



GRADE 3 MATHEMATICS

CURRICULUM

CARLISLE AREA SCHOOL DISTRICT

DATE OF BOARD APPROVAL: AUGUST 18, 2022

COURSE OVERVIEW

Title:	Grade 3 Mathematics
Grade Level:	3
Level:	N/A
Length:	90 Minute Blocks
Duration:	165-180 Days
Frequency:	Daily
Pre-Requisites:	N/A
Credit:	N/A
Description:	<p>This curriculum document is part of a vertically-aligned sequence of curricula from grades Kindergarten through five. Each grade level is aligned to the Pennsylvania Mathematics Standards, and addresses the four curricular domains: Numbers and Operations, Algebraic Thinking, Geometry, and Measurement and Data. Throughout elementary school, these courses are designed to develop students' concrete and abstract understanding of mathematics, foster strong number sense, and strengthen the ability to solve increasingly complex problems using a variety of methods and strategies. Ultimately, the objective is to empower students as mathematical thinkers and communicators.</p> <p><i>*Throughout document, italicized vocabulary appears in PSSA Mathematics Glossary.</i></p>

COURSE TIMELINE

UNIT	TITLE	KEY CONCEPTS	DURATION (DAYS)
	Ongoing Math Fluency	<ul style="list-style-type: none"> Ongoing skill development 	Ongoing
1	Numbers and Operations in Base 10	<ul style="list-style-type: none"> Understanding place value Navigating standard and expanded forms Rounding Adding and subtracting multi-digit numbers 	20 Days
2	Operations and Algebraic Thinking (Introducing Multiplication and Division)	<ul style="list-style-type: none"> Multiplying and dividing whole numbers Understanding multiplication properties Solving problems involving multiplication and division 	45 Days
3	Numbers and Operations – Fractions	<ul style="list-style-type: none"> Identifying and defining a fraction Representing fractions on a number line Recognizing and creating equivalent fractions Comparing fractions 	40 Days
4	Measurement	<ul style="list-style-type: none"> Measuring in U.S. standard units Measuring in metric units Finding the perimeter and area of polygons Measuring volume and mass 	30 Days
5	Measurement and Data	<ul style="list-style-type: none"> Calculating elapsed time Solving problems involving money Reading and interpreting a variety of graphs Presenting data as charts and graphs 	20 Days
6	Geometry	<ul style="list-style-type: none"> Classifying objects based on specific attributes 	10 Days

DISCIPLINARY SKILLS and PRACTICES

DISCIPLINARY SKILL/PRACTICE	DESCRIPTION
Make sense of problems and persevere in solving them	Make conjectures about how real world application problems may be solved, monitor progress toward a solution, and make adjustments in the problem solving plan if necessary.
Reason abstractly and quantitatively	Estimate and check answers to problems and determine the reasonableness of results.
Construct viable arguments and critique the reasoning of others	Justify and communicate conclusions effectively and respond to arguments logically.
Model with mathematics	Use mathematics to model real world problems, interpreting the mathematical results in the context of the situation.
Use appropriate tools strategically	Consider the tools available in solving problems and understand the insights gained by using the tool as well as the limitation of the tool.
Attend to precision	Calculate accurately and efficiently within the context of problems and communicate results precisely.
Look for and make use of structure	Examine problems to discern a pattern or structure and utilize this finding in similar problems.
Look for and express regularity in repeated reasoning	Notice repeated calculations or processes and generalize from those insights in order to solve problems.

**Adapted from PA Academic Standards for Mathematics.*

FLUENCY UNIT

Unit Title	Number Sense and Math Fluency (Ongoing)		
Unit Description	This is an ongoing mathematics fluency unit that is designed to be taught and reviewed consistently throughout the school year.		
Unit Assessment	N/A		
Essential Question	Learning Goals	Content and Vocabulary	Standards
Fluency Skills	<input type="checkbox"/> Master addition (10-20). <input type="checkbox"/> Master subtraction (10-20). <input type="checkbox"/> Master multiplication (0-10).	Vocabulary fact fluency, addition, subtraction, multiplication	CC2.2.3A1 Represent and solve problems involving multiplication and division.

UNIT 1

Unit Title	Numbers and Operations in Base 10 (20 Days)		
Unit Description	Students will learn place value and operations with whole numbers. They will be able to read and represent whole numbers, identify place value, round whole numbers, as well as add and subtract multi-digit numbers. This unit provides a foundation for number sense and place value that students will need to understand mathematical operations and problem-solving skills.		
Unit Assessment	Common Assessment		
Essential Question	Learning Goals	Content and Vocabulary	Standards
How does the location of the digit determine its value in a whole number?	<input type="checkbox"/> Read and write whole numbers in standard, word, and expanded forms to the ten thousands place. <input type="checkbox"/> Order a set of whole numbers from least to greatest or greatest to least to the ten thousands place (limit sets to no more than four numbers).	Vocabulary standard form, expanded form, <i>place value</i> , digit	CC.2.1.3.B.1 Apply place-value understanding and properties of operations to perform multi-digit arithmetic. Eligible Content M03.A-T.1.1.4
How do I round whole numbers to a given place?	<input type="checkbox"/> Round whole numbers through the thousands place.	Vocabulary rounding, estimate	CC.2.1.3.B.1 Apply place-value understanding and properties of operations to perform multi-digit arithmetic. Eligible Content M03.A-T.1.1.1

<p>How do I add and subtract multi-digit numbers to the thousands place?</p>	<p><input type="checkbox"/> Add multi-digit whole numbers with and without regrouping up to the thousands.</p> <p><input type="checkbox"/> Subtract multi-digit whole numbers with and without regrouping up to the thousands.</p> <p><input type="checkbox"/> Round whole numbers to estimate sums and differences.</p>	<p>Vocabulary <i>sum, difference, regroup, addend</i></p>	<p>CC.2.1.3.B.1 Apply place-value understanding and properties of operations to perform multi-digit arithmetic.</p> <p>Eligible Content M03.A-T.1.1.2</p>
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UNIT 2

Unit Title	Operations and Algebraic Thinking (Introducing Multiplication and Division) (45 Days)		
Unit Description	Students will learn order of operations, patterns, and relationships between whole numbers. Students will identify and use symbols following order of operations to solve and evaluate problems. They will generate and extend rules to identify the relationship of two corresponding terms.		
Unit Assessment	Common Assessment		
Essential Question	Learning Goals	Content and Vocabulary	Standards
How do I multiply whole numbers?	<input type="checkbox"/> Use equal groups, skip counting, repeated addition, and arrays to demonstrate multiplication.	Vocabulary <i>array, repeated addition, factor, product</i>	C.C.2.2.3.A.1 Represent and solve problems involving multiplication and division. Eligible Content M03.B-O.1.1.1
How do I use properties?	<input type="checkbox"/> Use properties to solve multiplication problems.	Vocabulary <i>associative property, commutative property, Zero Property of Multiplication, Identity Property of Multiplication</i> Note Students need not define properties, but must be able to apply properties.	CC.2.2.3.A.2 Understand properties of multiplication and the relationship between multiplication and division. Eligible Content M03.B-O.2.1.1 M03.B-O.2.1.2 M03.B-O.3.1.5

<p>How do I divide whole numbers?</p>	<p><input type="checkbox"/> Use equal sharing to solve division problems.</p> <p><input type="checkbox"/> Explain the relationship between multiplication and division.</p>	<p>Vocabulary <i>quotient, dividend</i></p>	<p>C.C.2.2.3.A.1 Represent and solve problems involving multiplication and division.</p> <p>C.C.2.2.3.A.2 Understand properties of multiplication and the relationship between multiplication and division.</p> <p>Eligible Content M03.B-O.1.1.2 M03.B-O 1.2.2 M03.B-O 2.2.1</p>
<p>How do I solve word problems using multiplication and division?</p>	<p><input type="checkbox"/> Multiply or divide to solve word problems.</p> <p><input type="checkbox"/> Solve two-step word problems using multiplication and division.</p> <p><input type="checkbox"/> Use a symbol to represent an unknown quantity. Assess reasonableness of answers.</p>	<p>Vocabulary <i>equation</i></p>	<p>CC.2.2.3.A.1 Represent and solve problems involving multiplication and division.</p> <p>Eligible Content M03.B-O.1.2.1 M03.B-O.3.1.2 M03.B-O.3.1.3</p>

<p>How do I solve word problems using the four operations?</p>	<p><input type="checkbox"/> Solve two-step word problems using four operations.</p> <p><input type="checkbox"/> Use a symbol to represent an unknown quantity.</p> <p><input type="checkbox"/> Assess reasonableness of answers.</p>	<p>Vocabulary addition, subtraction, multiplication, division, equation</p>	<p>CC.2.2.3.A.1 Represent and solve problems involving multiplication and division.</p> <p>Eligible Content M03.B-O.1.2.1 M03.B-O.3.1.1 M03.B-O.3.1.2 M03.B-O.3.1.3</p>
<p>How do I use the order of operations?</p>	<p><input type="checkbox"/> Solve two-step equations using order of operations.</p> <p><input type="checkbox"/> Create or match a story to a given combination of symbols and numbers.</p> <p><input type="checkbox"/> Identify the missing symbol (+, -, x, ÷, <, >, and =) that makes a number sentence true.</p>	<p>Vocabulary <i>order of operations</i></p>	<p>CC.2.2.3.A.4 Solve problems involving the four operations, and identify and explain patterns in arithmetic.</p> <p>Eligible Content M03.B-O.3.1.4 M03.B-O.3.1.6 M03.B-O.3.1.7</p>
<p>How do I use patterns to develop or follow a rule?</p>	<p><input type="checkbox"/> Generate a number pattern to determine a rule for an equation.</p> <p><input type="checkbox"/> Multiply one-digit whole numbers by two-digit multiples of 10 (ex. 2x 90).</p>	<p>Vocabulary extended fact, <i>number sentence</i>, <i>equation</i></p>	<p>CC.2.1.3.B.1 Apply place-value understanding and properties of operations to perform multi-digit arithmetic.</p> <p>Eligible Content M03.B-O.3.1.5 M03.A-T.1.1.3</p>

How do I answer open ended questions involving the four operations?	<input type="checkbox"/> Review the steps to answer open ended questions involving the four operations.	N/A	N/A
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UNIT 3

Unit Title	Numbers and Operations – Fractions (40 Days)		
Unit Description	Students will learn about fractional relationships, equivalency, and operations including fractions (with denominators limited to 2, 3, 4, 6, and 8). They will be able to identify fractions, define fractions, compare fractions, order fractions, and solve problems involving fractions.		
Unit Assessment	Common Assessment		
Essential Question	Learning Goals	Content and Vocabulary	Standards
How do I define and explain a fraction?	<input type="checkbox"/> Explain the difference between a whole number and fraction. <input type="checkbox"/> Identify parts of a whole. <input type="checkbox"/> Identify parts of a collection.	Vocabulary <i>fraction</i> , numerator, denominator, <i>whole number</i>	CC.2.1.3.C.1 Explore and develop an understanding of fractions as numbers. Eligible Content M03.A-F.1.1.1 M03.C-G.1.1.3
How do I represent fractions on a number line?	<input type="checkbox"/> Represent fractions on a number line using denominators of 2, 3, 4, 6, and 8 (example: 0 to 1 on the number has 2 parts if the denominator is 2).	Vocabulary <i>number line</i>	CC.2.1.3.C.1 Explore and develop an understanding of fractions as numbers. Eligible Content M03.A-F.1.1.2

How do I represent whole numbers as fractions?	<input type="checkbox"/> Express whole numbers as fractions.	Vocabulary <i>whole number, fraction</i>	CC.2.1.3.C.1 CC.2.1.3.C.1 Explore and develop an understanding of fractions as numbers. Eligible Content M03.A-F.1.1.4 M03.C-G.1.1.3
How do I recognize and create equivalent fractions?	<input type="checkbox"/> Recognize equivalent fractions with pictures. <input type="checkbox"/> Recognize equivalent fractions on a number line. <input type="checkbox"/> Given a fraction, create equivalent fractions to the original fraction.	Vocabulary <i>equivalent</i>	CC.2.1.3.C.1 Explore and develop an understanding of fractions as numbers. Eligible Content M03.A-F.1.1.3
How do I compare fractions?	<input type="checkbox"/> Compare fractions using pictures. <input type="checkbox"/> Compare fractions on a number line.	Vocabulary compare, greater than ($>$), less than ($<$)	CC.2.1.3.C.1 Explore and develop an understanding of fractions as numbers. Eligible Content M03.A-F.1.1.5
How do I answer open ended questions involving the four operations?	<input type="checkbox"/> Review the steps to answer open ended questions involving the four operations.	N/A	N/A

UNIT 4

Unit Title	Measurement (30 Days)		
Unit Description	Students will learn to measure involving length, mass, and volume. Students will use both standard and metric units of measure to solve real world problems. Students will be able to solve problems for perimeter of polygons and area of rectangles.		
Unit Assessment	Common Assessment		
Essential Question	Learning Goals	Content and Vocabulary	Standards
How do I use a ruler to measure using standard measurement?	<input type="checkbox"/> Measure to the nearest inch. <input type="checkbox"/> Measure to the nearest half inch. <input type="checkbox"/> Measure to the nearest quarter inch.	Vocabulary inch, ruler	CC.2.4.3.A.1 Solve problems involving measurement and estimation of temperature, liquid volume, mass or length. Eligible Content M03.D-M.1.2.3
How do I use a ruler to measure using metric measurement?	<input type="checkbox"/> Measure to the nearest centimeter.	Vocabulary centimeter	CC.2.4.3.A.1 Solve problems involving measurement and estimation of temperature, liquid volume, mass or length. Eligible Content M03.D-M.1.2.3

<p>How do I find perimeter of polygons?</p>	<p><input type="checkbox"/> Find the perimeter of 2-dimensional shapes.</p> <p><input type="checkbox"/> Find the perimeter of a shape with an unknown side length.</p> <p><input type="checkbox"/> Given a perimeter, create as many rectangles with that perimeter.</p> <p><input type="checkbox"/> Solve word problems involving perimeter.</p>	<p>Vocabulary perimeter</p>	<p>CC.2.4.3.A.6 Solve problems involving perimeters of polygons and distinguish between linear and area measures.</p> <p>Eligible Content M03.D-M.4.1.1</p>
<p>How do I find area of rectangles?</p>	<p><input type="checkbox"/> Measure area by counting unit squares.</p> <p><input type="checkbox"/> Multiply side lengths to find area of rectangles.</p> <p><input type="checkbox"/> Solve real-world problems involving rectangular area and perimeter.</p> <p><input type="checkbox"/> Given an area, create as many rectangles with that area.</p>	<p>Vocabulary area, square units</p>	<p>CC.2.4.3.A.5 Determine the area of a rectangle and apply the concept to multiplication and to addition.</p> <p>Eligible Content M03.D-M.3.1.1 M03.D-M.3.1.2 M03.D-M.4.1.1</p>
<p>How do I measure liquid volume and mass using standard measurement?</p>	<p><input type="checkbox"/> Identify standard units of liquid volume and mass.</p> <p><input type="checkbox"/> Measure and estimate standard liquid volume and mass.</p>	<p>Vocabulary standard unit, cups, pints, quarts, gallons, pounds, ounces, <i>volume</i></p>	<p>CC.2.4.3.A.1 Solve problems involving measurement and estimation of temperature, liquid volume, mass or length.</p> <p>Eligible Content M03.D-M.1.2.1</p>

<p>How do I measure liquid volume and mass using metric units?</p>	<p><input type="checkbox"/> Identify metric units of liquid volume and mass. <input type="checkbox"/> Measure and estimate metric liquid volume and mass.</p>	<p>Vocabulary liters, grams, kilograms, <i>volume</i></p>	<p>CC.2.4.3.A.1 Solve problems involving measurement and estimation of temperature, liquid volume, mass or length.</p> <p>Eligible Content M03.D-M.1.2.1</p>
<p>How do I answer open ended questions using measurement?</p>	<p><input type="checkbox"/> Review steps to answer open ended questions involving measurement.</p>	<p>N/A</p>	<p>N/A</p>

UNIT 5

Unit Title	Measurement and Data (20 Days)		
Unit Description	Students will learn to measure time, money, and data. Students will be able to solve real-world problems based on time, money, and data incorporating all previously taught numbers and operations concepts.		
Unit Assessment	Common Assessment		
Essential Question	Learning Goals	Content and Vocabulary	Standards
How do I calculate elapsed time to the nearest minute on analog and digital clocks?	<input type="checkbox"/> Tell, show, and write time to the nearest minute. <input type="checkbox"/> Calculate elapsed time to the minute (total elapsed time limited to 60 minutes or less). <input type="checkbox"/> Solve real world problems finding the start time, end time, or elapsed time.	Vocabulary hour hand, minute hand, elapsed time, <i>number line, analog time, digital time</i>	CC.2.4.3.A.2 Tell and write time to the nearest minute and solve problems by calculating time intervals. Eligible Content M03.D-M.1.1.1 M03.D-M.1.1.2
How do I solve problems and make change involving money?	<input type="checkbox"/> Count different amounts of money (review). <input type="checkbox"/> Compare total values of coins and dollar bills less than \$5.00. <input type="checkbox"/> Round amounts of money to the nearest dollar. <input type="checkbox"/> Make change for an amount up to \$5.00.	Vocabulary penny, nickel, dime, quarter, value, dollar, bill, coin, change	CC.2.4.3.A.3 Solve problems and make change involving money using a combination of coins and bills. Eligible Content M03.D-M.1.3.1 M03.D-M.1.3.2 M03.D-M.1.3.3

<p>How do I interpret data from a graph?</p>	<p><input type="checkbox"/> Interpret data on a scaled bar or pictograph by solving one and two-step problems.</p>	<p>Vocabulary scale, key, <i>bar graph, pictograph, line plot, tally chart</i></p>	<p>CC.2.4.3.A.4 Represent and interpret data using tally charts, tables, pictographs, line plots, and bar graphs.</p> <p>Eligible Content M03.D-M.2.1.1</p>
<p>How do I create a graph to represent data?</p>	<p><input type="checkbox"/> Create a scaled pictograph and bar graph to represent data (scale limited to 1,2,5,10). <input type="checkbox"/> Translate information from one type of display to another. <input type="checkbox"/> Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. <input type="checkbox"/> Display the data by making a line plot, where the horizontal scale is marked in appropriate units-whole numbers, halves, or quarters.</p>	<p>Vocabulary scale, key, <i>bar graph, pictograph, line plot, tally chart</i></p>	<p>CC.2.4.3.A.4 Represent and interpret data using tally charts, tables, pictographs, line plots, and bar graphs.</p> <p>Eligible Content M03.D-M.2.1.2 M03.D-M.2.1.4 M03.D-M.2.1.3</p>
<p>How do I answer open ended questions involving the time, money, and data?</p>	<p><input type="checkbox"/> Review the steps to answer open ended questions involving time, money, and data.</p>	<p>N/A</p>	<p>N/A</p>

UNIT 6

Unit Title	Geometry (10 Days)		
Unit Description	Students will learn to identify two-dimensional shapes and their attributes. Students will be able to identify and classify polygons based on their attributes.		
Unit Assessment	Common Assessment		
Essential Question	Learning Goals	Content and Vocabulary	Standards
How do I classify a 2-dimensional shape based on its attributes?	<input type="checkbox"/> Identify the attributes of a polygon. <input type="checkbox"/> Classify quadrilaterals into subcategories.	Vocabulary <i>polygon, parallelogram, quadrilateral, trapezoid, square, rhombus, rectangle, parallel, attribute, pentagon, plane face, line</i>	CC.2.3.3.A.1 Identify, compare, and classify shapes and their attributes. Eligible Content M03.C-G.1.1.1 M03.C-G.1.1.2
How do I identify a three-dimensional shape based on its attributes?	<input type="checkbox"/> Identify three-dimensional shapes based on specific attributes. <input type="checkbox"/> Categorize attributes of shapes.	Vocabulary solid shape, three-dimensional shapes, cube, rectangular prism, sphere, cone, cylinder, pyramid, attributes (face, edge, apex, vertices)	CC.2.3.3.A.1 Identify, compare, and classify shapes and their attributes.

ACCOMMODATIONS AND MODIFICATIONS

Adaptations or modifications to this planned course will allow exceptional students to earn credits toward graduation or develop skills necessary to make a transition from the school environment to community life and employment. The I.E.P. team has determined that modifications to this planned course will meet the student's I.E.P. needs.

Adaptations/Modifications may include but are not limited to:

INSTRUCTION CONTENT

- Modification of instructional content and/or instructional approaches
- Modification or deletion of some of the essential elements

SETTING

- Preferential seating

METHODS

- Additional clarification of content
- Occasional need for one to one instruction
- Minor adjustments or pacing according to the student's rate of mastery
- Written work is difficult, use verbal/oral approaches
- Modifications of assignments/testing
- Reasonable extensions of time for task/project completion
- Assignment sheet/notebook
- Modified/adjusted mastery rates
- Modified/adjusted grading criteria
- Retesting opportunities

MATERIALS

- Supplemental texts and materials
- Large print materials for visually impaired students
- Outlines and/or study sheets
- Carbonless notebook paper
- Manipulative learning materials
- Alternatives to writing (tape recorder/

Grade 3

Eligible Content (EC) Standards

UNIT 1

How does the location of the digit determine its value in a whole number?

M.03.A-T.1.1.4

Order a set of whole numbers from least to greatest or greatest to least (up through 9,999, and limit sets to no more than four numbers).

How do I round whole numbers to a given place?

M.03.A-T.1.1.1

Round two- and three-digit whole numbers to the nearest ten or hundred, respectively.

How do I add and subtract multi-digit numbers to the thousands place?

M.03.A-T.1.1.2

Add two- and three-digit whole numbers (limit sums from 100 through 1,000) and/or subtract two- and three-digit numbers from three-digit whole numbers.

UNIT 2

How do I multiply whole numbers?

M03.B-O.1.1.1

Interpret and/or describe products of whole numbers (up to and including 10×10).

How do I use properties?

M03.B-O.2.1.1

Apply the commutative property of multiplication (not identification or definition of the property).

M03.B-O.2.1.2

Apply the associative property of multiplication (not identification or definition of the property).

M03.B-O.3.1.5

Identify arithmetic patterns (including patterns in the addition table or multiplication table) and/or explain them using properties of operations.

How do I divide whole numbers?

M03.B-O.1.1.2

Interpret and/or describe whole-number quotients of whole numbers (limit dividends through 50 and limit divisors and quotients through 10).

M03.B-O.1.2.2

Determine the unknown whole number in a multiplication (up to and including 10×10) or division (limit dividends through 50 and limit divisors and quotients through 10) equation relating three whole numbers.

M03.B-O.2.2.1

Interpret and/or model division as a multiplication equation with an unknown factor.

How do I solve word problems using multiplication and division?

M03.B-O.1.2.1

Use multiplication (up to and including 10×10) and/or division (limit dividends through 50 and limit divisors and quotients through 10) to solve word problems in situations involving equal groups, arrays, and/or measurement quantities.

M03.B-O.3.1.2

Represent two-step word problems using equations with a symbol standing for the unknown quantity. Limit to problems with whole numbers and having whole-number answers.

M03.B-O.3.1.3

Assess the reasonableness of answers. Limit problems posed with whole numbers and having whole -number awareness.

How do I solve word problems using the four operations?

M03.B-O.1.2.1

Use multiplication (up to and including 10×10) and/or division (limit dividends through 50 and limit divisors and quotients through 10) to solve word problems in situations involving equal groups, arrays, and/or measurement quantities.

M03.B-O.3.1.1 Solve two-step word problems using the four operations (expressions are not explicitly stated). Limit to problems with whole numbers and having whole-number answers.

M03.B-O.3.1.2

Represent two-step word problems using equations with a symbol standing for the unknown quantity. Limit to problems with whole numbers and having whole-number answers.

M03.B-O.3.1.3

Assess the reasonableness of answers. Limit problems posed with whole numbers and having whole -number awareness.

How do I use the order of operations?

M03.B-O.3.1.4

Solve two-step equations using order of operations (equation is explicitly stated with no grouping symbols.)

M03.B-O.3.1.6

Create or match a story to a given combination of symbols (+, -, \times , \div , $<$, $>$, and $=$) and numbers.

M03.B-O.3.1.7

Identify the missing symbol (+, -, \times , \div , $<$, $>$, and $=$) that makes a number sentence true.

How do I use patterns to develop or follow a rule?

M03.B-O.3.1.5

Identify arithmetic patterns (including patterns in the addition table or multiplication table) and/or explain them using properties of operations.

M03.A-T.1.1.3

Multiply one-digit whole numbers by two-digit multiples of 10 (from 10 through 90).

UNIT 3

How do I define and explain a fraction?

M03.A-F.1.1.1

Demonstrate that when a whole or set is partitioned into y equal parts, the fraction $1/y$ represents 1 part of the whole and/or the fraction x/y represents x equal parts of the whole (limit denominators to 2,3,4,6 and 8; limit numerators to whole numbers less than the denominator; and no simplification necessary).

M03.C-G.1.1.3

Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole.

How do I represent fractions on a number line?

M03.A-F.1.1.2

Represent fractions on a number line (limit denominators to 2,3,4,6, and 8; limit numerators to whole numbers less than the denominator; and no simplification necessary).

How do I represent whole numbers as fractions?

M03.A-F.1.1.4

Express whole numbers as fractions, and/or generate fractions that are equivalent to whole numbers (limit denominators to 1,2,3,4,6 and 8).

How do I recognize and create equivalent fractions?

M03.A-F.1.1.3

Recognize and generate simple equivalent fractions (limit the denominators to 1,2,3,4,6, and 8 and limit numerators to whole numbers less than the denominator).

How do I compare fractions?

M03.A-F.1.1.5

Compare two fractions with the same denominator (limit denominators to 1,2,3,4,6, and 8), using the symbols $>$, $=$, or $<$, and/or justify the conclusions.

UNIT 4

How do I use a ruler to measure using standard measurement?

How do I use a ruler to measure using metric measurement?

M03.D-M.1.2.3

Use a ruler to measure lengths to the nearest quarter inch or centimeter.

How do I find perimeter of polygons?

M03.D-M.4.1.1

Solve real-world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, exhibiting rectangles with the same perimeter and different areas, and exhibiting rectangles with the same area and different perimeters. Use the same units throughout the problem.

How do I find area of rectangles?

M03.D-M.3.1.1

Measure areas by counting unit squares (square cm, square m, square in., square ft, and non-standard square units).

M03.D-M.3.1.2

Multiply side lengths to find areas of rectangles with whole-number side lengths in the context of solving real-world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning.

M03.D-M.4.1.1

Solve real-world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, exhibiting rectangles with the same perimeter and different areas, and exhibiting rectangles with the same area and different perimeters. Use the same units throughout the problem.

How do I measure liquid volume and mass using standard measurement?

M03.D-M.1.2.1

Measure and estimate liquid volumes and masses of objects using standard units (cups [c], pints [pt], quarts [qt], gallons [gal], ounces [oz], and pounds [lb] and metric units (liters [l], grams [g], and kilograms [kg]).

How do I measure liquid volume and mass using metric units?

M03.D-M.1.2.2

Add, subtract, multiply, and divide to solve one-step word problems involving masses or liquid volumes that are given in the same units.

UNIT 5

How do I calculate elapsed time to the nearest minute on analog and digital clocks?

M03.D-M.1.1.1

Tell, show, and/or write time (analog) to the nearest minute.

M03.D-M.1.1.2

Calculate elapsed time to the minute in a given situation (total elapsed time limited to 60 minutes or less).

How do I solve problems and make change involving money?

M03.D-M.1.3.1

Compare total values of combinations of coins (penny, nickel, dime, and quarter) and/or dollar bills less than \$5.00.

M03.D-M.1.3.2

Make changes for an amount up to \$5.00 with no more than \$2.00 change given (penny, nickel, dime, quarter, and dollar).

M03.D-M.1.3.3

Round amounts of money to the nearest dollar.

How do I interpret data from a graph?

M03.D-M.2.1.1

Complete a scaled pictograph and a scaled bar graph to represent a data set with several categories (scales limited 1,25, and 10).

How do I create a graph to represent data?

M03.D-M.2.1.2

Solve one- and two-step problems using information to interpret data presented in scaled pictographs and scaled bar graphs (scales limited to 1,2,5, and 10).

M03.D-M.2.1.4

Translate information from one type of display to another. Limit to pictographs, tally charts, bar graphs, and tables.

M03D-M.2.1.3

Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Display the data by making a line plot, where the horizontal scale is marked in appropriate units—whole numbers, halves, or quarters

UNIT 6

How do I classify a 2-dimensional shape based on its attributes?

M03.C-G.1.1.1

Explain that shapes in different categories may share attributes and that the shared attributes can define a larger category.

How do I identify a three-dimensional shape based on its attributes?

M03.C-G.1.1.2

Recognize rhombi, rectangles, and squares as examples of quadrilaterals and/or draw examples of quadrilaterals that do not belong to any of these subcategories.