

Curriculum Map: 5th Grade Mathematics - 2021-2022

Course: MATH Sub-topic: General

Grade(s): 5

Course Description: The following is the curriculum for 5th grade mathematics. It primarily follows enVision Mathematics. Successmaker, Reflex Math, Frax Math, and IXL Math are also implemented.

Course Textbooks, Workbooks, Materials Citations: Envision Mathematics Grade 5, Volumes 1 and 2

Pacing Calendar:

1st Marking Period (41 days)

- Topic 1 - Understand Place Value - 10 days
- Topic 2 - Use Models and Strategies to Add and Subtract Decimals - 8 days
- Topic 3 - Fluently Multiply Multi-Digit Whole Numbers - 12 days
- Topic 4 - Use Models and Strategies to Multiply Decimals - 11 days

2nd Marking Period (45 days)

- Topic 5 - Use Models and Strategies to Divide Whole Numbers - 11 days
- Topic 6 - Use Models and Strategies to Divide Decimals - 8 days
- Topic 7 Use Equivalent Fractions to Add and Subtract Fractions - 15 days
- Topic 8 - Apply Understanding of Multiplication to Multiply Fractions - 11 days

3rd Marking Period (39 days)

- Topic 9 - Apply Understanding of Division to Divide Fractions - 11 days
- Topic 10 - Represent and Interpret Data - 9 days
- Topic 11 - Understand Volume Concepts - 8 days
- Topic 12 - Convert Measurements - 11 days

4th Marking Period (26 days)

- Topic 13 - Write and Interpret Numerical Expressions - 7 days
- Topic 14 - Graph Points on the Coordinate Plane - 6 days
- Topic 15 - Algebra: Analyze Patterns and Relationships - 7 days
- Topic 16 - Geometric Measurement: Classify Two-Dimensional Figures - 6 days

*Extra time at the end of the year will consist of 6th grade lessons. There are 10 of these lessons listed under "Topic 17 - Step Up to Grade 6."

Course Interdisciplinary Connections: Envision STEM Projects
3-ACT MATH Activities

Unit: Topic 1 - Understand Place Value

Unit Description: Understand Place Value.

Unit Essential Questions: How are whole numbers and decimals written, compared, and ordered?

Unit Big Ideas: Topic 1 focuses on deepening the understanding of place value in both whole numbers and decimals. Students explore the structure of our base-ten numeration system by recognizing the relationships among the place values. Students learn to read, write, compare, and round decimals to thousandths.

Unit Materials: place-value blocks (or TT 4-5)
index cards
place-value charts (TT 3)
lined paper
colored pencils
decimal place-value charts (TT 6)
number lines (TT 12)

Unit Assignments: 1-1 Patterns with Exponents and Powers of 10
1-2 Understand Whole-Number Place Value
1-3 Decimals to Thousandths
1-4 Understand Decimal Place Value
1-5 Compare Decimals
1-6 Round Decimals
1-7 Problem Solving: Look For and Use Structure

Unit Key Terminology & Definitions: power
exponent
equivalent decimals
base
value
expanded form
thousandths

STANDARDS: STANDARDS

NATIONAL: US Common Core State Standards (2010)

[MA.5.NBT.A.1 \(Advanced\)](#) Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and 1/10 of what it represents in the place to its left.

[MA.5.NBT.A.2 \(Advanced\)](#) Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10.

[MA.5.NBT.A.3.A \(Advanced\)](#) Read and write decimals to thousandths using base-ten numerals, number names, and expanded form, e.g., $347.392 = 3 \times 100 + 4 \times 10 + 7 \times 1 + 3 \times (1/10) + 9 \times (1/100) + 2 \times (1/1000)$.

[MA.5.NBT.A.3.B \(Advanced\)](#) Compare two decimals to thousandths based on meanings of the digits in each place, using $>$, $=$, and $<$ symbols to

[MA.5.NBT.A.4](#)
(Advanced)

record the results of comparisons.
Use place value understanding to round decimals to any place.

This Curriculum Map Unit has no Topics to display

Unit: Topic 2 - Use Models and Strategies to Add and Subtract Decimals

Unit Description: Use Models and Strategies to Add and Subtract Decimals

Unit Essential Questions: How can sums and differences of decimals be estimated?
What are some common procedures for adding and subtracting decimals?
How can sums and differences be found mentally?

Unit Big Ideas: Topic 2 focuses on developing understanding of addition and subtraction of decimals using models, strategies, and understanding of decimal place value. Students learn to estimate and compute sums and differences of decimals to hundredths.

Unit Materials: decimal place-value charts (TT 6)
decimal grids (TT 8)
place-value blocks (or TT 4-5)

Unit Assignments: 2-1 Mental Math
2-2 Estimate Sums and Differences of Decimals
2-3 Use Models to Add and Subtract Decimals
2-4 Use Strategies to Add Decimals
2-5 Use Strategies to Subtract Decimals
2-6 Problem Solving: Model with Math

Unit Key Terminology & Definitions: associative property of addition
commutative property of addition
compatible numbers
compensation

STANDARDS: STANDARDS

NATIONAL: US Common Core State Standards (2010)

[MA.5.NBT.A.4](#)
(Advanced)

Use place value understanding to round decimals to any place.

[MA.5.NBT.B.7](#)
(Advanced)

Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.

This Curriculum Map Unit has no Topics to display

Unit: Topic 3 - Fluently Multiply Multi-Digit Whole Numbers

Unit Description: Fluently multiply multi-digit whole numbers.

Unit Essential Questions: What are the standard procedures for estimating and finding products of multi-digit numbers?

Unit Big Ideas: Topic 3 focuses on developing understanding, procedural skill, and fluency with multiplying multi-digit whole numbers using the standard algorithm.

Unit Materials: Place value blocks (or TT 4-5)

Unit Assignments:

- 3-1 Multiply greater numbers by powers of 10
- 3-2 Estimate products
- 3-3 Multiply by 1-digit numbers
- 3-4 Multiply 2-digit by 2-digit numbers
- 3-5 Multiply 3-digit by 2 digit numbers
- 3-6 Multiply whole numbers with zeros
- 3-7 Practice Multiplying multi-digit numbers
- 3-8 Solve word problems using multiplication
- 3-9 Problem solving: critique reasoning

Unit Key Terminology & Definitions:

- Underestimate
- Overestimate
- Partial Products
- Variable

Unit Notes: More time will be spent on this unit to teach multiple strategies to multiply multi-digit numbers, not just the standard algorithm.

STANDARDS: STANDARDS

NATIONAL: US Common Core State Standards (2010)

[MA.5.NBT.A.1 \(Advanced\)](#) Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and 1/10 of what it represents in the place to its left.

[MA.5.NBT.A.2 \(Advanced\)](#) Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10.

[MA.5.NBT.B.5 \(Advanced\)](#) Fluently multiply multi-digit whole numbers using the standard algorithm.

This Curriculum Map Unit has no Topics to display

Unit: Topic 4 - Use Models and Strategies to Multiply Decimals

Unit Description: Use Models and Strategies to Multiply Decimals.

Unit Essential Questions: What are some common procedures for estimating and finding products involving decimals?

Unit Big Ideas: Topic 4 focuses on developing understanding of multiplying with decimals using models and strategies.

Unit Materials: decimal grids (TT 8)
index cards
paper
pencils
bills and coins (TT 18)

Unit Assignments:
4-1 Multiply Decimals by Powers of 10
4-2 Estimate the Product of a Decimal and a Whole Number
4-3 Use Models to Multiply a Decimal and a Whole Number
4-4 Multiply a Decimal and Whole Number
4-5 Use Models to Multiply a Decimal and a Decimal
4-6 Multiply Decimals Using Partial Products
4-7 Use Properties to Multiply Decimals
4-8 Use Number Sense to Multiply Decimals.
4-9 Problem Solving: Model with Math

Unit Key Terminology & Definitions: N/A

STANDARDS: STANDARDS

NATIONAL: US Common Core State Standards (2010)

[MA.5.NBT.A.2](#)
(Advanced)

Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10.

[MA.5.NBT.B.7](#)
(Advanced)

Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.

Topic:

Unit: Topic 5 - Use Models and Strategies to Divide Whole Numbers

Unit Description: Use models and strategies to divide whole numbers.

Unit Essential Questions: What are some common procedures for division and why do they work?

Unit Big Ideas: Topic 5 focuses on developing understanding of dividing whole numbers using models and strategies. Students learn to estimate and compute quotients of whole numbers with 2-digit

divisors.

Unit Materials: -centimeter grid paper (or TT 9)
-place-value blocks (or TT 4)
-bills and coins (or TT 18)

Unit Assignments:
5-1: Use Patterns and Mental Math to Divide
5-2: Estimate Quotients with 2-Digit Divisors
5-3: Use Models and Properties to Divide with 2-Digit Divisors
5-4: Use Partial Quotients to Divide
5-5: Use Sharing to Divide: 2-Digit Divisors
5-6: Use Sharing to Divide: Greater Dividends
5-7: Choose a Strategy to Divide
5-8: Problem Solving: Make Sense and Persevere

Unit Key Terminology & Definitions: N/A

Unit Notes: More time will be required to teach different dividing strategies.

STANDARDS: STANDARDS

NATIONAL: US Common Core State Standards (2010)

[MA.5.NBT.B.6 \(Advanced\)](#)

Find whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.

This Curriculum Map Unit has no Topics to display

Unit: Topic 6 - Use Models and Strategies to Divide Decimals.

Unit Description: Use models and strategies to divide decimals.

Unit Essential Questions: What are some common procedures for estimating and finding quotients involving decimals?

Unit Big Ideas: Topic 6 focuses on developing understanding of dividing with decimals using models, place-value strategies, and properties.

Unit Materials: -decimal place-value charts (TT 6)
-index cards
-bills and coins (or TT 18)
-decimal models (TT 7)
-decimal grids (TT 8)
-place-value blocks (or TT 4-5)
-centimeter grid paper (or TT 9)

- Unit Assignments:**
- 6-1: Patterns for Dividing with Decimals
 - 6-2: Estimate Decimal Quotients
 - 6-3: Use Models to Divide by a 1-Digit Whole Number
 - 6-4: Divide by a 2-Digit Whole Number
 - 6-5: Divide by a Decimal
 - 6-6: Problem Solving: Reasoning

Unit Key Terminology & Definitions: N/A

STANDARDS: STANDARDS

NATIONAL: US Common Core State Standards (2010)

[MA.5.NBT.A.2](#)
(Advanced)

Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10.

[MA.5.NBT.B.7](#)
(Advanced)

Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.

This Curriculum Map Unit has no Topics to display

Unit: Topic 7 - Use Equivalent Fractions to Add and Subtract Fractions

Unit Description: Use equivalent fractions to add and subtract fractions.

Unit Essential Questions: How can sums and differences of fractions and mixed numbers be estimated?
What are common procedures for adding and subtraction fractions and mixed numbers?

Unit Big Ideas: Topic 7 focuses on developing understanding of how to add and subtract fractions and mixed numbers with unlike denominators by using equivalent fractions.

Unit Materials: number lines (TT 12)
fractions strips (or TT 13)
circle fraction models (TT 14)

- Unit Assignments:**
- 7-1 Estimate Sums and Difference of Fractions
 - 7-2 Find Common Denominators
 - 7-3 Add Fractions with Unlike Denominators
 - 7-4 Subtract Fractions with Unlike Denominators
 - 7-5 Add and Subtract Fractions
 - 7-6 Estimate Sums and Differences of Mixed Numbers
 - 7-7 Use Models to Add Mixed Numbers

- 7-8 Add Mixed Numbers
- 7-9 Use Models to Subtract Mixed Numbers
- 7-10 Subtract Mixed Numbers
- 7-11 Add and Subtract Mixed Numbers
- 7-12 Problem Solving: Model with Math

Unit Key Terminology & Definitions: benchmark fraction
 equivalent fractions
 common denominator
 mixed numbers

STANDARDS: STANDARDS

NATIONAL: US Common Core State Standards (2010)

[MA.5.NF.A.1 \(Advanced\)](#) Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators.

[MA.5.NF.A.2 \(Advanced\)](#) Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators, e.g., by using visual fraction models or equations to represent the problem. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers.

This Curriculum Map Unit has no Topics to display

Unit: Topic 8 - Apply Understanding of Multiplication to Multiply Fractions

Unit Description: Apply understanding of multiplication to multiply fractions.

Unit Essential Questions: What does it mean to multiply whole numbers and fractions?
 How can multiplication with whole numbers and fractions be shown using models and symbols?

Unit Big Ideas: Topic 8 focuses on extending conceptual understanding of multiplication from whole numbers to fractions and using this understanding to solve problems involving multiplication with fractions and mixed numbers.

Unit Materials: fraction strips (or TT 13)
 centimeter grid paper (or TT 9)
 number lines (TT 12)

Unit Assignments: 8-1 Multiply a Fraction by a Whole Number
 8-2 Multiply a Whole Number by a Fraction
 8-3 Multiply Fractions and Whole Numbers
 8-4 Use Models to Multiply Two Fractions
 8-5 Multiple Two Fractions

- 8-6 Area of a Rectangle
- 8-7 Multiply Mixed Numbers
- 8-8 Multiplication as Scaling
- 8-9 Problem Solving: Make Sense and Persevere

Unit Key

Terminology & Definitions: N/A

STANDARDS: STANDARDS

NATIONAL: US Common Core State Standards (2010)

[MA.5.NF.B.4.A](#)
(Advanced)

Interpret the product $(a/b) \times q$ as a parts of a partition of q into b equal parts; equivalently, as the result of a sequence of operations $a \times q \div b$.

[MA.5.NF.B.4.B](#)
(Advanced)

Find the area of a rectangle with fractional side lengths by tiling it with unit squares of the appropriate unit fraction side lengths, and show that the area is the same as would be found by multiplying the side lengths. Multiply fractional side lengths to find areas of rectangles, and represent fraction products as rectangular areas.

[MA.5.NF.B.5](#)
(Advanced)

Interpret multiplication as scaling (resizing), by:

[MA.5.NF.B.5.B](#)
(Advanced)

Explaining why multiplying a given number by a fraction greater than 1 results in a product greater than the given number (recognizing multiplication by whole numbers greater than 1 as a familiar case); explaining why multiplying a given number by a fraction less than 1 results in a product smaller than the given number; and relating the principle of fraction equivalence $a/b = (n \times a)/(n \times b)$ to the effect of multiplying a/b by 1.

Explaining why multiplying a given number by a fraction greater than 1 results in a product greater than the given number (recognizing multiplication by whole numbers greater than 1 as a familiar case); explaining why multiplying a given number by a fraction less than 1 results in a product smaller than the given number; and relating the principle of fraction equivalence $a/b = (n \times a)/(n \times b)$ to the effect of multiplying a/b by 1.

[MA.5.NF.B.6](#)
(Advanced)

Solve real world problems involving multiplication of fractions and mixed numbers, e.g., by using visual fraction models or equations to represent the problem.

This Curriculum Map Unit has no Topics to display

Unit: Topic 9 - Apply Understanding of Division to Divide Fractions

Unit

Description: Apply understanding of division to divide fractions.

Unit Essential Questions: How are fractions related to division?

How can you divide with whole numbers and unit fractions?

Unit Big Ideas: Topic 9 focuses on applying conceptual understanding of whole-number division to divide unit fractions by whole numbers and whole numbers by unit fractions.

Unit Materials: circle fraction models (TT 14)

number lines (TT 12)

fraction strips (or TT 13)

- Unit** 9-1 Fractions and Division
- Assignments:**
- 9-2 Fractions and Mixed Numbers as Quotients
 - 9-3 Use Multiplication to Divide
 - 9-4 Divide Whole Numbers by Unit Fractions
 - 9-5 Divide Unit Fractions by Non-Zero Whole Numbers
 - 9-6 Divide Whole Numbers and Unit Fractions
 - 9-7 Solve Problems Using Division
 - 9-8 Problem Solving: Repeated Reasoning

Unit Key Terminology & Definitions: unit fraction

STANDARDS: STANDARDS

NATIONAL: US Common Core State Standards (2010)

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|---|---|
| <p>MA.5.NF.B.3
(Advanced)</p> <p>MA.5.NF.B.7.A
(Advanced)</p> <p>MA.5.NF.B.7.B
(Advanced)</p> <p>MA.5.NF.B.7.C
(Advanced)</p> | <p>Interpret a fraction as division of the numerator by the denominator ($a/b = a \div b$). Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers, e.g., by using visual fraction models or equations to represent the problem.</p> <p>Interpret division of a unit fraction by a non-zero whole number, and compute such quotients.</p> <p>Interpret division of a whole number by a unit fraction, and compute such quotients.</p> <p>Solve real world problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions, e.g., by using visual fraction models and equations to represent the problem.</p> |
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This Curriculum Map Unit has no Topics to display

Unit: Topic 10 - Represent and Interpret Data

Unit Description: Represent and interpret data.

Unit Essential Questions: How can line plots be used to represent data and answer questions?

Unit Big Ideas: Topic 10 focuses on using line plots to represent and interpret data, with an emphasis on measurement data involving fractions. Students use the data to solve problems involving fraction operations.

Unit Materials: number lines (TT 12)
1/4 inch grid paper (TT 10)
straightedge

- Unit Assignments:**
- 10-1 Analyze Line Plots
 - 10-2 Make Line Plots
 - 10-3 Solve Word Problems Using Measurement Data
 - 10-4 Problem Solving: Critique Reasoning

*PA-1 Display and Interpret Data: Frequency Tables

*PA-2 Display and Interpret Data: Bar Graphs

*PA-3 Display and Interpret Data: Line Graphs

Unit Key Terminology & Definitions: data
line plot

*frequency tables

*bar graphs

*line graphs

Unit Notes: *3 extra days need to be accounted for this unit since enVision added 3 new lessons to fulfill PA Common Core standards.

STANDARDS: STANDARDS

NATIONAL: US Common Core State Standards (2010)

[MA.5.NF.A.2](#)
(Advanced)

Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators, e.g., by using visual fraction models or equations to represent the problem. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers.

[MA.5.NF.B.6](#)
(Advanced)

Solve real world problems involving multiplication of fractions and mixed numbers, e.g., by using visual fraction models or equations to represent the problem.

[MA.5.MD.B.2](#)
(Advanced)

Make a line plot to display a data set of measurements in fractions of a unit ($\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$). Use operations on fractions for this grade to solve problems involving information presented in line plots.

This Curriculum Map Unit has no Topics to display

Unit: Topic 11 - Understand Volume Concepts

Unit Description: Understand volume concepts.

Unit Essential Questions: What is the meaning of volume of a solid?
How can the volume of a rectangular prism be found?

Unit Big Ideas: Topic 11 focuses on developing understanding of the measurable attribute of volume and on using numbers and operations to compute the volume of rectangular prisms and composite shapes.

Unit Materials: unit cubes
combining volumes (TT 19)
place-value blocks (or TT 4)
centimeter grid paper (or TT 9)

Unit Assignments: 11-1 Model Volume
11-2 Develop a Volume Formula
11-3 Combine Volumes of Prisms

11-4 Solve Word Problems Using Volume

11-5 Problem Solving: Use Appropriate Tools

Unit Key Terminology & Definitions: volume
cubic unit
cube
rectangular prism
unit cube
formula

STANDARDS: STANDARDS

NATIONAL: US Common Core State Standards (2010)

[MA.5.MD.C.3.A \(Advanced\)](#) A cube with side length 1 unit, called a "unit cube," is said to have "one cubic unit" of volume, and can be used to measure volume.

[MA.5.MD.C.3.B \(Advanced\)](#) A solid figure which can be packed without gaps or overlaps using n unit cubes is said to have a volume of n cubic units.

[MA.5.MD.C.4 \(Advanced\)](#) Measure volumes by counting unit cubes, using cubic cm, cubic in, cubic ft, and improvised units.

[MA.5.MD.C.5.A \(Advanced\)](#) Find the volume of a right rectangular prism with whole-number side lengths by packing it with unit cubes, and show that the volume is the same as would be found by multiplying the edge lengths, equivalently by multiplying the height by the area of the base. Represent threefold whole-number products as volumes, e.g., to represent the associative property of multiplication.

[MA.5.MD.C.5.B \(Advanced\)](#) Apply the formulas $V = l \times w \times h$ and $V = b \times h$ for rectangular prisms to find volumes of right rectangular prisms with whole-number edge lengths in the context of solving real world and mathematical problems.

[MA.5.MD.C.5.C \(Advanced\)](#) Recognize volume as additive. Find volumes of solid figures composed of two non-overlapping right rectangular prisms by adding the volumes of the non-overlapping parts, applying this technique to solve real world problems.

This Curriculum Map Unit has no Topics to display

Unit: Topic 12 - Convert Measurements

Unit Description: Convert measurements.

Unit Essential Questions: What are customary measurement units and how are they related?
What are metric measurement units and how are they related?

Unit Big Ideas: Topic 12 focuses on using multiplication and division to convert measurements of length, capacity, weight, and mass within either the customary or metric measurement system, on converting units of time, and on solving problems involving measurement conversions.

Unit Materials: inch ruler and yardstick (or TT 17)
centimeter ruler and meter stick (or TT 16)
number lines (TT 12)

Unit Assignments:	12-1 Convert Customary Units of Length
	12-2 Convert Customary Units of Capacity
	12-3 Convert Customary Units of Weight
	12-4 Convert Metric Units of Length
	12-5 Convert Metric Units of Capacity
	12-6 Convert Metric Units of Mass
	12-7 Convert Units of Time
	12-8 Solve Word Problems Using Measurement Conversions
	12-9 Problem Solving: Precision

Unit Key Terminology & Definitions:	foot (ft)
	inch (in.)
	yard (yd)
	mile (mie)
	capacity
	gallon (gal)
	quart (qt)
	pint (pt)
	cup (c)
	fluid ounce (fl oz)
	weight
	ton (t)
	pound (lb)
	ounce (oz)
	kilometer (km)
	meter (m)
	centimeter (cm)
	millimeter (mm)
	liter (l)
	milliliter (ml)
	mass
	milligram (mg)
	gram (g)
	kilogram (kg)

STANDARDS: STANDARDS

NATIONAL: US Common Core State Standards (2010)

[MA.5.NBT.A.2](#)
(Advanced)

Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10.

MA.5.NBT.B.5 (Advanced)	Fluently multiply multi-digit whole numbers using the standard algorithm.
MA.5.NBT.B.6 (Advanced)	Find whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.
MA.5.MD.A.1 (Advanced)	Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m), and use these conversions in solving multi-step, real world problems.

This Curriculum Map Unit has no Topics to display

Unit: Topic 13 - Write and Interpret Numerical Expressions

Unit Description: Write and interpret numerical expressions.

Unit Essential Questions: How is the value of a numerical expression found?

Unit Big Ideas: Topic 13 focuses on developing understanding of the order of operations and how to use it to evaluate, write, and interpret numerical expressions with grouping symbols.

Unit Materials: N/A

Unit Assignments:

- 13-1 Evaluate Expressions
- 13-2 Write Numerical Expressions
- 13-3 Interpret Numerical Expressions
- 13-4 Problem Solving: Reasoning

Unit Key Terminology & Definitions:

- numerical expression
- evaluate
- order of operations
- parentheses
- brackets
- braces

STANDARDS: STANDARDS

<u>NATIONAL: US Common Core State Standards (2010)</u>	
MA.5.OA.A.1 (Advanced)	Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols.
MA.5.OA.A.2 (Advanced)	Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them.

This Curriculum Map Unit has no Topics to display

Unit: Topic 14 - Graph Points on the Coordinate Plane

Unit Description: Graph points on the coordinate plane.

Unit Essential Questions: How are points plotted?
How are relationships shown on a graph?

Unit Big Ideas: Topic 14 focuses on developing understanding of the coordinate system and how to use ordered pairs to locate points in a plane.

Unit Materials: coordinate grids (TT 20)
centimeter grid paper (or TT 9)

Unit Assignments: 14-1 The Coordinate System
14-2 Graph Data Using Ordered Pairs
14-3 Solve Problems Using Ordered Pairs
14-4 Problem Solving: Reasoning

Unit Key Terminology & Definitions: coordinate grid
ordered pair
x-axis
y-axis
origin
x-coordinate
y-coordinate

STANDARDS: STANDARDS

NATIONAL: US Common Core State Standards (2010)

[MA.5.G.A.1 \(Advanced\)](#) Use a pair of perpendicular number lines, called axes, to define a coordinate system, with the intersection of the lines (the origin) arranged to coincide with the 0 on each line and a given point in the plane located by using an ordered pair of numbers, called its coordinates.

Use a pair of perpendicular number lines, called axes, to define a coordinate system, with the intersection of the lines (the origin) arranged to coincide with the 0 on each line and a given point in the plane located by using an ordered pair of numbers, called its coordinates. Understand that the first number indicates how far to travel from the origin in the direction of one axis, and the second number indicates how far to travel in the direction of the second axis, with the convention that the names of the two axes and the coordinates correspond (e.g., x-axis and x-coordinate, y-axis and y-coordinate).

[MA.5.G.A.2 \(Advanced\)](#) Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation.

Unit: Topic 15 - Algebra: Analyze Patterns and Relationships

Unit Description: Algebra: Analyze patterns and Relationships

Unit Essential Questions: How can number patterns be analyzed and graphed?
How can number patterns and graphs be used to solve problems?

Unit Big Ideas: Topic 15 focuses on patterns and relationships in number sequences, tables, and graphs.

Unit Materials: centimeter grid paper (or TT 9)
coordinate grids (TT 20)

Unit Assignments: 15-1 Numerical Patterns
15-2 More Numerical Patterns
15-3 Analyze and Graph Relationships
15-4 Problem Solving: Make Sense and Persevere

Unit Key Terminology & Definitions: corresponding terms
number sequence

STANDARDS: STANDARDS

NATIONAL: [US Common Core State Standards \(2010\)](#)

[MA.5.OA.B.3 \(Advanced\)](#) Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns, and graph the ordered pairs on a coordinate plane.

[MA.5.G.A.2 \(Advanced\)](#) Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation.

[MA.5.G.B.3 \(Advanced\)](#) Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category.

This Curriculum Map Unit has no Topics to display

Unit: Topic 16 - Geometric Measurement: Classify Two-Dimensional Figures

Unit Description: Geometric measurement: Classify two-dimensional figures.

Unit Essential Questions: How can triangles and quadrilaterals be described, classified, and named?

Unit Big Ideas: Topic 16 focuses on understanding that the attributes belonging to a category of two-dimensional shapes also belong to all subcategories of that category.

Unit Materials: ruler
protractor

Unit 16-1 Classify Triangles

Assignments:

- 16-2 Classify Quadrilaterals
- 16-3 Continue to Classify Quadrilaterals
- 16-4 Problem Solving: Construct Arguments

Unit Key Terminology & Definitions:

- equilateral triangle
- isosceles triangle
- scalene triangle
- right triangle
- acute triangle
- obtuse triangle
- trapezoid
- parallelogram
- rectangle
- rhombus
- square

STANDARDS: STANDARDS

NATIONAL: US Common Core State Standards (2010)

[MA.5.G.B.3](#)
(Advanced)

Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category.

[MA.5.G.B.4](#)
(Advanced)

Classify two-dimensional figures in a hierarchy based on properties.

This Curriculum Map Unit has no Topics to display