

Math Curriculum Map Second Grade

	Essential Questions	Content	Skills	Assessment	Resources
Cycle 1	How do numbers relate to each other?	Number Sense	-Works with multiples of 5, 10, and 25 -Represents numbers up to 15 using 10 frames	Individual and Group Conferences Written and Verbal Responses	Math Trailblazers Unit Resource Guides Manipulatives
	How can we use strategies to help us solve computation problems?	Operations/Computation	-Addition and subtraction strategies -Writing addition and subtraction number sentences	Observation Small Group Informal Assessments	Student Guides Activstudio Flipcharts
	How does money relate to problem solving and patterns? How does time relate to our lives?	Money/Time	-Creates and solves problems involving money -Finds the values of pennies, nickels, dimes, and quarters	Activote Assessments Cycle Assessments	Center Activities
	How can we use strategies to solve story problems?	Problem Solving	-Solves problems in more than one way	Observational Assessment Records Pre/Post Assessments	
	How is the collection and interpretation of data important to our every day lives?	Data & Probability	-Collects and organizes data -Making and Interpreting bar graphs		
	How can recognizing patterns help us solve problems?	Patterns	-Identifies patterns in data tables to make predictions and solve problems -Describes patterns in designs -Identifying, describing, and using patterns in the 200 chart -Skip counting by 2s, 5s, and 10s -Identifying even and odd numbers		
		Geometry			
		Estimation/Measurement			
	<p>Key Vocabulary Unit 1: bar graph, data table, least common, most common, prediction, addend, strategy, sum, ten frame Unit 2: column, interval, row, even, odd, horizontal axis, tally mark, vertical axis</p>				

Cycle 2	How do numbers relate to each other?	Number Sense	-Groups and counts objects -Represents numbers using place value chart -Places numbers in intervals -Develops number sense in numbers up to 100 -Finds median	Individual and Group Conferences	Math Trailblazers Unit Resource Guides
	How can we use strategies to help us solve computation problems?	Operations/Computation	-Develops fluency with addition facts -Understands relationship between addition and subtraction	Written and Verbal Responses	Manipulatives
	How does money relate to problem solving and patterns? How does time relate to our lives?	Money/Time	-Solves problems involving money	Observation	Student Guides
	How is the collection and interpretation of data important to our every day lives?	Problem Solving		Small Group Informal Assessments	Activstudio Flipcharts
	How can recognizing patterns help us solve problems?	Data & Probability	-Sorts and classifies a collection of data -Collects and organizes data -Making and Interpreting bar graphs -Determines appropriate scale for a graph -Identifies and maintains fixed variables in a lab setting	Activote Assessments	Center Activities
	How does using estimation help us solve problems more quickly? What is the purpose of measurement?	Patterns	-Uses patterns in data to make predictions	Cycle Assessments	
	Geometry		Observational Assessment Records		
	Estimation/ Measurement	-Estimates the number of objects in a group -Uses nonstandard units of measurement -Estimates length and distances -Uses standard units of measurement	Pre/Post Assessments		
<p>Key Vocabulary</p> <p>Unit 3: characteristics, sort, estimate, interval, least common, most common, prediction, sum, place value</p> <p>Unit 4: arm span, range, variable, rectangle, square rectangle, approximate, cubit, estimate, hand span</p> <p>Unit 5: interval, larger than, smaller than, centimeter, meter, standard unit of measurement, fixed (controlled) variable, median, trial</p>					

Cycle 3	How do numbers relate to each other?	Number Sense	-Grouping and counting a collection of objects by ones, tens, and hundreds -Represents 2 and 3 digit numbers using place value manipulatives	Individual and Group Conferences	Math Trailblazers Unit Resource Guides
	How can we use strategies to help us solve computation problems?	Operations/Computation	-Solves addition and subtraction problems -Writes number sentences	Written and Verbal Responses Observation	Manipuatives Student Guides Activstudio Flipcharts
	How does money relate to problem solving and patterns? How does time relate to our lives?	Money/Time	-Identifies components of clocks -Telling time on analog and digital clocks	Small Group Informal Assessments Activote Assessments	Center Activities
	How can we use strategies to solve story problems?	Problem Solving	-Solves a multiple solution problem	Cycle Assessments Observational Assessment Records	
	How is the collection and interpretation of data important to our every day lives?	Data & Probabillity	-Collecting, organizing, graphing, and analyzing data	Pre/Post Assessments	
	How can recognizing patterns help us solve problems?	Patterns			
	How are shapes represented in our world? What are the differences between two and three dimensional shapes?	Geometry	-Building and recognizing three dimensional shapes using models		
	How does using estimation help us solve problems more quickly? What is the purpose of measurement?	Estimation/ Measurement	-Estimates the number of objects in a group -Explores volume using standard and nonstandard units -Comparing and ordering mass using a pan balance -Uses estimation to determine sums and/or reasonableness of an answer		
<p>Key Vocabulary Unit 6: analog clock, digital clock, hour hand, minute hand tick marks, hundreds, ones, tens, place value, base ten pieces, bit, flat, skinny, volume Unit 7: cube model, same shape, memo, three dimensional drawing, floor plan Unit 8: two-pan balance, mass, gram Unit 9: benchmark, estimation, number sense, reasonable, seminar, counting board, scribe, nameless, regrouping</p>					

Cycle 4	How do numbers relate to each other?	Number Sense	-Understands place value -Divides objects into equal size groups and counts remainders	Individual and Group Conferences	Math Trailblazers Unit Resource Guides
	How can we use strategies to help us solve computation problems?	Operations/Computation	-Develops fluency with subtraction facts -Understands fact families -Subtracts 2 digit numbers -Represents subtraction problems using base ten pieces -Solves addition and subtraction problems using calculators -Represents and solves multiplication and division problems using manipulatives, pictures, and number sentences	Written and Verbal Responses Observation Small Group Informal Assessments Activote Assessments Cycle Assessments Observational Assessment Records Pre/Post Assessments	Manipuatives Student Guides Activstudio Flipcharts Center Activities
	How does money relate to problem solving and patterns? How does time relate to our lives?	Money/Time	-Solves problems involving money		
	How can recognizing patterns help us solve problems?	Problem Solving Data & Probability			
	How does using estimation help us solve problems more quickly? What is the purpose of measurement?	Patterns Geometry Estimation/ Measurement	-Reads and interprets a variety of scales -Reads and fills graduated cylinders -Measures volume -Estimates sums and differences		
<p>Key Vocabulary Unit 10: cubic centimeter, graduated cylinder, milliliter, mph (miles per hour), scale, speedometer, units of measurement, meniscus, volume Unit 11: fact family, related subtraction fact, difference Unit 12: left over, remainder, multiplication sentence, product, row</p>					

Cycle 5	How do numbers relate to each other?	Number Sense	-Represents fractions in various ways -Compares, orders, and partitions shapes into halves, thirds, and fourths -Translates between different representations of fractions	Individual and Group Conferences	Math Trailblazers Unit Resource Guides
	How can we use strategies to help us solve computation problems?	Operations/Computation	-Explores addition of fractions	Written and Verbal Responses	Manipuatives
		Money/Time		Observation	Student Guides
		Problem Solving		Small Group Informal Assessments	Activstudio Flipcharts
		Data & Probability		Activote Assessments	Center Activities
How are shapes represented in our world? What are the differences between two and three dimensional shapes?	Patterns		Cycle Assessments		
	Geometry	-Constructs proportional models of the pattern block shapes -Compares and contrasts properties of pattern block shapes -Sorts, identifies, and describes two dimensional shapes using their properties -Uses slides, flips, and turns to move shapes -Explores line and turn symmetry	Observational Assessment Records		
	Estimation/ Measurement	-Measures length, width, and area using nonstandard and standard units -Recognizes that different shapes can have the same area	Pre/Post Assessments		
	Key Vocabulary Unit 14: fourth, fraction, half, third Unit 15: corners, hexagon, parallel, rectangle, rhombus, right angle, sides, square, trapezoid, triangle, flips, slides, turns, line symmetry, turn symmetry Unit 16: area, square centimeters (sq. cm.), unit, length, width, square unit, symmetry				

Cycle 6	How do numbers relate to each other?	Number Sense	-Represents fractions using number lines -Identifies fractional parts of sets -Reads and writes fractions -Represents fractions using manipulatives	Individual and Group Conferences	Math Trailblazers Unit Resource Guides
	How can we use strategies to help us solve computation problems?	Operations/Computation	-Solves problems involving addition and subtraction	Written and Verbal Responses	Manipuatives
	How can we use strategies to solve story problems?	Money/Time		Observation	Student Guide
	How is the collection and interpretation of data important to our every day lives?	Problem Solving	-Uses geometric concepts to solve problems -Solves problems involving length, volume, time, and money using fractions	Small Group Informal Assessments	Activstudio Flipcharts
		Data & Probability	-Identifies variables for a collection of objects -Identifies values of variables -Sorts and classifies objects into categories -Collects, organizes, graphs, and analyzes data -Makes predictions based on samples -Makes and interprets bar graphs	Activote Assessments	Center Activities
	How are shapes represented in our world? What are the differences between two and three dimensional shapes?	Patterns		Cycle Assessments	
	Geometry	-Explores and identifies three dimensional shapes in the real world -Describes and compares three dimensional shapes using their properties -Classifies and identifies three dimensional shapes using their properties -Relates two dimensional shapes to three dimensional shapes	Observational Assessment Records		
How does using estimation help us solve problems more quickly? What is the purpose of measurement?	Estimation/ Measurement	-Measures length using fractions -Measures area by counting square units	Pre/Post Assessments		
<p>Key Vocabulary</p> <p>Unit 17: cone, cube, curved, cylinder, face (side), flat, geometric solid, rectangular prism, rectangular pyramid, sphere, three-dimensional (3-D), triangular prism, triangular pyramid, two-dimensional (2-D), curved surface, edges, flat surface, vertices (corners), net, polyhedron, skeleton of a three-dimensional shape, hemisphere</p> <p>Unit 20: cup (measure), half past, inch, perimeter, quarter past, quarter to, volume</p> <p>Unit 13: sample, value, variable, territory, troop, sample</p>					

