

Fourth grade math students at St. Patrick’s will develop into individuals with the ability to solve problems and record data, using mathematical language, in an organized way. Students will increase proficiency in understanding numbers and performing operations with them. Students will compute fluently and make reasonable estimates. They will increase their understanding of number patterns, relations and functions. In fourth grade, students will develop an understanding of measurable attributes of objects and the units, systems, and processes of measurement. Students will analyze characteristics and properties of two and three-dimensional geometric shapes. Students will improve their speed and accuracy when completing basic math facts. By the end of fourth grade, students will be able to complete 50 mixed (addition/subtraction/multiplication/division) basic facts in 2.5 minutes. They will be able to reduce 40 fractions to lowest terms (numerator smaller than denominator) in 2.5 minutes.

	<u>Standards/Goals</u>	<u>Instructional Tools</u>	<u>Assessment Tools</u>
4.1 Problem Solving	<ul style="list-style-type: none"> a. Solve problems that arise in math and in other content areas utilizing a variety of strategies. b. Monitor and reflect on solutions, including interpreting remainders. c. Use mathematical language to show connections among mathematical ideas and record and communicate these in an organized way. 	<ul style="list-style-type: none"> Text Manipulatives Word wall Reference/Trade books 	<ul style="list-style-type: none"> Tests Slate assessments Homework Teacher observation
4.2 Numbers and Operations	<ul style="list-style-type: none"> a. Understand numbers (ways to represent numbers, relationships among numbers and number systems) b. Identify place-value and read, write and compare whole numbers up to 9 digits, hundred millions c. Identify, order, compare and round whole numbers and money/decimals (to thousandths) d. Compare and order fractions e. Write fractions and mixed numbers as decimals and vice versa f. Use mental math to multiply multiples of 10 g. Know basic addition, subtraction facts (through 20), multiplication and division facts (through 12s) (fact families) 	<ul style="list-style-type: none"> Text Place value chart Word wall Manipulatives Math games Multiplication/division flash cards Reference/Trade books Timed basic facts tests Slates Online resources 	<ul style="list-style-type: none"> Quizzes/Tests Slate assessments Timed facts tests Math facts expectations guide portfolio sheet Homework Teacher observation

	<u>Standards/Goals</u>	<u>Instructional Tools</u>	<u>Assessment Tools</u>	
4.2 Numbers and Operations (continued)	h. Estimate, add and subtract multi-digit numbers with regrouping (including decimals and money)	Text Place value chart Word wall	Quizzes/Tests Slate assessments Timed facts tests	
	i. Use addition properties and subtraction rules	Manipulatives	Math facts expectations guide	
	j. Estimate products	Math games	portfolio sheet	
	k. Use multiplication properties and division rules	Multiplication/division flash cards Reference/Trade books	Homework Teacher observation	
	l. Multiply 2, 3, 4, & 5 digit numbers by 1 digit numbers	Timed basic facts tests Slates		
	m. Multiply 2, 3, 4, & 5 digit numbers by 2 digit numbers	Online resources		
	n. Estimate and divide 2, 3, 4, & 5 digit dividends by 1 digit divisors			
	o. Estimate and divide 2, 3, 4, & 5 digit dividends by 2 digit divisors			
	p. Find factors and multiples of a number; identify prime and composite numbers			
	q. Solve addition/subtraction and multiplication/division multi-digit number stories			
	r. Identify equivalent fractions; reduce fractions both numerator less than and greater than denominator			
	s. Add and subtract fractions and mixed numbers with common and uncommon denominators			
	4.3 Measurement	a. Know units of measure for length, weight and capacity (standard and metric)	Tape measures Rulers	Quizzes/Tests Slate assessments
		b. Read, write and compare temperature in degrees Fahrenheit and degrees Celsius	Protractors Geometric templates	Homework Teacher observation
		c. Measure line segments to nearest $\frac{1}{4}$ inch or nearest millimeter.	Clocks Coins and bills	
d. Tell and show times to nearest minute.		Reference/Trade Books		
e. Determine elapsed time using clock or calendar				
f. Count combinations of bills and coins and make change; write totals in dollars and cents notation				
g. Measure and draw angles with $\frac{1}{2}$ circle protractor to within 3 degrees				

	<u>Standards/Goals</u>	<u>Instructional Tools</u>	<u>Assessment Tools</u>
4.4 Data Analysis and Probability	<ul style="list-style-type: none"> a. Collect and organize data for use in predicting outcomes. b. Understand the language of probability and use fractions to record probabilities and make predictions c. Find the minimum, maximum, range, mode, median, and mean (average) for a set of data (list of numbers) d. Make, read and interpret line plots, stem-and-leaf plots, bar graphs, circle graphs and line graphs 	<ul style="list-style-type: none"> Text Class data Graph paper Excel Reference /Trade Books 	<ul style="list-style-type: none"> Quizzes/Tests Slate assessments Homework Teacher observation Graphs
4.5 Geometry	<ul style="list-style-type: none"> a. Identify right angles. b. Identify, draw and name lines, segments and rays c. Draw parallel and intersecting lines, segments and rays. d. Identify congruent and symmetrical figures with line and rotational symmetry e. Identify, perform and predict the results of rotations, reflections and translations f. Identify, classify and describe plane and solid figures g. Estimate and find perimeter, area and volume 	<ul style="list-style-type: none"> Text Geometric shapes Geometric template Reference/Trade Books Slates Rulers 	<ul style="list-style-type: none"> Quizzes/Tests Slate assessments Homework Teacher observation
4.6 Algebra	<ul style="list-style-type: none"> a. Write expressions and equations, evaluate expressions and functions and solve equations; use order of operations b. Use addition properties and subtraction rules c. Use multiplication properties and division rules 	<ul style="list-style-type: none"> Text Reference/Trade Books Slates 	<ul style="list-style-type: none"> Quizzes/Tests Slate assessments Homework Teacher Observation