

Third Grade Mathematics Content Standards and Objectives

Standard 1:	Number and Operations	
M.S.3.1	Through communication, representation, reasoning and proof, problem solving, and making connections within and beyond the field of mathematics, students will <ul style="list-style-type: none"> 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.3.1.1	read, write, order, and compare numbers to 10,000 using a variety of strategies (e.g., symbols, manipulatives, number line).	
M.O.3.1.2	read, write, order, and compare decimals to hundredths, with manipulatives.	
M.O.3.1.3	identify place value of each digit utilizing standard and expanded form to 10,000.	
M.O.3.1.4	apply estimation skills (rounding, benchmarks, compatible numbers) to solve and evaluate reasonableness of an answer.	
M.O.3.1.5	demonstrate an understanding of fractions as part of a whole/one and as part of a set/group using models and pictorial representations.	
M.O.3.1.6	create concrete models and pictorial representations to <ul style="list-style-type: none"> compare and order fractions with like and unlike denominators, add and subtract fractions with like denominators, and verify results. 	
M.O.3.1.7	use concrete models and pictorial representations to demonstrate an understanding of equivalent fractions, proper and improper fractions, and mixed numbers.	
M.O.3.1.8	add and subtract 2- and 3-digit whole numbers and money with and without regrouping.	
M.O.3.1.9	demonstrate and model multiplication (repeated addition, arrays) and division (repeated subtraction, partitioning).	
M.O.3.1.10	use and explain the operations of multiplication and division including the properties (e.g., identity element of multiplication, commutative property, property of zero, associative property, inverse operations).	
M.O.3.1.11	recall basic multiplication facts and the corresponding division facts.	
M.O.3.1.12	model the distributive property in multiplication of 2- and 3-digit numbers by a 1-digit number.	
M.O.3.1.13	use models to demonstrate division of 2- and 3-digit numbers by a 1-digit number.	

M.O.3.1.14	create grade-appropriate real-world problems involving any of the four operations using multiple strategies, explain the reasoning used, and justify the procedures selected when presenting solutions.	
Standard 2:	Algebra	
M.S.3.2	Through communication, representation, reasoning and proof, problem solving, and making connections within and beyond the field of mathematics, students will <ul style="list-style-type: none"> • 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.3.2.1	analyze and extend geometric and numeric patterns.	
M.O.3.2.2	create an input/output model using addition, subtraction, multiplication or division.	
M.O.3.2.3	analyze a given pattern and write the rule.	
M.O.3.2.4	write equivalent numerical expressions and justify equivalency.	
M.O.3.2.5	use symbol and letter variables to represent an unknown quantity and determine the value of the variable.	
Standard 3:	Geometry	
M.S.3.3	Through communication, representation, reasoning and proof, problem solving, and making connections within and beyond the field of mathematics, students will <ul style="list-style-type: none"> • 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.3.3.1	identify and create new polygons by transforming, combining and decomposing polygons.	
M.O.3.3.2	identify, describe, and classify the following geometric solids according to the number of faces, edges, and vertices: cube rectangular solid cylinder cone pyramid	#1 The Shape of Things p.17

M.O.3.3.3	construct and identify a solid figure from a plane drawing.	
M.O.3.3.4	identify, describe and draw lines of symmetry in two-dimensional shapes.	
M.O.3.3.5	model, describe, and draw <ul style="list-style-type: none"> • lines • rays • angles including right, obtuse, and acute angles. 	
M.O.3.3.6	draw an example of a flip, slide and turn (reflection, translation, and rotation) given a model.	
M.O.3.3.7	name the location of a point on a first-quadrant grid, represent using ordered pairs.	
Standard 4:	Measurement	
M.S.3.4	Through communication, representation, reasoning and proof, problem solving, and making connections within and beyond the field of mathematics, students will <ul style="list-style-type: none"> • demonstrate understanding of measurable attributes of objects and the units, systems, and processes of measurement, and • apply appropriate techniques, tools and formulas to determine measurements. 	
Objectives	Students will	PLT Activity and Page
M.O.3.4.1	Within a project based investigation, identify a real life situation, consider a number of variables and use appropriate measurement tools, overtime, make a hypothesis as to the change overtime; with more precision than whole units; <ul style="list-style-type: none"> • length in centimeters and inches, temperature in Celsius and Fahrenheit weight/mass in pounds and kilograms, and design and implement a method to collect, organize, and analyze data; <ul style="list-style-type: none"> • analyze results to make a conclusion; • evaluate the validity of the hypothesis upon collected data; • design a mode of presentation (with and without technology) 	#4 Sounds Around p. 26 #41 How Plants Grow p.179 #48 Field, Forest, and Stream p.203 #67 How Big is Your Tree? p.288 #73 Waste Watchers p.314
M.O.3.4.2	estimate and find the perimeter and area of familiar geometric shapes, using manipulatives, grids, or appropriate measuring tools.	
M.O.3.4.3	determine the formula the area of a rectangle and explain reasoning through modeling.	
M.O.3.4.4	read time to 5-minute intervals (am and pm) using analog and digital clocks, compute elapsed time to the quarter-hour using a clock.	
M.O.3.4.5	identify, count and organize coins and bills to display a variety of price values from real-life examples with a total value of \$100 or less and model making change using manipulatives.	
Standard 5:	Data Analysis and Probability	

M.S.3.5	Through communication, representation, reasoning and proof, problem solving, and making connections within and beyond the field of mathematics, students will <ul style="list-style-type: none"> • 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.3.5.1	collect and organize grade-appropriate real-world data from observation, surveys, and experiments, and identify and construct appropriate ways to display data.	#6 Picture This! p. 34 #16 Pass The Plants, Please p. 77 #25 Birds and Worms p.111
M.O.3.5.2	develop and conduct grade-appropriate experiments using concrete objects (e.g. counters, number cubes, spinners) to determine the likeliness of events and list all outcomes.	
M.O.3.5.3	analyze real-world data represented on a graph using grade-appropriate questions.	