Curriculum Map: 3rd Grade Math (2025)

Course: 3 Math Sub-topic: General

Grade(s): 3

Course Description: Third graders study the following units: place value, addition, subtraction, multiplication, division, properties and equations, fractions, measurement, represent and interpret data, perimeter and area, and geometry.

Skills:

Computation with addition, subtraction, multiplication, and division

Identifying fractions

Problem-solving

Identifying polygons and quadrilaterals

Representing and interpreting data

Measuring to the nearest quarter-inch

Telling time to the nearest minute

Essential Questions:

Number and Operations

How can mathematical relationships among numbers be represented, compared, and communicated?

Algebraic Concepts

How can numbers be represented, compared, and communicated?

Geometry

How can relationships be described, analyzed, and classified based on spatial reasoning and/or visualization?

Measurement, Data, and Probability

How can numerical quantities, calculations, and measurements be estimated or analyzed by using appropriated strategies and tools?

Course Textbooks, Workbooks, Materials Citations:

District Approved Curriculum

i-Ready Toolbox

Unit: Unit 1: Place Value

Timeline: Week 2 to 4

Unit Description:

Students will be able to:

Round whole numbers to the nearest ten and hundred

Read, write, and identify place value of whole number through thousands

Use place value to compare numbers

Use place value to order numbers through thousands

Unit Essential Questions:

How is mathematics used to quantify, compare, represent, and model numbers?

How can patterns be used to describe relationships in mathematical situations?

How can whole numbers be expressed using place value blocks and standard, word, and expanded form?

When is it appropriate to estimate versus calculate an exact answer?

Unit Big Ideas:

Mathematical relationships among numbers can be represented, compared, and communicated.

Patterns exhibit relationships that can be extended, described, and generalized.

Unit Materials:

District Approved Curriculum

Internet Resources

TPT Resources

i-Ready Toolbox

Base Ten Blocks

Unit Assignments:

Chapter quizzes

Chapter tests

Weekly spiral reviews

Daily homework assignments

Unit Key Terminology & Definitions:

digit

expanded form

place value

standard form

word form

round

STANDARDS:

STANDARDS

STATE: PA Core Standards (2014)

CC.2.1.3.B.1 (Advanced)	Apply place-value understanding and properties of operations to perform multi-digit arithmetic.

This Curriculum Map Unit has no Topics to display

Unit: Unit 2: Addition

Timeline: Week 5 to 6

Unit Description:

Students will be able to:

Identify and apply addition properties

Use place value to identify addition patterns

Estimate sums using rounding

Use models to explore adding three-digit numbers

Add three-digit numbers and use estimation to check for reasonableness

Add four-digit numbers with regrouping

Check answers for reasonableness

Unit Essential Questions:

How can you apply the properties of addition when solving equations?

When is it appropriate to estimate versus calculate an exact answer?

How can patterns be used to describe relationships in mathematical situations?

When does it mean to estimate or analyze numerical quantities?

Unit Big Ideas:

Numerical quantities, calculations, measurements can be estimated or analyzed by using appropriate

strategies and tools.

Patterns exhibit relationships that can be extended, described, and generalized.

Unit Materials:

District Approved Curriculum

Base Ten Blocks

Place Value Chart

Internet Resources

TPT Resources

i-Ready Toolbox

Unit Assignments:

Chapter quizzes

Chapter tests

Weekly spiral reviews

Daily homework assignments

Unit Key Terminology & Definitions:

Associative Property of Addition

Commutative Property of Addition

Identity Property of Addition

mental math

parentheses

pattern

estimate

reasonable

regroup

unknown

STANDARDS:

STANDARDS

STATE: PA Core Standards (2014)

CC.2.1.3.B.1 (Advanced)	Apply place-value understanding and properties of operations to perform multi-digit arithmetic.
CC.2.2.3.A.4 (Advanced)	Solve problems involving the four operations, and identify and explain patterns in arithmetic.

This Curriculum Map Unit has no Topics to display

Unit: Unit 3: Subtraction

Timeline: Week 7 to 8

Unit Description:

Students will be able to:

Estimate differences using rounding to the nearest ten or hundred

Determine whether an estimate or an exact answer is needed to solve the problem

Model subtraction with regrouping

Subtract three-digit numbers with regrouping

Subtract four-digit numbers with regrouping

Subtract across zeros with regrouping

Unit Essential Questions:

How are addition and subtraction related?

How is mathematics used to quantify, compare, represent, and model numbers?

How can patterns be used to describe relationships in mathematical situations?

When is it appropriate to estimate versus calculate an exact answer?

Unit Big Ideas:

Mathematical relationships among numbers can be represented, compared, and communicated.

Numerical quantities, calculations, in measurement can be estimated or analyzed by using appropriate strategies and tools.

Patterns exhibit relationships that can be extended, described, and generalized.

Unit Materials:

District Approved Curriculum

TPT Resources

Internet Resources

i-Ready Toolbox

Base Ten Blocks

Unit Assignments:

Chapter quizzes

Chapter tests

Weekly spiral reviews

Daily homework assignments

Unit Key Terminology & Definitions:

regroup

inverse operations

STANDARDS:

STANDARDS

STATE: PA Core Standards (2014)

CC.2.1.3.B.1 (Advanced)	Apply place-value understanding and properties of operations to perform multi-digit arithmetic.
CC.2.2.3.A.4 (Advanced)	Solve problems involving the four operations, and identify and explain patterns in arithmetic.

This Curriculum Map Unit has no Topics to display

Unit: Unit 4: Understanding Multiplication

Timeline: Week 9 to 13

Unit Description:

Students will be able to:

Use models to explore the meaning of multiplication

Relate multiplication and addition

Use arrays to explore and model multiplication

Use arrays to multiply

Use the make a table strategy to solve problems

Use multiplication to find the total number of combinations that can be made when given two groups of objects

Use different representations such as; arrays, equal groups, number lines, repeated addition, and word problems to multiply by 2-12

Unit Essential Questions:

How are multiplication and repeated addition related?

How can you apply the properties of multiplication when solving equations?

What makes a tool and/or strategy appropriate for a given task?

How are relationships represented mathematically?

How is mathematics used to quantify, compare, represent, and model numbers?

Unit Big Ideas:

Numerical quantities, calculations, and measurements can be estimated or analyzed by using appropriate strategies and tools.

Mathematical relationships among numbers can be represented, compared, and communicated.

Patterns exhibit relationships that can be extended, described, and generalized.

Unit Materials:

District Approved Curriculum

TPT Resources

Internet Resources

i-Ready Toolbox

Counters

Unit Assignments:

Chapter quizzes

Chapter tests

Weekly spiral reviews

Daily homework assignments

Unit Key Terminology & Definitions:

equal groups

multiplication

multiplication sentence

multiply

factors

product

array

Commutative Property of Multiplication

combination

tree diagrams

STANDARDS:

STANDARDS

STATE: PA Core Standards (2014)

CC.2.2.3.A.1 (Advanced)	Represent and solve problems involving multiplication and division.
CC.2.2.3.A.2 (Advanced)	Understand properties of multiplication and the relationship between multiplication and division.
CC.2.2.3.A.4 (Advanced)	Solve problems involving the four operations, and identify and explain patterns in arithmetic.

This Curriculum Map Unit has no Topics to display

Unit: Unit 5: Understand Division

Timeline: Week 14 to 15

Unit Description:

Students will be able to:

Explore meanings of division

Model division as equal sharing

Use models to relate division and subtraction

Explore how division and multiplication are related

Divide using related multiplication facts

Use different representations such as: arrays, equal groups, number lines, and word problems to divide by 0-12

Unit Essential Questions:

How are division and repeated subtraction related?

Why are multiplication and division inverse operations?

How can we learn the quotients of division problems using divisors 2-12 with fluency?

How can patterns be used to describe relationships in mathematical situations?

Unit Big Ideas:

Patterns exhibit relationships that can be extended, describe, and generalized.

Mathematical relationships among numbers can be represented, compared, and communicated.

Unit Materials:

District Approved Curriculum

	TPT Resources
	Internet Resources
	i-Ready Toolbox
	Counters
Unit Assignments:	Chapter quizzes
	Chapter tests
	Weekly spiral reviews
	Daily homework assignments
Unit Key Terminology & Definitions:	divide
	division
	dividend
	division sentence
	divisor
	fact family

inverse operations

partition

quotient

STANDARDS: **STANDARDS**

STATE: PA Core Standards (2014)

CC.2.2.3.A.1 (Advanced)	Represent and solve problems involving multiplication and division.
CC.2.2.3.A.2 (Advanced)	Understand properties of multiplication and the relationship between multiplication and division.
CC.2.2.3.A.3 (Advanced)	Demonstrate multiplication and division fluency.

This Curriculum Map Unit has no Topics to display

Unit: Unit 6: Fractions

Timeline: Week 16 to 18

Unit Description:

Students will be able to:

Explore and model unit fractions

Read and write fractions that name a part of a whole

Use models to represent fractions that name a part of a set

Draw a diagram that solve word problems

Represent fractions on a number line

Use models to find equivalent fractions

Express whole numbers as fractions and recognize fractions equivalent to whole numbers

Use models to compare two fractions and record the results

Unit Essential Questions:

How can you represent and locate fractions on a number line?

How can you represent equivalent fractions in different ways?

How is mathematics used to quantify, compare, represent, and model numbers?

What makes a tool and/or strategy appropriate for a given task?

Unit Big Ideas:

Mathematical relationships among numbers can be represented, compared, and communicated.

Mathematical relationships can be represented as expressions, equations, and inequalities in mathematical situations.

Patterns exhibit relationships that can be extended, described, and generalized.

Unit Materials:

District Approved Curriculum

	TPT Resources
	Internet Resources
	i-Ready Toolbox
	Fraction Tiles
	Fraction Circles
	Connecting Cubes
Unit Assignments:	Chapter quizzes
	Chapter tests
	Weekly spiral reviews
	Daily homework assignments
Unit Key Terminology & Definitions:	fraction
	unit fraction
	numerator
	denominator

equivalent fractions

STANDARDS: **STANDARDS**

STATE: PA Core Standards (2014)

CC.2.1.3.C.1 (Advanced)	Explore and develop an understanding of fractions as numbers.
CC.2.3.3.A.2 (Advanced)	Use the understanding of fractions to partition shapes into parts with equal areas and express the area of each part as a unit fraction of the whole.

This Curriculum Map Unit has no Topics to display

Unit: Unit 7: Properties and Equations

Timeline: Week 19 to 20

Unit Description:

Students will be able to:

Explore how to take apart factors to multiply

Apply the Distributive Property of Multiplication to find products

Explore how to find the product of three factors

Apply the Associative Property of Multiplication to find product

Write expressions using the four operations

Write, then find the value of expressions

Represent one and two-step word problems using equations with a variable

Represent and solve two-step word problems using equations with a variable

Use logical reasoning to solve problems

Unit Essential Questions:

How are relationships represented mathematically?

How can expressions, equations, and inequalities be used to quantify, solve, model, and/or analyzed mathematical situations?

Unit Big Ideas:

Mathematical relationships can be represented as expressions, equations, and inequalities in mathematical situations.

Mathematical relations and functions can be modeled through multiple representations and analyzed to raise and answer questions.

Unit Materials:

District Approved Curriculum

TPT Resources

Internet Resources

i-Ready Toolbox

	Counters
Unit Assignments:	Chapter quizzes
	Chapter tests
	Weekly spiral reviews
	Daily homework assignments
Unit Key Terminology & Definitions:	Distributive Property
	Associative Property
	operations
	expression
	evaluate
	variable
	equation
STANDARDS:	**STANDARDS**

STATE: PA Core Standards (2014)

CC.2.2.3.A.4 (Advanced)	Solve problems involving the four operations, and identify and explain patterns in arithmetic.

This Curriculum Map Unit has no Topics to display

Unit: Unit 8: Measurement and Data

Timeline: Week 21 to 24

Unit Description:

Students will be able to:

Estimate and measure capacity using customary and metric units

Solve capacity problems

Estimate and measure mass/weight using customary and metric units

Solve mass/weight problems

Tell time to the nearest minute

Use different strategies to solve elapsed time problems

Collect data using surveys, frequency tables, and tally charts

Draw and analyze pictographs, bar graphs, and line plots

Measure to the nearest quarter of an inch

Measure to the nearest centimeter

Unit Essential Questions:

When is it appropriate to estimate versus calculate?

How precise do measurements and calculations need to be?

Why does "what" we measure influence "how" we measure?

How can data be organized and represented to provide insight into the relationship between quantities?

Unit Big Ideas:

Mathematical relationships among numbers can be represented, compared and, communicated.

Data can be modeled and used to make inferences.

Patterns exhibit relationships that can be extended, described, and generalized.

Unit Materials:

District Approved Curriculum

Internet Resources

TPT Resources

i-Ready Toolbox

Clocks

Rulers

Unit Assignments:

Chapter quizzes

Chapter tests

Weekly spiral reviews

Daily homework assignments

Unit Key Terminology & Definitions:

analog clock

digital clock

elapsed time/time interval

capacity/liquid volume

customary/standard unit

cup

gallon

gram

kilogram

liter

mass

metric unit

milliliter

ounce

pint

pound

quart

ton

weight

analyze

bar graph

data

frequency table

interpret

key

line plot

pictograph

scale

survey

tally chart

tally mark(s)

centimeter

inch

STANDARDS: **STANDARDS**

STATE: PA Core Anchors and Eligible Content (2014)

M03.D-M.1.1.1 (Advanced)	Tell, show, and/or write time (analog) to the nearest minute. Alternate Eligible Content Code M03DM1.1.1a: Tell time to the hour or half hour on a clock
M03.D-M.1.1.2 (Advanced)	Calculate elapsed time to the minute in a given situation (total elapsed time limited to 60 minutes or less).
M03.D-M.1.2.1 (Advanced)	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]). Alternate Eligible Content Code M03DM1.2.1a: Identify and use the appropriate measurement tool based on the situation
M03.D-M.1.2.3 (Advanced)	Use a ruler to measure lengths to the nearest quarter inch or centimeter. Alternate Eligible Content Code M03DM1.2.3a: Use a ruler and measure to the nearest inch (exact measurement)
M03.D-M.2.1.1 (Advanced)	Complete a scaled pictograph and a scaled bar graph to represent a data set with several categories (scales limited to 1, 2, 5, and 10). Alternate Eligible Content Code M03DM2.1.1a: Add information to a pictograph,

	line plot, or bar graph
M03.D-M.2.1.2 (Advanced)	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). Example 1: (One-step) "Which category is the largest?" Example 2: (Two-step) "How many more are in category A than in category B?"
M03.D-M.2.1.3 (Advanced)	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.
M03.D-M.2.1.4 (Advanced)	Translate information from one type of display to another. Limit to pictographs, tally charts, bar graphs, and tables. Example: Convert a tally chart to a bar graph.

This Curriculum Map Unit has no Topics to display

Unit: Unit 9: Area and Perimeter

Timeline: Week 25 to 28

Unit Description:

Students will be able to:

Find the perimeter of a figure

Find the area of a figure by counting unit squares

Find the area of a rectangle by using a formula

Find the area of composite figures

Draw and label rectangles with the same areas but different perimeters

Draw and label rectangles with the same perimeters but different areas

Unit Essential Questions:

When is it appropriate to estimate versus calculate?

How can data be organized and represented to provide insight into the relationship between quantities?

How precise do measurements and calculations need to be?

How are spatial relationships, including shape and dimension, used to draw, construct, model, and represents real situations or solve problems?

How can recognizing repetitions or regularity assist in solving problems more efficiently?

Unit Big Ideas:

Mathematical relationships can be represented as expressions, equations, and inequalities in mathematical situations.

Mathematical relations and functions can be modeled through multiple representations and analyzed to raise and answer questions.

Unit Materials:

District Approved Curriculum

Internet Resources

TPT Resources

i-Ready Toolbox

Unit Assignments:

Chapter quizzes

Chapter tests

Weekly spiral reviews

Daily homework assignments

Unit Key Terminology & Definitions:

area

composite figure

formula

perimeter

square unit

unit square

STANDARDS:

STANDARDS

STATE: PA Core Anchors and Eligible Content (2014)

M03.D-M.3.1.1 (Advanced)	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 (Advanced)	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. Alternate Eligible Content Code M03DM3.1.2a: Measure the area of a rectangle by counting squares, tiling, or addition
M03.D-M.4.1.1 (Advanced)	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. Alternate Eligible Content Code M03DM4.1.1a: Find the perimeter of a rectangle

This Curriculum Map Unit has no Topics to display

Unit: Unit 10: Geometry

Timeline: Week 29 to 30

Unit Description:

Students will be able to:

Identify polygons and their attributes

Identify quadrilaterals and their attributes

Compare and contrast attributes of quadrilaterals

Partition figures into equal parts

Unit Essential Questions:

How can the application of the attributes of geometric shapes support mathematical reasoning and problem solving?

How are spatial relationships, including shape and dimension, used to draw, construct, model, and represents real situations or solve problems?

In what ways are the mathematical attributes of objects or processes measured, calculated and/or interpreted?

Unit Big Ideas:

Data can be modeled and used to make inferences.

Patterns exhibit relationships that can be extended, described, and generalized.

Geometric relationships can be described, analyzed, and classified based on spatial reasoning and/or visualization.

Unit Materials:

District Approved Curriculum

Internet Resources

TPT Resources

i-Ready Toolbox

Geo-boards

Unit Assignments:

Chapter quizzes

Chapter tests

Weekly spiral reviews

Daily homework assignments

Unit Key Terminology & Definitions:

angle

attribute

hexagon

octagon

parallel

parallelogram

pentagon

polygon

quadrilateral

rectangle

rhombus

right angle

square

trapezoid

triangle

STANDARDS: **STANDARDS**

STATE: PA Core Anchors and Eligible Content (2014)

M03.C-G.1.1.1 (Advanced)	Explain that shapes in different categories may share attributes and that the shared attributes can define a larger category. Example 1: A rhombus and a rectangle are both quadrilaterals since they both have exactly four sides. Example 2: A triangle and a pentagon are both polygons since they are both multi-sided plane figures. Alternate Eligible Content Code M03CG1.1.1a: Identify similarities between two polygons
M03.C-G.1.1.2 (Advanced)	Recognize rhombi, rectangles, and squares as examples of quadrilaterals and/or draw examples of quadrilaterals that do not belong to any of these subcategories.
M03.C-G.1.1.3 (Advanced)	Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. Example 1: Partition a shape into 4 parts with equal areas. Example 2: Describe the area of each of 8 equal parts as 1/8 of the area of the shape. Alternate Eligible Content Code M03CG1.1.3a: Partition a rectangle into parts with equal areas

This Curriculum Map Unit has no Topics to display