

First Grade Math

Power Standard: Number and Operations - The student will estimate, identify, write, and model addition and subtraction of whole numbers without regrouping, and identify, and demonstrate benchmark fractions as part of a whole. They will read, write, order, compare, estimate for reasonableness, and create problem situations using a variety of strategies and properties with whole numbers in hundreds, justifying their solutions.		
M.O.1.1.8	estimate the number of objects in a group of 100 or less and count to evaluate reasonableness of estimate.	
	<ul style="list-style-type: none"> estimate the number of objects in a group of 100 or less 	Reasoning
	<ul style="list-style-type: none"> count to evaluate reasonableness of estimate. 	Reasoning
M.O.1.1.9	identify, name, and explain why a given part is a half, third or fourth of a whole or part of a group, using concrete models.	
	<ul style="list-style-type: none"> Identify a given part is a half of a whole or part of a group, using concrete models 	Level 1
	<ul style="list-style-type: none"> Name a given part is a half of a whole or part of a group, using concrete models 	Level 1
	<ul style="list-style-type: none"> Explain a given part is a half of a whole or part of a group, using concrete models 	Level 2
	<ul style="list-style-type: none"> Identify a given part is a third of a whole or part of a group, using concrete models 	Level 1
	<ul style="list-style-type: none"> Name a given part is a third of a whole or part of a group, using concrete models 	Level 1
	<ul style="list-style-type: none"> Explain a given part is a third of a whole or part of a group, using concrete models 	Level 2
	<ul style="list-style-type: none"> Identify a given part is a fourth of a whole or part of a group, using concrete models 	Level 1
	<ul style="list-style-type: none"> Name a given part is a fourth of a whole or part of a group, using concrete models 	Level 1
	<ul style="list-style-type: none"> Explain a given part is a fourth of a whole or part of a group, using concrete models 	Level 2
M.O.1.1.10	use concrete objects to model the addition of two or three addends and subtraction of whole numbers related to sums less than 18 and write the corresponding number sentence.	
	<ul style="list-style-type: none"> use concrete objects to model the addition of two addends 	Performance
	<ul style="list-style-type: none"> use concrete objects to model the addition of three addends 	Performance
	<ul style="list-style-type: none"> use concrete objects to model subtraction of whole numbers related to sums less than 18 	Performance
	<ul style="list-style-type: none"> write the corresponding number sentence 	Product
M.O.1.1.11	model operations, addition and subtraction, and the relationship between addition and subtraction (e.g., identity element of addition,	

	commutative property, fact families, inverse operations) using concrete objects.	
	<ul style="list-style-type: none"> Identify element of addition using concrete objects 	Level 2
	<ul style="list-style-type: none"> Identify commutative property using concrete objects 	Level 2
	<ul style="list-style-type: none"> Identify fact families using concrete objects 	Level 2
	<ul style="list-style-type: none"> Identify inverse operations using concrete objects 	Level 2
M.O.1.1.12	quick recall of basic addition facts with sums to 10 and corresponding subtraction facts.	
	<ul style="list-style-type: none"> recall of basic addition facts with sums to 10 	Recall
	<ul style="list-style-type: none"> Recall basic subtraction facts with differences up to 10 	Recall
M.O.1.1.13	model and solve 2-digit addition and subtraction without regrouping.	
	<ul style="list-style-type: none"> Model 2 digit addition without regrouping 	Level 2
	<ul style="list-style-type: none"> Model 2 digit subtraction without regrouping 	Level 2
	<ul style="list-style-type: none"> Solve 2-digit addition without regrouping 	Level 3
	<ul style="list-style-type: none"> Solve 2-digit subtraction without regrouping 	Level 3
M.O.1.1.14	create grade-appropriate picture and story problems using a variety of strategies (with and without technology), present solutions and justify results.	
	<ul style="list-style-type: none"> create grade-appropriate picture and story problems using a variety of strategies with technology 	Level 3
	<ul style="list-style-type: none"> create grade-appropriate picture and story problems using a variety of strategies without technology 	Level 3
	<ul style="list-style-type: none"> Present solutions to grade appropriate picture/story problems 	Level 4
	<ul style="list-style-type: none"> Justify results to grade appropriate picture/story problems 	Level 4
Power Standard: Number and Operations - The students will count, read, write, order, round, and identify number values in a variety of ways. They will group numbers using place value models.		
M.O.1.1.1	count forward to 100 and backward from 20 with and without manipulatives.	
	<ul style="list-style-type: none"> Count forward to 100 with manipulatives 	Knowledge
	<ul style="list-style-type: none"> Count forward to 100 without manipulatives 	Knowledge
	<ul style="list-style-type: none"> Count backward from 20 with manipulatives 	Knowledge
	<ul style="list-style-type: none"> Count backward from 20 without manipulatives 	Knowledge
M.O.1.1.2	read, write, order, and compare numbers to 100 using multiple strategies (e.g. manipulatives, number line, symbols).	
	<ul style="list-style-type: none"> Read numbers to 100 using multiple strategies 	Knowledge
	<ul style="list-style-type: none"> Write numbers to 100 using multiple strategies 	Product

	<ul style="list-style-type: none"> order numbers to 100 using multiple strategies 	Reasoning
	<ul style="list-style-type: none"> compare numbers to 100 using multiple strategies 	Reasoning
M.O.1.1.3	identify odd and even numbers to 20 and determine if a set of objects has an odd or even number of elements.	
	<ul style="list-style-type: none"> Identify odd numbers to 20 	Recall
	<ul style="list-style-type: none"> Identify even numbers to 20 	Recall
	<ul style="list-style-type: none"> Determine if a set of objects has an odd number of elements 	Reasoning
	<ul style="list-style-type: none"> Determine if a set of objects has an even number of elements 	Reasoning
M.O.1.1.4	group and count manipulatives by ones, fives, and tens to 100.	
	<ul style="list-style-type: none"> group and count manipulatives by fives to 100. 	Performance
	<ul style="list-style-type: none"> group and count manipulatives by tens to 100. 	Performance
	<ul style="list-style-type: none"> group and count manipulatives by ones to 100. 	Performance
M.O.1.1.5	model and identify place value of each digit utilizing standard and expanded form to 100.	
	<ul style="list-style-type: none"> Model place value of each digit utilizing standard form to 100. 	Level 3
	<ul style="list-style-type: none"> Model place value of each digit utilizing expanded form to 100 	Level 3
	<ul style="list-style-type: none"> Identify place value of each digit utilizing standard form to 100 	Level 1
	<ul style="list-style-type: none"> Identify place value of each digit utilizing expanded form to 100 	Level 1
M.O.1.1.6	round any two-digit number to the nearest 10.	Performance
M.O.1.1.7	use ordinal numbers 1 st - 20 th to identify position in a sequence .	Knowledge
Power Standard: Algebra - The student will sort, classify, and analyze numerical and non-numerical patterns using a variety of strategies including input/output models, Venn Diagrams, AB forms, and T-Charts representing a rule. The student will write a rule and use it to create concrete models that are grade-appropriate with equivalencies.		
M.O.1.1.1	count forward to 100 and backward from 20 with and without manipulatives.	
	<ul style="list-style-type: none"> Count forward to 100 with manipulatives 	Knowledge
	<ul style="list-style-type: none"> Count forward to 100 without manipulatives 	Knowledge
	<ul style="list-style-type: none"> Count backward from 20 with manipulatives 	Knowledge
	<ul style="list-style-type: none"> Count backward from 20 without manipulatives 	Knowledge
M.O.1.1.2	read, write, order, and compare numbers to 100 using multiple strategies (e.g. manipulatives, number line, symbols).	
	<ul style="list-style-type: none"> Read numbers to 100 using multiple strategies 	Knowledge
	<ul style="list-style-type: none"> Write numbers to 100 using multiple strategies 	Product
	<ul style="list-style-type: none"> order numbers to 100 using multiple strategies 	Reasoning
	<ul style="list-style-type: none"> compare numbers to 100 using multiple strategies 	Reasoning

M.O.1.1.3	identify odd and even numbers to 20 and determine if a set of objects has an odd or even number of elements.	
	<ul style="list-style-type: none"> Identify odd numbers to 20 	Recall
	<ul style="list-style-type: none"> Identify even numbers to 20 	Recall
	<ul style="list-style-type: none"> Determine if a set of objects has an odd number of elements 	Reasoning
	<ul style="list-style-type: none"> Determine if a set of objects has an even number of elements 	Reasoning
M.O.1.1.4	group and count manipulatives by ones, fives, and tens to 100.	
	<ul style="list-style-type: none"> group and count manipulatives by fives to 100. 	Performance
	<ul style="list-style-type: none"> group and count manipulatives by tens to 100. 	Performance
	<ul style="list-style-type: none"> group and count manipulatives by ones to 100. 	Performance
M.O.1.1.5	model and identify place value of each digit utilizing standard and expanded form to 100.	
	<ul style="list-style-type: none"> Model place value of each digit utilizing standard form to 100. 	Level 3
	<ul style="list-style-type: none"> Model place value of each digit utilizing expanded form to 100 	Level 3
	<ul style="list-style-type: none"> Identify place value of each digit utilizing standard form to 100 	Level 1
	<ul style="list-style-type: none"> Identify place value of each digit utilizing expanded form to 100 	Level 1
<p>Power Standard: Geometry - Student will use physical materials to construct, describe, and classify by attributes two-dimensional and three-dimensional solid geometric figures in the real world and predict the result of combining and decomposing these figures. The student will be able to model, draw, and identify open and closed figures and congruent plane shapes. The student s will create and describe symmetrical designs and be able to describe spatial relationships. They will be able to plot and locate points on a first-quadrant grid.</p>		
M.O.1.3.1	draw, label, and sort <ul style="list-style-type: none"> circle, rectangles including squares, triangles according to sides and vertices. 	
	<ul style="list-style-type: none"> Draw a circle 	Level 4
	<ul style="list-style-type: none"> Label a circle 	Level 1
	<ul style="list-style-type: none"> Sort circles 	Level 3
	<ul style="list-style-type: none"> Draw rectangles including squares 	Level 4
	<ul style="list-style-type: none"> Label rectangles including squares 	Level 1
	<ul style="list-style-type: none"> Sort rectangles including squares 	Level 3
	<ul style="list-style-type: none"> Draw triangles according to sides and vertices 	Level 4
	<ul style="list-style-type: none"> Label triangles according to sides and vertices 	Level 1
	<ul style="list-style-type: none"> Sort triangles according to sides and vertices 	Level 3
M.O.1.3.2	use physical materials to construct, identify, and classify three-	

	dimensional figures: <ul style="list-style-type: none"> • cube • cone • sphere • rectangular solid • pyramid • cylinder 	
	Use physical materials to construct: <ul style="list-style-type: none"> • cube • cone • sphere • rectangular solid • pyramid • cylinder 	Product
	Use physical materials to identify: <ul style="list-style-type: none"> • cube • cone • sphere • rectangular solid • pyramid • cylinder 	Recall
	Use physical materials to classify: <ul style="list-style-type: none"> • cube • cone • sphere • rectangular solid • pyramid • cylinder 	Reasoning
M.O.1.3.3	recognize three-dimensional shapes in the environment.	Recall
M.O.1.3.4	draw and identify	
	<ul style="list-style-type: none"> • open and closed figures • congruent plane shapes 	
	• Draw open and closed figures	Level 3
	• Draw congruent plane shapes	Level 3
	• Identify open and closed figures	Level 3
	• Identify congruent plane shapes	Level 3
M.O.1.3.5	create and describe simple symmetrical designs	
	• Create simple symmetrical designs	Level 3
	• describe simple symmetrical designs	Level 2
M.O.1.3.6	describe spatial relationships: over/under, left/right.	
	• Describe spatial relationships over	Reasoning
	• Describe spatial relationships under	Reasoning
	• Describe spatial relationships left	Reasoning

	<ul style="list-style-type: none"> Describe spatial relationships right 	Reasoning
M.O.1.3.7	find and name locations on a first-quadrant grid.	
	<ul style="list-style-type: none"> Find locations on a first-quadrant grid. 	Level 1
	<ul style="list-style-type: none"> name locations on a first-quadrant grid. 	Level 1
M.O.1.3.8	predict the result of combining or decomposing two or more two-dimensional/three-dimensional shapes.	
	<ul style="list-style-type: none"> predict the result of combining two or more two-dimensional shapes. 	Level 2
	<ul style="list-style-type: none"> predict the result of combining two or more three-dimensional shapes. 	Level 2
	<ul style="list-style-type: none"> predict the result of decomposing two or more two-dimensional shapes. 	Level 2
	<ul style="list-style-type: none"> predict the result of decomposing two or more three-dimensional shapes. 	Level 2
Power Standard: Measurement - The student will estimate, measure, compare, and order units to determine length. They will also select appropriate tools to measure and compare length, height, weight, temperature, and volume and justify selections of units and tools use.		
M.O.1.4.1	estimate, measure, compare and order using customary, metric, and nonstandard units to determine length to nearer whole unit.	
	<ul style="list-style-type: none"> Estimate using customary nonstandard units to determine length to the nearest whole unit 	Level 2
	<ul style="list-style-type: none"> Measure using customary and nonstandard units 	Level 3
	<ul style="list-style-type: none"> Compare using customary nonstandard units to determine length to the nearest whole unit 	Level 2
	<ul style="list-style-type: none"> Order using customary nonstandard units to determine length to the nearest whole unit 	Level 3
M.O.1.4.2	select appropriate units and tools to measure and compare two objects or events according to one or more of the following attributes: length height weight temperature volume justify selection of units and tools used to measure the attributes and present results.	
	<ul style="list-style-type: none"> select appropriate units and tools to measure and compare length of two objects or events 	Knowledge
	<ul style="list-style-type: none"> select appropriate units and tools to measure and compare height of two objects or events 	Knowledge
	<ul style="list-style-type: none"> select appropriate units and tools to measure and compare the weight of two objects or events 	Knowledge

	<ul style="list-style-type: none"> select appropriate units and tools to measure and compare the temperature of two objects or events 	Knowledge
	<ul style="list-style-type: none"> select appropriate units and tools to measure and compare the volume of two objects or events 	Knowledge
	<ul style="list-style-type: none"> Justify selection of units used to measure 	Reasoning
	<ul style="list-style-type: none"> Justify selection of tools used to measure 	Reasoning
	<ul style="list-style-type: none"> Present results 	Performance
<p>Power Standard: Measurement - The students will identify, explain, and read time to half hour, dates, and sequence of days, weeks and months of the calendar. The students will be able to identify, count trade and organize money and communicate their solutions to problems in real world situations with totals of 100 cents or less.</p>		
M.O.1.4.3	use calendar to identify date, sequence of days of the week, and months of the year.	
	<ul style="list-style-type: none"> Use calendar to identify date 	Reasoning
	<ul style="list-style-type: none"> Use calendar to identify sequence of days of the week 	Reasoning
	<ul style="list-style-type: none"> Use calendar to identify months of the year 	Reasoning
M.O.1.4.4	explain time concept in context of personal experience.	Performance
M.O.1.4.5	read time to the half hour using an analog and digital clock.	
	<ul style="list-style-type: none"> read time to the half hour using an analog clock. 	Performance
	<ul style="list-style-type: none"> read time to the half hour using a digital clock. 	Performance
M.O.1.4.6	<p>identify, count, trade and organize the following coins and bill to display a variety of price values from real-life examples with a total value of 100 cents or less.</p> <ul style="list-style-type: none"> penny nickel dime quarter dollar bill 	
	<ul style="list-style-type: none"> Identify penny 	Knowledge
	<ul style="list-style-type: none"> Identify nickel 	Knowledge
	<ul style="list-style-type: none"> Identify dime 	Knowledge
	<ul style="list-style-type: none"> Identify quarter 	Knowledge
	<ul style="list-style-type: none"> Identify dollar bill 	Knowledge
	<ul style="list-style-type: none"> Count pennies with a total value of 100 cents 	Level 2
	<ul style="list-style-type: none"> Count nickels with a total value of 100 cents 	Level 2
	<ul style="list-style-type: none"> Count dime with a total value of 100 cents 	Level 2
	<ul style="list-style-type: none"> Count quarters with a total value of 100 cents 	Level 2
	<ul style="list-style-type: none"> Trade pennies to display a nickel 	Level 2

	<ul style="list-style-type: none"> Trade pennies to display a dime 	Level 2
	<ul style="list-style-type: none"> Trade pennies to display a quarter 	Level 2
	<ul style="list-style-type: none"> Trade pennies to display a dollar bill 	Level 2
	<ul style="list-style-type: none"> Trade nickels to display a dime 	Level 2
	<ul style="list-style-type: none"> Trade nickels to display a quarter 	Level 2
	<ul style="list-style-type: none"> Trade nickels to display a dollar bill 	Level 2
	<ul style="list-style-type: none"> Trade dimes to display a dollar bill 	Level 2
	<ul style="list-style-type: none"> Trade quarters to display a dollar bill 	Level 2
	<ul style="list-style-type: none"> Organize mixed coins to count up to a total value of a dollar 	Level 3
	<ul style="list-style-type: none"> Given real-life examples students will display a variety of price values using a penny, nickel, dime, quarter, and dollar bill with a total of not more than 100 cents 	Level 3
Power Standard: Data Analysis and Probability - Students will conduct experiments to collect, sort, organize, and display data in a bar or pictorial graph and use tally charts or tables to draw conclusions and predict events.		
M.O.1.5.1	identify a real life situation to gather data over time; make a hypothesis as to the outcome; design and implement a method to collect, organize, and analyze the results to make a conclusion; evaluate the validity of the hypothesis based upon collected data; design a mode of presentation using a pictograph and a bar graph (with and without technology).	
	<ul style="list-style-type: none"> identify a real life situation to gather data over time 	Knowledge
	<ul style="list-style-type: none"> make a hypothesis as to the outcome 	Reasoning
	<ul style="list-style-type: none"> Design a method to collect data 	Performance
	<ul style="list-style-type: none"> Design a method to organize data 	Performance
	<ul style="list-style-type: none"> Design a method to analyze data 	Performance
	<ul style="list-style-type: none"> Implement a method to collect data 	Performance
	<ul style="list-style-type: none"> Implement a method to organize data 	Performance
	<ul style="list-style-type: none"> Implement a method to analyze data 	Performance
	<ul style="list-style-type: none"> Make a conclusion from data 	Performance
	<ul style="list-style-type: none"> evaluate the validity of the hypothesis based upon collected data 	Product
	<ul style="list-style-type: none"> design a mode of presentation using a pictograph with technology 	Product
	<ul style="list-style-type: none"> design a mode of presentation using a pictograph without technology 	Product
	<ul style="list-style-type: none"> design a mode of presentation using a bar graph with technology 	Product
	<ul style="list-style-type: none"> design a mode of presentation using a bar graph without technology 	Product
M.O.1.5.2	conduct simple experiments, record data on a tally chart or table and use the data to predict which of the events is more likely or less likely to	

	occur if the experiment is repeated.	
	<ul style="list-style-type: none"> conduct simple experiments 	Knowledge
	<ul style="list-style-type: none"> record data on a tally chart or table 	Knowledge
	<ul style="list-style-type: none"> use the data to predict which of the events is more likely or less likely to occur if the experiment is repeated 	Reasoning
Power Standard:		
M.O.1.2.1	sort and classify objects by more than one attribute, using various strategies, including Venn Diagrams.	
	<ul style="list-style-type: none"> sort objects by more than one attribute, using various strategies, including Venn Diagrams. 	Level 3
	<ul style="list-style-type: none"> classify objects by more than one attribute, using various strategies, including Venn Diagrams. 	Level 3
M.O.1.2.2	determine the rule or give the output given an input/output model using addition or subtraction.	
	<ul style="list-style-type: none"> given an input/output model using addition, the student will determine the rule 	Level 2
	<ul style="list-style-type: none"> given an input/output model using subtraction, the student will determine the rule 	Level 2
	<ul style="list-style-type: none"> given an input/output model using addition, the student will determine the output 	Level 2
	<ul style="list-style-type: none"> given an input/output model using subtraction, the student will determine the output 	Level 2
M.O.1.2.3	identify and write number patterns by 2's, 5's, and 10's.	
	<ul style="list-style-type: none"> Identify number patterns by 2's 	Recall
	<ul style="list-style-type: none"> Identify number patterns by 5's 	Recall
	<ul style="list-style-type: none"> Identify number patterns by 10's 	Recall
	<ul style="list-style-type: none"> Write number patterns by 2's 	Recall
	<ul style="list-style-type: none"> Write number patterns by 5's 	Recall
	<ul style="list-style-type: none"> Write number patterns by 10's 	Recall
M.O.1.2.4	create and analyze number patterns based on real-life situations using words, AB form, and T-charts and present results.	

	<ul style="list-style-type: none"> • create number patterns based on real-life situations using words and present results. 	Application
	<ul style="list-style-type: none"> • create number patterns based on real-life situations using AB form and present results. 	Application
	<ul style="list-style-type: none"> • create number patterns based on real-life situations T-charts and present results. 	Application
	<ul style="list-style-type: none"> • analyze number patterns based on real-life situations using words and present results. 	Application
	<ul style="list-style-type: none"> • analyze number patterns based on real-life situations using AB form and present results. 	Application
	<ul style="list-style-type: none"> • analyze number patterns based on real-life situations T-charts and present results. 	Application
M.O.1.2.5	use concrete materials to demonstrate that the quantities on both sides of a grade-appropriate number sentence are equivalent.	Reasoning