
I can use an open number line and patterns to multiply by multiples of 10.

I can use properties of multiplication to find a product when one factor is a multiple of 10.

I can use different strategies to find products when one factor is a multiple of 10.

I can use patterns to describe relationships between quantities.

Unit: 3: Applying the Relationships and Algebraic Thinking of Multiplication and Division   **Duration:** 8 Week(s)

Unit Description
The inverse relationship between multiplication and division can be used to find division facts. Every division fact has a related multiplication fact. Factors and products can be identified by patterns as well as other characteristics such as even or odd numbers. We will discover patterns in the factors and the products for multiplication facts. Any division problem can be thought of as a missing factor multiplication problem. Strategies such as using properties of operations, drawings, and skip counting can be used to multiply. Some real-world problems that involve equal groups can be solved using division. We will end the unit with area and perimeter.

Enduring Understandings/Essential Learner Outcomes
How are multiplication and division related?
How do we measure perimeter and area of geometric shapes?
How can we use multiplication facts to find related division facts?
How can you explain multiplication patterns for even and odd numbers?
How do you divide with 0 and 1?
How can you make sense of a problem and persevere in solving it?
How can you explain patterns in the multiplication chart?

How can you use a multiplication table to solve multiplication or division problems?
How can you describe a multiplication fact?
How do you write division stories?
How do you measure area?
How do you measure area with non-standard units?
How can you measure area using standard units of length?
How can you find the area of a figure?
How do you find perimeter?
How can you find the perimeters of common shapes?
How can you find the unknown side length from the perimeter?
Can rectangles have different areas but the same perimeter?

Academic Vocabulary

dividend
divisor
fact family
quotient
even
odd
area
unit square
square unit
estimate
exact
perimeter
equilateral triangle
multiplication table
Distributive Property
factors
products
fluency
unknown number
polygon

Assessment

Throughout each unit, students will take an in class formative assessments that will be a combination of multiple choice and constructed response questions that will gauge their understand of the concepts taught.

At the end of each unit, students will take an in class summative assessment that will be a combination of multiple choice and constructed response questions that will gauge their overall understanding of the concepts taught in the unit.

Topic: Topic 4 - Use Multiplication to Divide: Division Facts	**Duration:** 10 Day(s)

Description

Students will learn how to use inverse operations to make the connection between multiplication and division. Students will work with fact families, finding patterns with odd and even numbers, and practicing dividing with factors 0-9.

Academic Vocabulary (What terms will students need to know?)

dividend
divisor
fact family
quotient
even
odd

Definition of Mastery

Students will be able to use multiplication facts to solve division equations.
Students will be able to use even and odd factors to determine if the product is an even or odd number.
Students will use properties to understand division involving 0 and 1.

Learning Targets

I can use fact families to see how multiplication and division are related.

I can divide by 2, 3, 4, and 5 by thinking about how I multiply with those numbers.

I can divide by 6 and 7 by thinking about how I multiply with those numbers.

I can divide by 8 and 9 by thinking about how I multiply with those numbers.

I can find and explain patterns for even and odd numbers.

I can understand the patterns of division with 0 and 1.

I can use patterns and related facts to solve multiplication and division problems.

I can use multiplication and division facts to find unknown values in an equation.

I can make sense of problems and keep working if I get stuck.

I can solve a multiplication or division problem by finding the fact family.

I can solve a multiplication or division problem by using a drawing to solve the problem.

I can solve a word problem by using a drawing or illustration.

I can use a fact family to multiply or divide.

Topic: Topic 5: Fluently Multiply and Divide Within 100   Duration: 10 Day(s)

Description

This topic focuses on applying strategies to achieve fluency with multiplication and division facts within 100. Fluency includes a strong focus on selecting and using appropriate strategies. The work in this topic moves students toward knowing from memory all products of two 1-digit numbers by the end of Grade 3.

Academic Vocabulary (What terms will students need to know?)

multiplication table
Distributive Property
factors
products
fluency
unknown number

Definition of Mastery

Students can use strategies to fluently multiply and divide within 100.
Students will be able to explain patterns found in a multiplication chart.
Students will be able to find missing numbers in a multiplication table.
Students will solve word problems.
Students will write math stories involving multiplication and division.

Learning Targets

I can use structure and properties to explain patterns for multiplication facts.

I can use reasoning and the relationship between multiplication and division to find basic facts.

I can use the relationship between multiplication and division to find basic facts.

I can use different strategies to solve multiplication problems.

I can use strategies to solve word problems that involve multiplication and division.

I can write and solve math stories for multiplication equations.

I can write and solve math stories for division equations.

I can use the structure of multiplication and division to compare expressions.

I can multiply within 100 fluently.

I can use numbers from a fact family to multiply and divide fluently.

I can multiply and divide fluently by understanding the relationship between multiplication and division facts.

Topic: Topic 6: Connect Area to Multiplication and Addition   Duration: 10 Day(s)

Description

This topic develops a deep understanding of the concept of area. Beginning with concrete models and then moving to pictorial and abstract models, students come to understand how area is related to multiplication and addition.

Academic Vocabulary (What terms will students need to know?)

area
unit square
square unit
estimate
exact

Definition of Mastery

Students will identify the area of squares, rectangles and irregular shapes.
Students will count unit square to find the area of a shape.
Students will find the exact area or estimate an area of a shape.

Students will multiply length x width to find the area of a square or rectangle.
Students will use the Distributive Property to find the area of a shape.

Learning Targets

I can label the area in square units

I can count unit squares to find the area of a shape.

I can measure the area of a shape using standard units.

I can find the area of squares and rectangles by multiplying.

I can use properties when multiplying to find the area of squares and rectangles.

I can use properties to find the area of irregular shapes by breaking the shape into smaller parts.

I can use the relationships between quantities to break a problem into simpler parts.

I can find the area by multiplying the lengths.

Topic: Topic 16 Solve Perimeter Problems	**Duration:** 10 Day(s)

Description

This topic focuses on recognizing perimeter as an attribute of polygons, finding perimeter, using addition and multiplication, and finding an unknown side length. Students distinguish the attribute of perimeter from the attribute of area by analyzing rectangles with the same perimeter and different areas or with the same area and different perimeters.

Academic Vocabulary (What terms will students need to know?)

perimeter
equilateral triangle
perimeter
polygon
area

Definition of Mastery

Students will find the distance around a figure to find the perimeter.
Students will add the lengths of the sides to find the perimeter of a polygon.
Students will learn that some polygons can have the same perimeter but different areas.
Students will learn that some polygons can have the same area but different perimeters.
Students will find the unknown length of a side on a polygon when all other sides are given.

Learning Targets

i can find the perimeter of different polygons.

I can find the perimeter of polygons with common shapes.

I can find the unknown length of a polygon by using a known perimeter.

I can understand the relationship of shapes with the same perimeter and different areas.

I can understand the relationship of shapes with the same area and different perimeters.

I can understand the relationship between numbers to simplify and solve problems involving perimeter.

Unit: 4: Data and Statistics

Duration: 2 Week(s)

Unit Description

This topic focuses on reading and making scaled picture graphs and scaled bar graphs that represent a data set with several categories. Students also solve problems involving the data represented in the graphs.

Enduring Understandings/Essential Learner Outcomes

How can you read picture graphs?
How can you make a picture graph?
How can you make a bar graph?
How can you solve problems using graphs?

Academic Vocabulary

data
scaled picture graph
scale
key
scaled bar graph
frequency table
survey

line plot

Assessment

Throughout each unit, students will take an in class formative assessments that will be a combination of multiple choice and constructed response questions that will gauge their understand of the concepts taught.

At the end of each unit, students will take an in class summative assessment that will be a combination of multiple choice and constructed response questions that will gauge their overall understanding of the concepts taught in the unit.

Topic: Topic 7 - Represent and Interpret Data	**Duration:** 10 Day(s)

Description

Students will read graphs and understand the importance of titles, labels, scales, and pictures or bars. Students will create graphs and include all parts of graphs. Students will notice the same kind of data represented in picture graphs and bar graphs. This builds an understanding that there can be more than one way to display a set of data.

Academic Vocabulary (What terms will students need to know?)

data
scaled picture graph
scale
key
scaled bar graph
frequency table
survey
line plot

Definition of Mastery

Students will be able to create a picture or bar graph based on the data they are analyzing.
Students will determine the scale or key and determine the value with it.
Students will state facts learned from the data.
Students will recognize trends in the data.

Learning Targets

I can use picture graphs and bar graphs to answer questions about data sets.

I can make a picture graph to record information and answer questions about a data set.

I can make a bar graph to record information and answer questions about a data set.

I can use graphs and other tools to solve word problems.

I can be precise when solving math problems.

I can create a line plot from a data set.

I can answer questions based on data in the line plot.

Unit: 5: Fractions	**Duration:** 6 Week(s)

Unit Description

This unit focuses on understanding that fractions are numbers that can represent a portion of a whole or a point on the number line. Students will use models and number sense to understand fraction equivalence and comparison

Enduring Understandings/Essential Learner Outcomes

How can you name the equal parts of a whole?
How can you show and name parts of a region?
How can you use a fractional part to find the whole?
How can you record fractions on a number line?
How can you use a number line to represent fractions greater than 1?
How can you make and use line plots?
How can you measure lengths and use line plots to show the data?
How can different fractions name the same part of a whole?
How can you use number lines to find equivalent fractions?
How can you compare fractions with the same denominator?
How can you compare fractions with the same numerator?
How can benchmark numbers be used to compare fractions?
How can you compare fractions using the number line?
How can you use fractin names to represent whole numbers?

Academic Vocabulary

fraction
unit fraction
numerator
denominator
nearest fourth inch

nearest half inch
line plot
region
equivalent fractions
greater than
less than
equal to
compare fractions
benchmark fractions
fraction strips
number line

Assessment

Throughout each unit, students will take an in class formative assessments that will be a combination of multiple choice and constructed response questions that will gauge their understand of the concepts taught.

At the end of each unit, students will take an in class summative assessment that will be a combination of multiple choice and constructed response questions that will gauge their overall understanding of the concepts taught in the unit.

Topic: Topic 12 - Understand Fractions as Numbers	**Duration:** 15 Day(s)

Description

This topic explains how to read and write unit fractions for equal sized parts of a whole. We will develop a strong conceptual understanding of a fraction as a value, not just "a number over another number." This meaning is connected to the concept of the whole and how the fraction related to the whole. We will learn how to represent fractions on a number line and determine if a fraction is greater than or less than 1 whole.

Academic Vocabulary (What terms will students need to know?)

fraction
unit fraction
numerator
denominator
nearest fourth inch
nearest half inch

Definition of Mastery

Students will learn how to read and write unit fractions for equal sized parts of a region.
Students will understand the difference between numerator and denominator and the role these numbers play.
Students will represent fractions greater than or less than 1 on a number line.
Students will read the markings on a ruler to identify the nearest fourth and nearest half inch.
Students will plot a line plot.

Learning Targets

I can read and write a unit fraction.

I can use a fraction to represent multiple copies copies of a unit fraction.

I can identify the whole by using a part.

I can represent fractions on a number line.

I can represent fractions equal to or greater than 1 on a number line.

I can measure to the nearest 1/4", 1/2", or 3/4" inch.

I can measure to the nearest fourth inch and show the data on a line plot.

I can measure to the nearest half inch and show the data on a line plot.

I can make sense of problems and keep working if I get stuck.

I can divide regions into equal parts.

Topic: Topic 13 - Fraction Equivalence and Comparison	**Duration:** 15 Day(s)

Description

This unit will compare fractions and find equivalent fractions on a number line. Fractions with the same denominators will be compare as well as fractions with the same numerator. We will compare fractions against benchmark fractions and on number lines.

Academic Vocabulary (What terms will students need to know?)

compare fractions
equivalent fractions
benchmark fractions
numerator
denominator
fraction strips

number lines
greater than
less than
equal to

Definition of Mastery

Students will be able to use fractions strips and number lines to identify equivalent fractions. Students will compare fractions that have either the same numerator or the same denominator. Students will compare fractions using benchmark fractions and compare fractions on a number line.

Learning Targets

I can find equivalent fractions that name the same part of the whole.

I can use number lines to represent equivalent fractions.

I can compare fractions that refer to the same sized whole and have the same denominator by comparing their numerator.

I can compare fractions that refer to the same whole and have the same numerator by comparing their denominators.

I can use what I know about the size of benchmark numbers to compare fractions.

I can compare two fractions by locating them on a number line.

I can use representations to find fraction names for the whole numbers.

I can construct math arguments using what I know about fractions.

I can find equivalent fractions using visual models.

I can recognize equivalent fractions on a number line.

Unit: 6: Geometry and Measurement

Duration: 4 Week(s)

Unit Description

Topic 14
Students will be able to tell time to the nearest minute on an analog clock and understand the meaning of the numbers and tick marks on a clock. Students will solve elapsed time problems and understand the relationship between hours and minutes as well as the difference between A.M. and P.M. Students will also learn about liquid volume and mass. Students should have experiences with measuring liquids and weighing objects. Students need to work with tools such as balance scales, weights, and measuring cups. Students need to be able measure liquid volume using milliliters and liters and measure mass in grams and kilograms.

Topic 15
Students will be able to identify types of quadrilaterals such as trapezoids, parallelograms, rectangles, rhombuses, and squares. Students will learn the attributes of these shapes including convex and concave polygons. Students will identify attributes of shapes and sort them, compare groups of shapes and classify quadrilaterals.

Topic: Topic 14: Solve Time, Capacity, and Mass Problems

Duration: 13 Day(s)

Description

Students will tell time, find elapsed time, identify A.M. and P.M., using measure cups to measure liquid volume in milliliters and liters, and use a balance scale to find the mass of objects in grams and kilograms.

Academic Vocabulary (What terms will students need to know?)

hour hand
minute hand
analog clock
digital clock
elapsed time
time intervals
A.M.
P.M.
liters (L)
milliliters (mL)
volume
capacity (liquid volume)
1,000 milliliters = 1 liter
beaker
gram (g)
kilogram (kg)
1,000 grams = 1 kilogram

Definition of Mastery

Students will be able to tell time to the nearest minute, find elapsed time, identify A.M. and P.M.
Students will be able to measure the capacity of liquid in mL or L.
Students will be able to find the mass of objects in g or kg.

Learning Targets

I can show and tell time to the minute using clocks.

I can measure intervals of time in hours and minutes.

I can use representations to solve word problems about time.

I can use standard units to estimate liquid volume.

I can use standard units to measure liquid volume.

I can use standard units to estimate the masses of solid objects.

I can use grams and kilograms to measure the mass of objects.

I can use pictures to help solve problems about mass and volume.

I can make sense of quantities and relationships in problem situations.

I can tell time to the nearest minute.

I can tell time to the nearest minute in small intervals.

Topic: Topic 15: Attributes of Two-Dimensional Shapes	**Duration:** 7 Day(s)

Description

Students will learn about types of quadrilaterals, classify shapes, and analyze and compare quadrilaterals.

Academic Vocabulary (What terms will students need to know?)

polygon
side
quadrilateral
angle
vertex
trapezoid
parallel sides
parallelogram
rectangle
right angle
rhombus
square
convex
concave

Definition of Mastery

Students will be able to describe attributes of quadrilaterals, classify shapes and analyze and compare quadrilaterals.

Learning Targets

I can identify quadrilaterals and use attributes to describe them.

I can classify shapes in several ways based on how they are alike and how they are different.

I can identify rhombuses, rectangles and squares as examples of quadrilaterals and draw examples.

I can identify quadrilaterals.

I can analyze and compare quadrilaterals and group them by attributes.

I can analyze and compare quadrilaterals.

Activities (Lesson Plans)

1: Number Sense: Place Value

Place Value to 100,000 place

3-Math MLS

Mathematics

Lesson 1: Identifying Place Value to 100s Place
This lesson is a review from 2nd grade. Students will review place value (hundreds, tens, ones) place. Students will be able to identify the value of a digit in each position.

Author: Cindy Sutton	Shared: Yes	Type: Educator Submitted

Lesson 2: Place Value to 100s Place
This lesson will continue to reinforce place value skills to hundreds place by writing 3-digit numbers in expanded form, word form, and standard form.

Author: Cindy Sutton	Shared: Yes	Type: Educator Submitted

Lesson 3: Identify Place Value to 1,000s Place
Students will identify the position of the thousands place and identify the value of that digit.

Author: Cindy Sutton	Shared: Yes	Type: Educator Submitted

Lesson 4: Place Value to 1000s Place & CFA1
Students will continue to identify place value up to 1000s place. Students will read and write numbers in word form, expanded form and standard form.

Author: Cindy Sutton	Shared: Yes	Type: Educator Submitted

Lesson 5: Comparing Numbers to the 1,000s Place
Students will compare 2 numbers up to the 1,000s place. Students will build numbers with place value blocks and compare the two numbers by using the symbols < > or =.

Author: Cindy Sutton	Shared: Yes	Type: Educator Submitted

Lesson 6: Identifying Place Value to 10,000 Place
Students will read and write numbers that go into the 10,000s place.

Author: Cindy Sutton	Shared: Yes	Type: Educator Submitted

Lesson 7: Place Value to 10,000s Place & CFA2
Students will continue to reinforce their understanding of place value to the ten thousands place. Students will continue to write these larger numbers in word form and expanded form and begin to compare two 5-digit numbers.

Author: Cindy Sutton	Shared: Yes	Type: Educator Submitted

Lesson 8: Identifying Place Value to 100,000 Place
Students will read and write numbers up to 999,999.

Author: Cindy Sutton	Shared: Yes	Type: Educator Submitted

Lesson 9: Place Value to 100,000 Place
Students will apply understanding of place value to 100,000s place and read and write numbers in word form, standard form, and expanded form.

Author: Cindy Sutton	Shared: Yes	Type: Educator Submitted

Lesson 10: Comparing Numbers to 100,000s
Students will use strategies to compare numbers up to 999,999.

Author: Cindy Sutton	Shared: Yes	Type: Educator Submitted

Lesson 11: Ordering Numbers to 100,000s & CFA3
Students will order numbers up to 100,000s place.

Author: Cindy Sutton	Shared: Yes	Type: Educator Submitted

Lesson 12: Place Value Unit Review - Math Games
Students will review place value unit to 100,000s place by engaging in hands-on games, activities, or online websites.

Author: Cindy Sutton	Shared: Yes	Type: Educator Submitted

Lesson 13: Place Value Unit Review - Stations
Students will review place value to 100,000s place by using hands-on activities, games, or online websites. This is also a day to give additional support to students who need small group instruction.

Author: Cindy Sutton	Shared: Yes	Type: Educator Submitted

Lesson 14: Place Value Unit Review
Students will apply their understanding of place value to 100,000s place through hands-on activities to review skills taught throughout this unit. Teacher will enrich and reteach students who need additional small group instruction.

Author: Cindy Sutton	Shared: Yes	Type: Educator Submitted

PLACE VALUE SUMMATIVE
Summative assessment today.

Author: Cindy Sutton	Shared: Yes	Type: Educator Submitted

Topic 8- Use Strategies and Properties to Add and Subtract

Lesson 8-1: Properties of Addition (2 days) CFA#1
This lesson will review the properties of addition: Associative (Grouping) Property of Addition, Commutative (Order) Property of Addition, and Identify (Zero) Property of Addition.

Author: Cindy Sutton	Shared: Yes	Type: Educator Submitted

Lesson 8-2: Algebra: Addition Patterns
In this lesson students will recognize that there are patterns in addition, including patterns with even and odd numbers.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

Lesson 8-3: Round Whole Numbers
Students will use place value and a number line to round numbers.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

Lesson 8-3: Round Whole Numbers (Day 2) CFA#2
Students will use place value understanding to round to the nearest ten or hundreds place.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

Lesson 8-4: Mental Math: Addition
Students will focus on learning different algorithms for performing mental math, and they become adept at using the varied strategies to mentally add two 3-digit numbers for multi-step word problems.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

Lesson 8-5: Mental Math: Subtraction
Students focus on learning different algorithms for performing mental math, and they become adept at using the varied strategies.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

Lesson 8-6: Estimating Sums
Students will use rounding or compatible numbers to estimate a sum.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

Lesson 8-7: Estimating Differences CFA#3
Students will use rounding or compatible numbers to estimate a difference
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

Lesson 8-8: Relate Addition and Subtraction
Students will solve one step and multi step problems using strategies based on the relationship between addition and subtraction
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

Lesson 8-9: Model With Math
Students use their understanding of other mathematical practices to solve one step and multi-step problems.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

Lesson 8-10: More Rounding Review (not in book)
Students will spiral back and round numbers to the nearest 10 or 100s place.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

TOPIC 8 SUMMATIVE
Students will review properties of estimating sums and differences, inverse operations of addition and suntraction
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

Topic 8 Study Guide
Topic 8 Study Guide
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

Topic 9- Fluently Add and Subtract within 1,000

Lesson 9-1: Use Partial Sums to Add
Students will use knowledge of place value to break apart a number when adding the hundreds, tens, and ones places.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

Lesson 9-2: Add 3- Digit Numbers
Students will add 3 digit numbers using the standard algorithm.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

Lesson 9-3: Continue to Add 3- Digit Numbers
Students add 3 digit numbers using the standard algoruthm
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

Lesson 9-4: Add 3 or More Numbers & FORM
Students will add 3 or more numbers using the standard algorithm
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

Lesson 9-6: Subtract 3-Digit Numbers
Students will subtract 3 digit numbers using the standard algorithm
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

Lesson 9-7: Continue to Subtract 3-Digit Numbers
Students will subtract 3 digit numbers from other 3 digit numbers with one or more zeros using the standard subtraction algorithm. The 3-digit subtraction problems in this lesson provide challenges as students learn to regroup with zeros.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

Lesson 9-7: Continued... (Day 2) & FORM
Students will subtract across zero.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

Lesson 9-8: Construct Arguments
Students will use what they know about addition and subtraction to construct arguments.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

Topic 9:   Review with Math Games (Day 1)
Students will apply addition and subtraction strategies.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

Topic 9: Review (Day 2)
Students will review addition and subtraction skills learned in this topic.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

TOPIC 9 SUMMATIVE
Summative of addition and subtraction.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

2: Understanding the Relationships and Algebraic Thinking of Multiplication and Division

Topic 1: Understanding Multiplication & Division

Lesson 1-1: Multiplication as Repeated Addition
Students will use repeated addition to show the relationship between multiplication and addition.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

Lesson 1-2: Multiplication on the Number Line
Students will use number lines to join equal groups.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

Lesson 1-3 Arrays and Multiplication
Students will use arrays as one way to think about and understand multiplication.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

Lesson 1-4 The Commutative Property & FORM
Students will understand and use the Commutative Property of Multiplication.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

Lesson 1-5 Division as Sharing
Students will be able to use sharing to separate equal groups.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

Lesson 1-6 Division as Repeated Subtraction & FORM
Students will use repeated subtraction as a strategy to solve a division equation.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

Lesson 1-7 Use Appropriate Tools & Topic Review
Students will think which tools will help them solve multiplication and division word problems.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

TOPIC 1 SUMMATIVE
Understanding multiplication and division summative.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

Topic 2: Multiplication Facts, Use Patterns

Lesson 2-1 2 and 5 as Factors
Students will use patterns to multiply by 2 and 5.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

Lesson 2-2 9 as a Factor
Students will use patterns to multiply by 9.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

Lesson 2-3 Apply Properties: Multiply by 0 and 1
I can use properties of multiplication to find the product.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

Lesson 2-4   Multiply by 10
I can use patterns to multiply by 10.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

Lesson 2-5 Multiplication Facts 0, 1, 2, 5, 9, 10
Students will use strategies to solve multiplication equations using 0, 1, 2, 5, 9 or 10 as a factor.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

Lesson 2-6 Model With Math
Students will apply a variety of mathematical practices to a diverse number of multiplication problems.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

Topic Review - Math Games & Activities
Students will review all skills learned in this topic.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

TOPIC 2 SUMMATIVE
Summative - Understanding the Relationships and Algebraic Thinking of Multiplication and Division
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

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

3-1 The Distributive Property
The Distributive Property can be used to break a large array into smaller arrays.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

3-2 Apply Properties: 3 as a Factor
Students will understand properties of operations as strategies to multiply and divide.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

3-3 Apply Properties: 4 as a Factor
Students will apply properties of operations as strategies to multiply and divide. (If 6 x 4 = 24 is known, then 4 x 6 = 24 is also known.) Students will use strategies, including the Distributive Property, to find the products to multiplication equations.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

3-4 Apply Properties: 6 and 7 as Factors
Students will apply properties of operations as strategies to multiply and divide.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

3-5 Apply Properties: 8 as a Factor
Students will be able to apply properties of operations as strategies to multiply and divide.
Students will be able to use the Distributive Property to solve challenging multiplication equations.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

3-6 Practice Multiplication Facts
Apply properties of operations as strategies to multiply and divide.
Use the Distributive Property to find the products to multiplication equations.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

3-7 The Associative Property: Multiply 3 Factors
Students will apply properties of operations as strategies to multiply and divide.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

3-8 Repeated Reasoning
Students will understand and apply properties of operations as strategies to multiply and divide.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

Topic Review
Topic Review
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

TOPIC 3 SUMMATIVE
Summative - Understanding the Relationships and Algebraic Thinking of Multiplication and Division
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

Topic 10: Multiply by Multiples of 10

10-1 Use An Open Number Line to Multiply
Multiply one-digit whole numbers to multiples of 10 in the range 10-90.
Use an open number line to find products when one factor is a multiple of 10.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

10-2 Use Properties to Multiply
Students will multiply one-digit numbers by multiples of 10 in the range 10-90.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

10-3 Multiply by Multiples of 10
Students will multiply one-digit whole numbers by multiples of 10 in the range 10-90.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

3-Math MLS

Mathematics

10-4 Look For and Use Structure & Review
Students will multiply one-digit whole numbers by multiples of 10 in the range 10-90.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

TOPIC 10 SUMMATIVE
Summative - Understanding the Relationships and Algebraic Thinking of Multiplication and Division
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

3: Applying the Relationships and Algebraic Thinking of Multiplication and Division

Topic 4 - Use Multiplication to Divide: Division Facts

Lesson 4-1: Relate Multiplication and Division
Multiplication and division have an inverse relationship.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

Lesson 4-2: Use Multiplication to Divide with 2, 3
Students will use multiplication facts for 2, 3, 4 and 5 to solve division equations.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

Lesson 4-3: Use Multiplication to Divide with 6, 7
Students will use multiplication facts for 6 and 7 to find the quotient to division facts.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

Lesson 4-4: Use Multi to Divide with 8, 9 FORM
Students will use multiplication facts for 8 and 9 to find the quotients to division equations.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

In/Out Boxes #1
Students will find patterns in these in/out boxes and continue the pattern with multiplication or division.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

Lesson 4-5: Multiplication Patterns - Even & Odd
Students will identify patterns to determine if the answer will be even or odd.
For example: An even number times any number will always have an even number for the product.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

Lesson 4-6: Division Involving 0 and 1
Students will use what they know about the Property of 1 and the Zero Property and apply that knowledge to division involving 0 and 1.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

Lesson 4-7: Practice Multiplication and Division
Students will apply strategies and knowledge they have learned to solve multiplication and division facts. Students can apply properties of multiplication to solve more challenge multiplication equations.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

Lesson 4-8: Solve Multiplication & Division Equati
Students will solve multiplication and division equations, using strategies to solve.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

Lesson 4-9: Make Sense and Persevere
Students will apply multiplication and division strategies to solve computation and word problems.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

Topic 4 Review
Activities to review what students learned in Topic 4.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

Topic 4 Assessment
Topic 4 Assessment
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

Topic 5: Fluently Multiply and Divide Within 100

Lesson 5-1 Patterns for Multiplication Facts
Using structures and properties to explain patterns for multiplication facts
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

Lesson 5-2 Use A Multiplication Table
Students can use reasoning and the relationship between multiplication and division to find basic facts.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

Lesson 5-3 Missing Numbers in Multiply Table
This lesson emphasizes conceptual understanding, procedural skill an fluency. Students find missing numbers in a multiplcation table and by completing the table, the increase multiplication and division fluency.

Author: Cindy Sutton	Shared: Yes	Type: Educator Submitted

Lesson 5-4 Use Strategies to Multiply
This lesson emphasizes conceptual understanding and fluency by having students choose different strategies when multiplying.

Author: Cindy Sutton	Shared: Yes	Type: Educator Submitted

Lesson 5-5 Solve Word Problems
This lesson emphasizes fluency and applications. Students choose different strategies to solve word problems involving multiplication and division. By using strategies, such as bar diagrams and arrays, to help them solve word problems gives students a variety of visual representations that add to their strategies when solving multiplication or division problems.

Author: Cindy Sutton	Shared: Yes	Type: Educator Submitted

Lesson 5-6 Write Math Stories- Multiplication
This lesson emphasizes application and fluency. Writing multiplication stories gives students the chance to improve their fluency and use academic vocabulary.

Author: Cindy Sutton	Shared: Yes	Type: Educator Submitted

Lesson 5-7 Write Math Stories - Division
This lesson emphasizes application and fluency with division. Students will create division stories, giving them the opportunity to improve their fluency and use of academic vocabulary with division.

Author: Cindy Sutton	Shared: Yes	Type: Educator Submitted

Lesson 5-8 Look For and Use Structure
Students gain fluency in multiplication and division as they compare expressions without computing.

Author: Cindy Sutton	Shared: Yes	Type: Educator Submitted

Topic 5 Review
Review for summative

Author: Cindy Sutton	Shared: Yes	Type: Educator Submitted

Topic 5 Fluency Envisions Practice Pages
Six pages of fluency for multiplication and division.
Standard: Fluently Multiply and Divide Within 100

Author: Cindy Sutton	Shared: Yes	Type: Educator Submitted

TOPIC 5 SUMMATIVE
Summative - Applying the Relationships and Algebraic Thinking of Multiplication and Division

Author: Cindy Sutton	Shared: Yes	Type: Educator Submitted

Topic 6: Connect Area to Multiplication and Addition

6-1 Cover Regions (2 days)
Students will count the unit squares to find the area of a shape.

Author: Cindy Sutton	Shared: Yes, Pending	Type: Educator Submitted

6-2 Area: Nonstandard Units
This lesson emphasizes conceptual understanding. Students use differently sized unit squares to measure the area of the same figure. By doing so, they acquire a fundamental understanding of measuring area with such standard units as inches, centimeters, and feet.

Author: Cindy Sutton	Shared: Yes	Type: Educator Submitted

6-3 Area: Standard Units & FORM
This lesson emphasizes conceptual understanding. Having worked with nonstandard units of measurement to find area, students are now ready to work with standard units of length to determine area.

Author: Cindy Sutton	Shared: Yes	Type: Educator Submitted

6-4 Area of Squares and Rectangles
This lesson emphasizes conceptual understanding and application. Students continue to count unit squares to determine area. They also learn to multiply side lengths to determine the areas of squares and rectangles.

Author: Cindy Sutton	Shared: Yes	Type: Educator Submitted

6-5 Apply Properties: Area and the Distributive Pr
This lesson emphasizes conceptual understanding. Students use their knowledge of area and rectangles to model the Distributive Property. By working with this property and area models, students continue to gain fluency in multiplication and writing equations.

Author: Cindy Sutton	Shared: Yes	Type: Educator Submitted

6-6 Apply Properties: Area of Irregular (2 days)
This lesson emphasizes application. Students are ready to use their knowledge of area and rectangles to find the area of an irregular shape. By dividing the irregular shape into rectangles, students can find the area of each rectangle, and then add the area of each rectangle to find the area of the irregular shape. This lesson and the growing complexity of the lessons in this topic showcase students' fluency in multiplication.

Author: Cindy Sutton	Shared: Yes	Type: Educator Submitted

6-7 Look for and Use Structure
This lesson emphasizes application. Students will use their knowledge of structure of math to analyze the relationship among different areas. By breaking apart complicated problems into simpler problems, students demonstrate acuity in applying properties of operations, as well as strong understanding of the Math Practices.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

Topic 6 Daily Common Core Review
Use as morning work, Kagan activities, assessments.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

Topic 6 Quick Checks Modified
Modified Quick Checks for those who need or require it.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

Topic 6 Review for Test
Activities to review for Topic 6 before assessment.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

TOPIC 6 ASSESSMENT
Assessment - Connecting Area to Multiplication and Addition
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

Topic 16 Solve Perimeter Problems

16-1 Understand Perimeter
Students will learn concept of perimeter by counting around a polygon on grid paper.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

16-2 Perimeter of Common Shapes
(a harder lesson -- may need to take two days)

This lesson emphasizes procedural skill. Students will find the perimeter of commonly used polygons. Students must understand that the perimeter of a rectangle will have two parallel lines so the measurements will be the same. The assumption will be made that when looking at a square, the student will infer that all side lengths will be the same number when only given the measurement of one length. Not all measurements are given.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

16-3 Perimeter and Unknown Side Lengths (2 days)
(difficult concept - may need to take two days)

This lesson emphasized conceptual understanding and procedural skill. Students extend their knowledge of perimeter and polygons by writing equations with variables that represent unknown side lengths. The unknown side length is represented with a ?.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

16-4 Same Perimeter, Different Area
Students will find the perimeter and area of polygons. Students must now understand the difference between area and perimeter and the formulas for each. This lesson helps students use the knowledge they have acquired as they comprehend the relationship between perimeter and area, focusing on the fact that two different rectangles can have the same perimeter but different areas.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

16-5 Same Area, Different Perimeter
Students will find both the area and perimeter of polygons. Students will use formulas they have learned (length x width) to find the area and the Distributive Property of Multiplication to find the perimeter. This lesson helps students use the knowledge they have acquired as they understand the relationship between perimeter and area, focusing on the fact that two different rectangles can have the same area but different perimeters.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

16-6 Reasoning
Students will reason abstractly as they solve more complex problems involving perimeter. Students make use of illustrations and reasoning skills, both of which help them focus on the key information necessary to find the solutions.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

Topic 16 Study Guide
Topic 16 Study Guide - Perimeter
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

Topic 16 Quick Checks
Topic 16 Quick Checks - Perimeter
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

TOPIC 16 ASSESSMENT
Assessment - Solve Perimeter Problems
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

4: Data and Statistics

Topic 7 - Represent and Interpret Data

7-1 Read Picture Graphs and Bar Graphs (2 days)
This lesson emphasizes conceptual understanding. Students learn to interpret data as they become familiar with picture graphs and bar graphs. This lesson may be challenging for some students given its focus not only on data but also on the visual representation of the data. Students need to understand the symbols, as they are critical to understanding the focus of the lesson.

Author: Cindy Sutton	Shared: Yes	Type: Educator Submitted

7-2 Make Picture Graphs
This lesson emphasizes procedural skill. Students continue to interpret data as they work with more picture graphs. Students are given greater challenges as they interpret the raw data to create picture graphs. By learning to use a frequency table in conjunction with a picture graph, students gain increasing knowledge in learning how to read tables and graphs.

Author: Cindy Sutton	Shared: Yes	Type: Educator Submitted

7-3 Make Bar Graphs
This lesson emphasizes procedural skill. Students continue to work with scaled bar graphs using information from data tables. By showing that they can both interpret the data in a bar graph and create a bar graph, students show increasing facility in representing a set of data.

Author: Cindy Sutton	Shared: Yes	Type: Educator Submitted

7-4 Solve Word Problems (2 days)
This lesson emphasizes application. Students have worked with data representation in both bar graphs and picture graphs, and now they take the knowledge they have acquired a step further and apply it to one- and two-step word problems using scaled graphs. By correctly interpreting data in a graph, students demonstrate mastery not only of a graph itself but also of how a graph's information is relevant to the solution of a given multi-step word problem.

Author: Cindy Sutton	Shared: Yes	Type: Educator Submitted

7-5 Precision
Students will solve word problems with graphs accurately.

Author: Cindy Sutton	Shared: Yes	Type: Educator Submitted

7-6 Line Plots (not in book) 2 days
Students will be able to understand that a line plot is another way to record data.

Author: Cindy Sutton	Shared: Yes	Type: Educator Submitted

Topic Review
Hands-on activities to review skills learned in topic 7.

Author: Cindy Sutton	Shared: Yes	Type: Educator Submitted

TOPIC 7 STUDY GUIDE
Study Guide

Author: Cindy Sutton	Shared: Yes	Type: Educator Submitted

TOPIC 7 QUICK CHECKS
Quick Checks

Author: Cindy Sutton	Shared: Yes	Type: Educator Submitted

TOPIC 7 ASSESSMENT
Assessment

Author: Cindy Sutton	Shared: Yes	Type: Educator Submitted

5: Fractions

Topic 12 - Understand Fractions as Numbers

12-1: Divide Regions into Equal Groups (2 days)
Students will look at a region (such as a 4 x 3 array) and divide it into a fractions such as halves, thirds, or fourths.

Author: Cindy Sutton	Shared: Yes	Type: Educator Submitted

12-2: Fractions and Regions & FORM
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.

Author: Cindy Sutton	Shared: Yes	Type: Educator Submitted

12-3: Understand the Whole (2 days)
Students will learn that the 'whole" of a fraction can be different sizes. A fraction of a whole must be interpreted relative to the whole to which it relates.

Author: Cindy Sutton	Shared: Yes	Type: Educator Submitted

12-4: Number Line: Fractions < Than 1 (2 days)
Students will use their knowledge of fractions and unit fractions to label points on the number line. They demonstrate a higher level of comprehension by drawing number lines with equally divided lengths based on a given fraction, and then marking and labeling the given fraction on the number line, showing they comprehend the more challenging concept that the size of the fractional part depends on the size of the whole.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

12-5: Number Line: Fractions > Than 1 (2 days) & F
Students will use their knowledge of fractions and unit fractions to label points on the number line when representing fractions greater than 1.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

Measuring with Ruler to 1/4", 1/2" & 3/4"
Using a ruler to find 1/4, 1/2, and 3/4 inch marks.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

12-6: Line Plots and Length
Students will use their knowledge of number lines and fractions to measure length to the nearest fourth inch. They then create a line plot by organizing the data on a number line.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

12-7: More Line Plots and Length & FORM
Students use their knowledge of fractions to measure the length of objects to the nearest half inch. They create line plots by organizing the data on a number line.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

12-8: Make Sense and Persevere
Students will analyze the given information to determine what is or is not needed to solve problems.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

Topic 12 End of Unit Review
Topic 12 End of Unit Review
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

TOPIC 12 STUDY GUIDE
Topic 12 Study Guide
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

TOPIC 12 QUICK CHECKS
Topic 12 Quick Checks
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

TOPIC 12 ASSESSMENT
Topic 12 Assessment
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

Topic 13 - Fraction Equivalence and Comparison

13-1: Equivalent Fractions: Use Models (2 days)
Students will use fractions strips to compare fractions.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

13-2: Equivalent Fractions: Number Line (2 days)
Students will use number lines to find equivalent fractions.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

13-3: Use Models to Compare Fractions: Same Denom
Students will compare fractions using fraction strips that have the same denominator.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

13-4: Use Models to Compare Fractions: Same Nume
Students will use fractions strips to compare fractions with the same numerator.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

13-5: Compare Fractions: Use Benchmarks (2 days)
Students will identify benchmark fractions 0, 1/2, and 1. Students will take what they learned about fraction strips and number lines and identify fractions being closer to 0, 1/2, or 1.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

13-6: Compare Fractions: Number Line (2 days)
Students compare fractions on one or two numbers and use < > or =.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

13-7: Whole Numbers and Fractions (2 days)
Students will learn the difference between a whole number and a fraction.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

13-8: Construct Arguments
Students will analyze word problems and give conjectures, offer arguments, to justify the conjecture and explain whether the conjecture is actually correct.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

Topic 13 Unit Review
Hands on activities to review fraction equivalence and comparison.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

TOPIC 13 QUICK CHECKS
Quick Checks
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

TOPIC 13 STUDY GUIDE
Study Guide
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

TOPIC 13 ASSESSMENT
Assessment
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

6: Geometry and Measurement

Topic 14: Solve Time, Capacity, and Mass Problems

14-1: Time to the Minute
Students will show and tell time to the nearest minute using analog and digital clocks.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

14-2: Units of Time: Elapsed Time (2 days)
Students will use their skill of telling time to help them find elapsed time.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

14-3: Units of Time: Solve Word Problems
Students will solve word problems by adding or subtracting time.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

14-4: Estimate Liquid Volume
Students will understand the concept of "capacity" by measuring liquids as mL or L.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

14-5: Measure Liquid Volume
Students will use their understanding of capacity to help find the volume. Units of measure in mL and L.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

14-6: Estimate Mass
Students need to understand that 1 kilogram = 1,000 grams and how to use 1 gram and 1 kilogram benchmarks to estimate the mass of objects.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

14-7: Measure Mass
Students measure mass by using a pan balance and metric weights.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

14-8: Solve Word Problems Involving Mass & Liquid
Students will use bar diagrams to solve word problems involving mass and liquid volume. These representations help students make sense of the content and organize information in a logical way.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

14-9: Reasoning with Time
Students solve quantitatively and abstractly. Students previous work with time helps them solve problems related to end and start times.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

Topic Review
Topic 14 review.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

TOPIC 14 STUDY GUIDE
Topic 14 Study Guide
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

TOPIC 14 SUMMATIVE
Topic 14 Summative.
Author: Cindy Sutton   Shared: Yes   Type: Educator Submitted

Topic 15: Attributes of Two-Dimensional Shapes

15-1: Describe Quadrilaterals
Students learn how to classify quadrilaterals in three different ways. (1) no sides are parallel; (2) exactly one pair of sides is parallel: (3) two pairs of sides are parallel (parallelograms). Within the parallelogram category there are three important attributes that students learn to recognize: (1) four right angles (rectangle); (2) four sides of the same length (rhombus); (3) four right angles and four sides of the same length (square).

Author: Cindy Sutton	Shared: Yes	Type: Educator Submitted

15-2: Classify Shapes
Students will classify and sort shapes based on how they are alike and how they are different. Students learn that while some attributes distinguish one set of polygons from another, common attributes define a larger category. For example, squares have two pairs of parallel sides and four right angles, while trapezoids have one pair of parallel sides but do not have four right angles.

Author: Cindy Sutton	Shared: Yes	Type: Educator Submitted

15-3: Analyze and Compare Quadrilaterals
Students will analyze quadrilaterals based on attributes. Common misconceptions will be addressed such as all squares are rhombuses but not all rhombuses are squares.

Author: Cindy Sutton	Shared: Yes	Type: Educator Submitted

15-4: Precision
Students will use what they have learned to solve riddles and critical thinking problems. Students will need to deconstruct problems.

Author: Cindy Sutton	Shared: Yes	Type: Educator Submitted

Hands-on Activities
Review of all skills learned in this topic. Take this day to reteach and enrich students by using online websites, math games, cooperative learning activities.

Author: Cindy Sutton	Shared: Yes	Type: Educator Submitted

Topic Review
Topic 15 Review.

Author: Cindy Sutton	Shared: Yes	Type: Educator Submitted

TOPIC 15 STUDY GUIDE
Topic 15 study guide.

Author: Cindy Sutton	Shared: Yes	Type: Educator Submitted

TOPIC 15 SUMMATIVE
Topic 15 Summative.

Author: Cindy Sutton	Shared: Yes	Type: Educator Submitted

Learning Targets

Addition and subtraction have an inverse relationship. That relationship can be used to solve problems.

I can add 3 digit numbers.

I can add 3 digit numbers.
I can add three or more numbers is an extension of adding two numbers.

I can add three or more numbers.

I can analyze and compare quadrilaterals and group them by attributes.

I can analyze and compare quadrilaterals.

I can answer questions based on data in the line plot.

I can be precise when solving math problems.

I can break apart unknown facts into known facts and solve multiplication problems.

I can classify shapes in several ways based on how they are alike and how they are different.

I can compare fractions that refer to the same sized whole and have the same denominator by comparing their numerator.

I can compare fractions that refer to the same whole and have the same numerator by comparing their denominators.

I can compare numbers up to the 100,000s place.

I can compare numbers using greater than, less than, and equal to symbols.

I can compare two fractions by locating them on a number line.

3-Math MLS

Mathematics

I can construct math arguments using what I know about addition and subtraction.

I can construct math arguments using what I know about fractions.

I can count unit squares to find the area of a shape.

I can create a line plot from a data set.

I can divide by 2, 3, 4, and 5 by thinking about how I multiply with those numbers.

I can divide by 6 and 7 by thinking about how I multiply with those numbers.

I can divide by 8 and 9 by thinking about how I multiply with those numbers.

I can divide regions into equal parts.

I can find and explain addition patterns.

I can find and explain patterns for even and odd numbers.

I can find equivalent fractions that name the same part of the whole.

I can find equivalent fractions using visual models.

I can find the area by multiplying the lengths.

I can find the area of squares and rectangles by multiplying.

I can find the find the product of a multiplication equation.
I can find the quotient of a division equation.
I can use an array to find the product.
I can draw equal groups to find the product.
I can share groups equally to find the quotient.
I can skip count to find the product on a number line.

i can find the perimeter of different polygons.

I can find the perimeter of polygons with common shapes.

I can find the product of multiplication equations.
I can use properties to find the product of multiplication equations.

I can find the unknown length of a polygon by using a known perimeter.

I can identify quadrilaterals and use attributes to describe them.

I can identify quadrilaterals.

I can identify rhombuses, rectangles and squares as examples of quadrilaterals and draw examples.

I can identify the whole by using a part.

I can label the area in square units

I can make a bar graph to record information and answer questions about a data set.

I can make a picture graph to record information and answer questions about a data set.

I can make and use models to solve multiplication problems that have 6 and 7 as factors.

I can make sense of problems and keep working if I get stuck.

I can make sense of problems and keep working if I get stuck.

I can make sense of quantities and relationships in problem situations.

I can measure intervals of time in hours and minutes.

I can measure the area of a shape using standard units.

I can measure to the nearest 1/4", 1/2", or 3/4" inch.

I can measure to the nearest fourth inch and show the data on a line plot.

3-Math MLS

Mathematics

I can measure to the nearest half inch and show the data on a line plot.

I can multiply 3 factors in any order to find a product.

I can multiply and divide fluently by understanding the relationship between multiplication and division facts.

I can multiply factors in any order to solve multiplication problems.

I can multiply within 100 fluently.

I can read and write a unit fraction.

I can read, write, and identify numbers up to the 1,000s place.

I can read, write, and identify numbers up to the 10,000s place.

I can read, write, and identify numbers up to the 100,000s place.

I can read, write, and identify numbers up to the 100s place.

I can recognize equivalent fractions on a number line.

I can represent fractions equal to or greater than 1 on a number line.

I can represent fractions on a number line.

I can round to the 10s and 100s place.

I can show and tell time to the minute using clocks.

I can solve a multiplication or division problem by finding the fact family.

I can solve a multiplication or division problem by using a drawing to solve the problem.

I can solve a word problem by using a drawing or illustration.

I can solve multi-step problems.

I can solve multi-step problems.

I can tell time to the nearest minute in small intervals.

I can tell time to the nearest minute.

I can think strategically to determine which tool will be more useful.

I can understand the patterns of division with 0 and 1.

I can understand the relationship between numbers to simplify and solve problems involving perimeter.

I can understand the relationship of shapes with the same area and different perimeters.

I can understand the relationship of shapes with the same perimeter and different areas.

I can use a fact family to multiply or divide.

I can use a fraction to represent multiple copies copies of a unit fraction.

I can use a number line to represent and solve multiplication facts.

I can use addition or multiplication to join equal groups.

I can use an open number line and patterns to multiply by multiples of 10.

I can use arrays to show and solve multiplication problems.

I can use bar diagrams to solve problems.

I can use basic multiplication facts to solve problems.

I can use different strategies to find products when one factor is a multiple of 10.

I can use different strategies to regroup when adding 3-digit numbers.

3-Math MLS

Mathematics

I can use different strategies to solve multiplication problems.

I can use estimation and rounding to solve a word problem.

I can use estimation to decide if my answer is reasonable.

I can use fact families to see how multiplication and division are related.

I can use grams and kilograms to measure the mass of objects.

I can use graphs and other tools to solve word problems.

I can use known facts and properties to multiply by 8.

I can use math I know to solve problems.

I can use mental math to add.

I can use mental math to subtract.

I can use multiplication and division facts to find unknown values in an equation.

I can use number lines to represent equivalent fractions.

I can use numbers from a fact family to multiply and divide fluently.

I can use objects or pictures to show how objects can be divided into equal groups.

I can use patterns and properties to multiply by 0 and 1.

I can use patterns and related facts to solve multiplication and division problems.

I can use patterns to describe relationships between quantities.

I can use patterns to describe the relationship between quantities.

I can use patterns to multiply by 10.

I can use patterns to multiply by 2 and 5.

I can use patterns to multiply by 9.

I can use picture graphs and bar graphs to answer questions about data sets.

I can use pictures to help solve problems about mass and volume.

I can use place value reasoning to subtract 3-digit numbers.

I can use place value reasoning to subtract 3-digit numbers.

I can use place value to break apart and add numbers.

I can use properties of multiplication to find a product when one factor is a multiple of 10.

I can use properties to find the area of irregular shapes by breaking the shape into smaller parts.

I can use properties to understand addition.

I can use properties when multiplying to find the area of squares and rectangles.

I can use reasoning and the relationship between multiplication and division to find basic facts.

I can use reasoning to look for and describe general strategies for finding products.

I can use regrouping to add 3-digit numbers.

I can use repeated subtraction to understand and solve division problems.

I can use representations to find fraction names for the whole numbers.

I can use representations to solve word problems about time.

I can use standard units to estimate liquid volume.

I can use standard units to estimate the masses of solid objects.

I can use standard units to measure liquid volume.

I can use strategies and tools to represent and solve multiplication facts.

I can use strategies to solve word problems that involve multiplication and division.

I can use structure and properties to explain patterns for multiplication facts.

I can use the relationship between addition and subtraction to solve problems.

I can use the relationship between multiplication and division to find basic facts.

I can use the relationships between quantities to break a problem into simpler parts.

I can use the structure of multiplication and division to compare expressions.

I can use tools and properties strategically to solve problems when I multiply by 3.

I can use what I know about addition and place value to estimate sums.

I can use what I know about multiplying by 2's and properties to multiply by 4.

I can use what I know about subtraction and place value to estimate differences.

I can use what I know about the size of benchmark numbers to compare fractions.

I can write and solve math stories for division equations.

I can write and solve math stories for multiplication equations.

Solve real world problems using properties of addition by demonstrating addition and subtraction within 1000.

Students will add 3-digit numbers using the standard algorithm.

Students will be able to read, write and identify numbers written in word form, standard form and numeral form up to the hundreds place.

Students will learn concepts of multiplication through skip counting, arrays, and number lines. Students will use patterns in numbers to learn their multiplication facts. Students will multiply by multiples of 10.

Students will learn the standard algorithm for adding 3-digit numbers is an extension of the standard algorithm for adding 2-digit numbers.

Students will read, write and identify numbers in expanded, numeral and number name form up to 100,000.

Students will understand basic place value positions of hundreds, tens, and ones.
Students will understand that every time you move to the left you are increasing the number x10.

Students will understand basic place value positions of hundreds, tens, and ones.
Students will understand that every time you move to the left you are increasing the number x10.
  Assessment: Warm-Up - Place Value Riddles (up to 100s place only)
                * Students will use their whiteboards to record the answer and display 3-2-1 showdown style. Discuss correct answers and wrong answers as well to help clear up incorrect thinking.

                See PPT attached for Place Value Riddles warm-up.

Students will use < > and = to compare numbers.

Students will use place value and a number line to round numbers.

Students will use rounding or compatible numbers to estimate a difference.

Students will use rounding or compatible numbers to estimate a sum.

The addition of three or more numbers is an extension of adding two numbers.

The addition of three or more numbers is an extension of adding two numbers.

The standard algorithm for adding 4-digit numbers is an extension to the standard algorithm for adding 3-digit numbers.

The standard algorithm for subtracting 3-digit numbers is an extension to the standard algorithm for subtracting 2-digit numbers.

The standard algorithm for subtracting 4-digit numbers is an extension to the standard algorithm for subtracting 3-digit numbers.