Fourth Grade Mathematics Content Standards and Objectives					
Standard 1:	Number and Operations				
M.S.4.1	 Through communication, representation, reasoning and proof, problem solving, and making connections within and beyond the field of mathematics, students will demonstrate understanding of numbers, ways of representing numbers, and relationships among numbers and number systems, demonstrate meanings of operations and how they relate to one another, and compute fluently and make reasonable estimates. 				
Objectives	Students will	PLT Activity and Page			
M.O.4.1.1	read, write, order, and compare whole numbers to the millions place and decimals to thousandths place using a variety of strategies (e.g. symbols, manipulatives, number line, pictorial representations).				
M.O.4.1.2	demonstrate an understanding of the place value of each digit utilizing standard and expanded form through 1,000,000 with multiples of 10 [(5 X $10,000$) + (3 X $1,000$) + (4 X 10) + 2].				
M.O.4.1.3	estimate solutions to problems including rounding, benchmarks, compatible numbers and evaluate the reasonableness of the solution, justify results.				
M.O.4.1.4	 using concrete models, benchmark fractions, number line compare and order fractions with like and unlike denominators add and subtract fractions with like and unlike denominators model equivalent fractions model addition and subtraction of mixed numbers with and without regrouping. 				
M.O.4.1.5	analyze the relationship of fractions to decimals using concrete objects and pictorial representations.				
M.O.4.1.6	round decimals to the nearest whole, 10th, or 100th place.				
M.O.4.1.7	add and subtract whole numbers(up to five –digit number) and decimals to the 1000th place, multiply (up to three digits by two-digits, and divide(up to a three digit number with a one and two-digit number).				
M.O.4.1.8	solve multi-digit whole number multiplication problems using a variety of strategies, including the standard algorithm, justify methods used.				
M.O.4.1.9	quick recall of basic multiplication facts and corresponding division facts.				
M.O.4.1.10	create grade-level real-world appropriate story problems using multiple strategies including simple ratios, justify the reason for choosing a particular strategy and present results.	#70 Soil Stories #73 Waste Watchers	p.297 p.314		

Standard 2:	Algebra		
M.S.4.2	 Through communication, representation, reasoning and proof, problem solving, and making connections within and beyond the field of mathematics, students will demonstrate understanding of patterns, relations and functions, represent and analyze mathematical situations and structures using algebraic symbols, use mathematical models to represent and understand quantitative relationships, and analyze change in various contexts. 		
Objectives	Students will	PLT Activity and Page	
M.O.4.2.1	determine the rule and explain how change in one variable relates to the change in the second variable, given an input/output model using two operations.		
M.O.4.2.2	recognize and describe relationships in which quantities change proportionally.		
M.O.4.2.3	represent the idea of a variable as an unknown quantity using a letter, write an expression using a variable to describe a real-world situation.		
M.O.4.2.4	solve real-world problems involving order of operations including grouping symbols and the four operations,		
Standard 3:			
M.S.4.3	 Through communication, representation, reasoning and proof, problem solving, and making connections within and beyond the field of mathematics, students will analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships, specify locations and describe spatial relationships using coordinate geometry and other representational systems, apply transformations and use symmetry to analyze mathematical situations, and solve problems using visualization, spatial reasoning, and geometric modeling. 		
Objectives	Students will	PLT Activity and Page	
M.O.4.3.1	identify, classify, compare and contrast two-dimensional (including quadrilateral shapes) and three-dimensional geometric figures according to attributes.		
M.O.4.3.2	recognize and describe three-dimensional objects from different perspectives.		
M.O.4.3.3	 identify, draw, label, compare and contrast, and classify lines (intersecting, parallel, and perpendicular) angles (acute, right, obtuse, and straight) 		
M.O.4.3.4	identify and create a two-dimensional design with one line of symmetry.		

M.O.4.3.5	graph/plot ordered pairs on a first-quadrant grid and use the coordinate system to specify location and describe path.		
M.O.4.3.6	ntify parts of a circle: center point, diameter, and radius.		
M.O.4.3.7	te and justify appropriate use of transformations (translations, rotations, flips) to solve geometric problems including congruency and tiling (tessellations).		
Standard 4:	Measurement		
M.S.4.4	 Through communication, representation, reasoning and proof, problem solving, and making connections within and beyond the field of mathematics, students will demonstrate understanding of measurable attributes of objects and the unites, systems, and processes of measurement, and apply appropriate techniques, tools and formulas to determine measurements. 		
Objectives	Students will	PLT Activity and Page	
M.O.4.4.1 M.O.4.4.2 M.O.4.4.3 M.O.4.4.4	 select appropriate measuring tools, apply and convert standard units within a system to estimate, measure, compare and order real-world measurements including: lengths using customary (to the nearest one-fourth inch) and metric units, weight, capacity, temperature, and justify and present results. Quantify area by finding the total number of same sized units that cover a shape, develop a rule and justify the formula for the area of a rectangle using the area model representing multiplication. read time to the minute, calculate elapsed time in hours/minutes within a 24-hour period. given real-world situations, count coins and bills and determine correct change. 	#4 Sounds Aroundp. 26#65 Bursting Budsp.279#66 Germinating Giantsp.284#67 How Big is Your Tree?p.288#77 Trees in Troublep.332	
Standard 5:	Data Analysis and Probability		
M.S.4.5	 Through communication, representation, reasoning and proof, problem solving, and making connections within and beyond the field of mathematics, students will: formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them, select and use appropriate statistical methods to analyze data, develop and evaluate inferences and predictions that are based on models, and apply and demonstrate an understanding of basic concepts of probability. 		
Objectives	Students will	PLT Activity and Page	

M.O.4.5.1	read and interpret information represented on a circle graph.	#6 Picture This!	p. 34
M.O.4.5.2	pose a grade-appropriate question that can be addressed with data, collect, organize, display, and analyze data in order to answer the question.	 #6 Picture This! #16 Pass The Plants, Please #21 Adopt A Tree #22 Trees as Habitats #25 Birds and Worms #27 Every Tree for Itself #28 Air Plants #36 Pollution Search #38 Every Drop Counts #41 How Plants Grow #48 Field, Forest, and Stream #53 On the Move #80 Nothing Succeeds Like Succession 	p. 34 p. 77 p. 97 p.102 p.111 p.117 p.120 p.153 p.163 p.179 p.203 p.232 p.345
M.O.4.5.3	design and conduct a simple probability experiment using concrete objects, examine and list all possible combinations using a tree diagram, represent the outcomes as a ratio and present the results.		
M.O.4.5.4	solve real world problems using mean, median and mode.		