

Math - Grade 1

Idaho Department of Education Content Standards	Objective	Sub Objectives	Task Analysis	Essential Vocabulary	Assessment	Materials & Resources
Cognitive level codes: • B: Memorize • C: Perform procedures • D: Demonstrate understanding • E: Conjecture, generalize, prove • F: Solve non-routine problems, make connections	Bloom's Equivalent • B = Knowledge • C = Comprehension • D = Comprehension • E = Application and Analysis • F = Synthesis	Calculator codes: NO: student MUST NOT have a calculator while completing this item in order to assess this objective.	Shaded objectives should be assessed in the classroom, but not included on the ISAT assessment.		° <i>First-Grade Math: A Month-To-Month Guide</i> ISBN: 978-0-941355-54-4 ° <i>Teaching Student-Centered Mathematics</i> by John A. Van de Walle ISBN: 0205408435 ° <i>Lesson for Algebraic Thinking</i> by Leyani von Rotz & Marilyn Burns ISBN: 0-941355-47-0 ° <i>Math Time, The Learning Environment</i> by Kathy Richardson ISBN: 1-888117-01-X ° <i>K-2 Mathematics Instructional Supplement</i> by The Idaho Department of Education ° http://www.eduplace.com/math/mthexp/g1/visual/ ° Jerry Pallotta math picture books	
Standard 1: Number and Operation						
Goal 1.1: Understand and use numbers.	1.M.1.1.1 Demonstrate knowledge of our numeration system by counting forward by ones and tens to 100, by counting backward by ones from 20, and by counting with ordinal numbers.	• Demonstrate knowledge of our numeration system by counting forward by ones and tens to 100, by counting backward by ones from 20, and by counting with ordinal numbers.	• Count forward by ones to 100 • Count forward by tens to 100 • Count backward by ones from 20 • Count with ordinal numbers to the 10th position	forward counting • backward counting • ordinal numbers • skip counting	• Recite numbers by ones to 100 in sequence • Recite numbers by tens to 100 in sequence • Recite numbers backward by ones from 20 in sequence • Recite ordinal numbers in sequence to the 10th position	<i>The M & M's Counting Book</i> by Barbara Barbieri McGrath <i>Lessons That Count - Math Fables</i> by Greg Tang <i>10 Rubber Ducks</i> by Eric Carlise
	1.M.1.1.2 Read, write, compare, and order whole numbers to 100.	• Read, write, compare, and order whole numbers to 100.	• Read, write, compare & order whole numbers to 20 • Read, write, compare & order whole numbers to 40 • Read, write, compare & order whole numbers to 60 • Read, write, compare & order whole numbers to 80 • Read, write, compare & order whole numbers to 100	whole numbers • compare • order • greater (more) • less (fewer) • equal • numeral	• Read random whole numbers to 100 • Write whole numbers to 100 accurately • Using 100s chart, student identifies before, after, & between given number • Tell a number that is greater/less than given number	http://etap.org/demo/math1/instruction1tutor.html http://www.canteach.ca/elementary/songspoems72.html
	1.M.1.1.3 Identify place value through 99.	• Identify place value through 99.	• Organize quantities into tens and ones through 99 • Identify groups of 10 • State the amount of tens and ones in a given number	identify • place value • ones • tens	• Given a 2 digit number, identify what number is in the tens place • What is the value of the number in the tens place?	<i>One-hundred Hungry Ants</i> by Elinor Pinczes http://eduplace.com/activity/kdca1.html
	1.M.1.1.4 Identify each and state the value of pennies, nickels, and dimes.	• Identify each and state the value of pennies, nickels, and dimes.	• State the name of the coin (penny, nickel, dime) • State the value of the coin (penny, nickel, dime)	penny • dime • nickel • value • amount • coin • money • cent	• Place a dime, a nickel, and a penny on the student page. • Tell the name of each coin, and tell how much it is worth.	<i>Money Matters</i> series by Scholastic http://www.canteach.ca/elementary/songspoems70.html
	1.M.1.1.5 Select strategies appropriate for solving a problem.	• Select strategies appropriate for solving a problem.	• Draw picture to solve problem • Use objects to solve problem • Use number line to solve problem • Use guess & check strategy • Use counting on/backward strategy • Write number sentence to solve problem • Use knowledge of strategies to solve problem	strategy • solving • problem • number sentence • number line • addition • subtraction • counting on • counting backwards	• Listen to this story • You can use any strategy to help you solve the problem • I have a dog, a cat, and a bird • How many legs are on all the pets?	http://math.about.com/od/1/a/problemsolv.htm http://math.about.com/od/wordproblem1/ss/gr1wp.htm
	1.M.1.1.6 Use appropriate vocabulary.	• Use appropriate vocabulary.	• Discuss math using appropriate grade level vocabulary as listed in the essential vocabulary column • Follow directions using grade level appropriate vocabulary • Use appropriate grade level vocabulary as listed in the essential vocabulary column			
Goal 1.2: Perform computations accurately.	1.M.1.2.1 Use objects, pictures, and symbols to add up to 10 and subtract from up to 9.	• Use objects, pictures, and symbols to add up to 10 and subtract from up to 9.	• Use objects to add up to 10 • Use objects to subtract from up to 9 • Use pictures to add up to 10 • Use pictures to subtract from up to 9 • Use symbols (+, =) to add up to 10 • Use symbols (-, =) to subtract from up to 9	add/plus • subtract/minus • sum/total • equal/same as • symbols	• Use pictures, objects, and symbols to add or subtract • There are 4 pencils. Your mom gave you 2. • There were 9 apples. Then, 5 were eaten.	Use a variety of manipulatives that can be used in hands-on activities.

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	1.M.1.2.2 Solve addition problems using objects, pictures, and symbols for sums up to 10.	<ul style="list-style-type: none"> Solve addition problems using objects, pictures, and symbols for sums up to 10. 	<ul style="list-style-type: none"> Solve addition problems using objects for sums up to 10 Solve addition problems using pictures for sums up to 10 Solve addition problems using symbols (+, =) for sums up to 10 	addition • solve • plus • sum/total • symbols	<ul style="list-style-type: none"> Give students 10 addition problems (sums up to 10), using objects, pictures, or symbols to solve 	<i>The Addition Book</i> by Jerry Pollotta http://www.mathsolutions.com/documents/0-941355-74-8_L.pdf
	1.M.1.2.3 Solve subtraction problems using objects, pictures, and symbols from up to 9.	<ul style="list-style-type: none"> Solve subtraction problems using objects, pictures, and symbols from up to 9. 	<ul style="list-style-type: none"> Solve subtraction problems using objects from up to 9 Solve subtraction problems using pictures from up to 9 Solve subtraction problems using symbols (-, =) from up to 9 	subtraction • solve • minus • difference • symbols	<ul style="list-style-type: none"> Give students 10 subtraction problems (from up to 9), using objects, pictures, or symbols to solve 	http://www.mathsolutions.com/documents/0-941355-74-8_L3.pdf http://www.math-drills.com/addition/add_table_blank.pdf
	1.M.1.2.4 Use appropriate vocabulary.	<ul style="list-style-type: none"> Use appropriate vocabulary. 	<ul style="list-style-type: none"> Discuss math using appropriate grade level vocabulary as listed in the essential vocabulary column Follow directions using grade level appropriate vocabulary Use appropriate grade level vocabulary as listed in the essential vocabulary column 			
Goal 1.3: Estimate and judge reasonableness of results.	1.M.1.3.1 Estimate a quantity of objects when shown a set of 10.	<ul style="list-style-type: none"> Estimate a quantity of objects when shown a set of 10. 	<ul style="list-style-type: none"> Experiment with groups of objects to ten Estimate a quantity of objects when shown a set of 10 	estimate/guess (pair <i>know</i> vocabulary with <i>essential</i> vocabulary) • quantity • guess • groups/sets	<ul style="list-style-type: none"> Provide a pile of 10 objects (don't allow the student to count) Make an estimate about how many objects do you think are in the group? Accept any answer 8-12 	Estimation Station-GREAT IDEA shown at URL below: http://hssd.net/gardner/awards/estimation_station/estimation_station_winners.html
	1.M.1.3.2 Use estimation to evaluate the reasonableness of an answer.	<ul style="list-style-type: none"> Use estimation to evaluate the reasonableness of an answer. 	<ul style="list-style-type: none"> Experiment with groups of objects to identify quantities and number relationships Explain the reasonableness / unreasonableness of an answer Use knowledge of estimation to determine the reasonableness/ unreasonableness of an answer 	estimate/guess (pair <i>known</i> vocabulary with <i>essential</i> vocabulary) • quantity • reasonable/unreasonable • evaluate	<ul style="list-style-type: none"> Provide a pile of 20 objects (don't allow the student to count) Make an estimate About how many objects do you think are in the group? Accept any answer within five more or five less of the number 	http://csmstu01.csm.edu/students/ksliwa/handy%20estimation%20p.htm
	1.M.1.3.3 Use appropriate vocabulary.	<ul style="list-style-type: none"> Use appropriate vocabulary. 	<ul style="list-style-type: none"> Discuss math using appropriate grade level vocabulary as listed in the essential vocabulary column Follow directions using grade level appropriate vocabulary Use appropriate grade level vocabulary as listed in the essential vocabulary column 			
Standard 2: Concepts and Principles of Measurement						
Goal 2.1: Understand and use U.S. customary and metric measurements.	1.M.2.1.1 Use non-standard tools and units for measuring length, volume (capacity), and weight.	<ul style="list-style-type: none"> Use non-standard tools and units for measuring length, volume (capacity), and weight. 	<ul style="list-style-type: none"> Explain what measurement is and what it is used for Demonstrate how to begin measurement at the starting end of the desired object to be measured Demonstrate how to use the non-standard tools end-to-end Use objects as non-standard tools to measure length Demonstrate how to use liquid and non-liquid items to fill containers Use objects as non-standard tools to measure volume Use objects as non-standard tools to measure weight 	length • long/short • volume • measure • weight • heavy/light • tool • units	<ul style="list-style-type: none"> Provide non-standard tools to measure the length of the object Provide non-standard tools to measure the capacity of the container Identify which object weighs more/less 	http://eduplace.com/activity/home.html

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	1.M.2.1.2 Estimate measurement using non-standard units.	• Estimate measurement using non-standard units.	<ul style="list-style-type: none"> • Use objects as non-standard tools to estimate length • Use objects as non-standard tools to estimate volume • Use objects as non-standard tools to estimate weight 	estimate • measure • tool • length • volume • weight	<ul style="list-style-type: none"> • Show students a non-standard unit of measure • Have student estimate the length and volume of an object using the non-standard measure • When shown two objects, students estimate which object is heavier/lighter 	http://eduplace.com/activity/knca1.html
	1.M.2.1.3 Tell time to the hour.	• Tell time to the hour.	<ul style="list-style-type: none"> • Recognize a clock • Recognize numerals to 12 • Recognize starting point on clock • Recognize difference between minute hand/hour hand • Recognize when minute hand is on 12 it is o'clock • Recognize hour hand tells the hour 	clock • hour hand • minute hand • clockwise • hour • time • minute • o'clock	<ul style="list-style-type: none"> • When shown a clock set to the hour, students tell what time is on the clock 	<i>The Grouchy Ladybug</i> by Eric Carle http://www.dositey.com/math/time.htm http://www.canteach.ca/elementary/songspoems71.html
	1.M.2.1.4 Recite the days of the week, in order, and identify yesterday and tomorrow on a calendar.	• Recite the days of the week, in order, and identify yesterday and tomorrow on a calendar.	<ul style="list-style-type: none"> • Recognize that days of week have specific names • Recognize that days of week have a specific order • Recite days of the week in order • Recognize a calendar • Identify today/present • Identify yesterday/past • Identify tomorrow/future 	calendar • days of week • week • order • yesterday/past • today/present • tomorrow/future	<ul style="list-style-type: none"> • Recite days of week • Students will identify yesterday and tomorrow using a calendar 	<i>Calendar Math</i> by Creative Teaching Press <i>Today is Monday</i> by Eric Carle <i>The Very Hungry Caterpillar</i> by Eric Carle
	1.M.2.1.5 Use appropriate vocabulary.	• Use appropriate vocabulary.	<ul style="list-style-type: none"> • Discuss math using appropriate grade level vocabulary as listed in the essential vocabulary column • Follow directions using grade level appropriate vocabulary • Use appropriate grade level vocabulary as listed in the essential vocabulary column 			
	Goal 2.2: Apply the concepts of rates, ratios, and proportions.	No objectives at this grade level.				
Goal 2.3: Apply dimensional analysis.	No objectives at this grade level.					
Standard 3: Concepts and Language of Algebra and Functions						
Goal 3.1: Use algebraic symbolism as a tool to represent mathematical relationships.	1.M.3.1.1 Write an addition problem in both vertical and horizontal form.	• Write an addition problem in both vertical and horizontal form.	<ul style="list-style-type: none"> • Write numerals to ten • Write symbols (+, =) • Demonstrate the difference between horizontal/vertical • Demonstrate correct placement of numerals/symbols • Write an addition problem in horizontal form • Write an addition problem in vertical form 	vertical • horizontal • addition problem • addends • sum • symbols	<ul style="list-style-type: none"> • Give the student an addition problem • Student will write the problem in vertical and horizontal form 	http://www.kidzone.ws/math/addition.htm
	1.M.3.1.2 Draw a picture and/or write a number sentence when given an addition word problem.	• Draw a picture and/or write a number sentence when given an addition word problem.	<ul style="list-style-type: none"> • Recognize that pictures represent quantities/numerals • Identify key words/phrases (i.e. in all, all together, etc.) • Identify addends in a word problem • Write numbers/symbols for each part of the word problem to complete an addition sentence 	number sentence • addition sentence • problem • add • total • addends	<ul style="list-style-type: none"> • Give the student an addition word problem • Student will draw a picture and/or write a number sentence 	http://www.mathsolutions.com/documents/978-0-941355-84-1_L1.pdf http://kidzone.ws/math/wordproblems.htm#gr1wp
	1.M.3.1.3 Compare numbers to 99 using vocabulary (less than, greater than, equal to, more, less, same, fewer).	• Compare numbers to 99 using vocabulary (less than, greater than, equal to, more, less, same, fewer).	<ul style="list-style-type: none"> • Recognize/count numbers to 99 • Recognize number value to 99 • Demonstrate knowledge of essential vocabulary • Use number sequence to compare numbers to 99 • Recognize number relationships • Recognize place value 	less than • greater than • equal to • more • less • same • fewer • compare • place value	<ul style="list-style-type: none"> • Show students two numbers • Students will compare the two numbers by indicating less than, greater than, equal to, more, less, same, or fewer 	http://www.mathsolutions.com/documents/0-941355-47-0_L2.pdf
Goal 3.2: Evaluate algebraic expressions.	No objectives at this grade level.					

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Goal 3.3: Solve algebraic equations and inequalities.	No objectives at this grade level.					
Goal 3.4: Understand the concept of functions.	1.M.3.4.1 Describe and extend a repeating pattern (e.g., ABACABAC).	• Describe and extend a repeating pattern (e.g., ABACABAC).	<ul style="list-style-type: none"> Recognize a pattern Use manipulatives, words, pictures, symbols, etc. to represent/describe a repeating pattern Use manipulatives to describe, create, and extend a repeating pattern 	pattern (e.g., ABACABAC) • repeating • extend	<ul style="list-style-type: none"> Provide a pattern that has been repeated at least three times Students will identify the pattern and extend the pattern 	http://www.mathsolutions.com/documents/0-941355-47-0_L1.pdf
	1.M.3.4.2 Use appropriate vocabulary.	• Use appropriate vocabulary.	<ul style="list-style-type: none"> Discuss math using appropriate grade level vocabulary as listed in the essential vocabulary column Follow directions using grade level appropriate vocabulary Use appropriate grade level vocabulary as listed in the essential vocabulary column 			
Goal 3.5: Represent equations, inequalities and functions in a variety of formats.	No objectives at this grade level.					
Goal 3.6: Apply functions to a variety of problems.	No objectives at this grade level.					
Standard 4: Concepts and Principles of Geometry						
Goal 4.1: Apply concepts of size, shape, and spatial relationships.	1.M.4.1.1 Recognize, name, build, draw, and sort two- and three-dimensional shapes (triangle, rectangle, square, circle, cone, cube, cylinder).	• Recognize, name, build, draw, and sort two- and three-dimensional shapes (triangle, rectangle, square, circle, cone, cube, cylinder).	<ul style="list-style-type: none"> Identify and name two- and three dimensional shapes- identify characteristics of two- and three-dimensional shapes Build and draw two- and three-dimensional shapes Sort two- and three-dimensional shapes 	two-dimensional • three-dimensional sides • corners • triangle • rectangle • square • circle • cone • cube • cylinder • sort	<ul style="list-style-type: none"> Teacher shows two- and three-dimensional shapes Student identifies shapes Student names shapes Student builds shapes (geoboard, clay, etc.) Student draws shapes Student sorts shapes 	<i>Exploring Geometric Solids</i> by Learning Resources http://www.canteach.ca/elementary/songspoems82.html
	1.M.4.1.2 Sort and classify objects by more than one attribute.	• Sort and classify objects by more than one attribute.	<ul style="list-style-type: none"> Recognize and identify different attributes Sort and classify by one attribute Sort and classify by more than one attribute 	sort • classify • attribute (i.e. size, shape, color, dimension)	<ul style="list-style-type: none"> Given a set of objects with different attributes, students will sort and classify by more than one attribute 	http://www.abcteach.com/free/s/shapcards_outline_set.pdf http://eduplace.com/activity/k_5_act2.html http://eduplace.com/activity/find.html
	1.M.4.1.3 Use appropriate vocabulary.	• Use appropriate vocabulary.	<ul style="list-style-type: none"> Discuss math using appropriate grade level vocabulary as listed in the essential vocabulary column Follow directions using grade level appropriate vocabulary Use appropriate grade level vocabulary as listed in the essential vocabulary column 			
Goal 4.2: Apply the geometry of right triangles.	No objectives at this grade level.					
Goal 4.3: Apply graphing in two dimensions.	1.M.4.3.1 Indicate whether a number is above or below a benchmark number (100 or less) on a number line.	• Indicate whether a number is above or below a benchmark number (100 or less) on a number line.	<ul style="list-style-type: none"> Recognize numbers to 100 Sequence numbers to 100 Compare numbers on a number line to 100 	above • below • compare • number line • sequence	<ul style="list-style-type: none"> Give student a number (100 or less) on a number line Student indicates whether a number is above or below a benchmark number (i.e. Is 59 above or below 72 on a number line?) 	http://www.geocities.com/GradeOne_ca/Lessons/numse.html
Standard 5: Data Analysis, Probability, and Statistics						
Goal 5.1: Understand data analysis.	1.M.5.1.1 Interpret information found in real object graphs and in pictographs to answer questions.	• Interpret information found in real object graphs and in pictographs to answer questions.	<ul style="list-style-type: none"> Recognize a graph/pictograph Tell specific information represented in a graph/pictograph Describe information represented in a graph/pictograph using greater than, less than, more than, fewer, same as, equal to, etc. 	graph • pictograph • information (data) • greater than • less than • more than • fewer • same as • equal • rows • columns	<ul style="list-style-type: none"> Teacher will need to provide a real object graph or a pictograph Teacher will ask questions about which item is shown the most/least, etc. Ask if any items have the same amount as another item How many more of one item than another item 	<i>Graph Math</i> by Creative Teaching Press

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	1.M.5.1.2 Use appropriate vocabulary.	<ul style="list-style-type: none"> • Use appropriate vocabulary. 	<ul style="list-style-type: none"> • Discuss math using appropriate grade level vocabulary as listed in the essential vocabulary column • Follow directions using grade level appropriate vocabulary • Use appropriate grade level vocabulary as listed in the essential vocabulary column 			
Goal 5.2: Collect, organize, and display data.	1.M.5.2.1 Gather and display data in real object graphs and in pictographs to answer a question.	<ul style="list-style-type: none"> • Collect and display data in real object graphs and in pictographs to answer a question. 	<ul style="list-style-type: none"> • Formulate a question to collect data • Determine how to collect data • Determine how to record data • Organize collected data • Create a graph/pictograph • Transfer data to graph/pictograph 	graph • pictograph • information (data) • greater than • less than • more than • fewer • same as • equal to • rows • columns	<ul style="list-style-type: none"> • Students will create a real object graph or pictograph • Teacher will create a rubric that contains the steps outlined in the task analysis column • Students will be assessed using the teacher generated rubric 	http://www.mathsolutions.com/documents/0-941355-50-0_L.pdf http://www.mathsolutions.com/documents/QuickAsACricket.pdf
Goal 5.3: Apply simple statistical measurements.	No objectives at this grade level.					
Goal 5.4: Understand basic concepts of probability.	No objectives at this grade level.					
Goal 5.5: Make predictions or decisions based on data.	No objectives at this grade level.					