

Mathematics 2021-2022

## Second Grade Mathematics Scope and Sequence

Quarte	Quarter 1				
Domain	<b>Operations &amp; Algebraic Thinking</b>	Numbers and Operations Base Ten	Measurement & Data		
Standard	2.OA.1 Use addition and subtraction within 100	2.NBT.1 Understand that the three digits of a	2.MD.6 Represent whole numbers as		
	to solve one- and twostep word problems	three-digit number represent amounts of	lengths from 0 on a number line		
	involving situations of adding to, taking from,	hundreds, tens, and ones; e.g., 706 equals 7	diagram with equally spaced points		
	putting together, taking apart, and comparing,	hundreds, 0 tens, and 6 ones. Understand the	corresponding to the numbers 0, 1,		
	with unknowns in all positions, e.g., by using	following as special cases:	2,, and represent whole-number		
	drawings and equations with a symbol for the	a. 100 can be thought of as a bundle of ten	sums and differences within 100 on a		
	unknown number to represent the problem.	tens - called a "hundred."	number line diagram.		
		b. The numbers 100, 200, 300, 400, 500, 600,			
	2.OA.2 Fluently add and subtract within 20	700, 800, 900 refer to one, two, three, four,			
	using mental strategies. By end of Grade 2,	five, six, seven, eight, or nine hundreds (and 0			
	know from memory all sums of two one-digit	tens and 0 ones).			
	numbers. See standard 1.OA.6 for a list of				
	mental strategies.	2.NBT.3 Read and write numbers to 1,000			
		using base-ten numerals, number names,			
	2.OA.3 Determine whether a group of objects	expanded form, and equivalent			
	(up to 20) has an odd or even number of	representations, e.g., 716 is 700 + 10 + 6, or 6			
	members, e.g., by pairing objects or counting	+ 700 + 10, or 6 ones and 71 tens, etc.			
	them by 2s; write an equation to express an				
	even number as a sum of two equal addends.	2.NBT.5 Fluently add and subtract within 100			
		using strategies based on place value,			
	2.OA.4 Use addition to find the total number of	properties of operations, and/or the			
	objects arranged in rectangular arrays with up	relationship between addition and			
	to 5 rows and up to 5 columns; write an	subtraction.			
	equation to express the total as a sum of equal				
	addends.				
Resource	Bridges – Unit 1 & 2	Bridges – Unit 1 & 2	Bridges – Unit 1 & 2		

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Quart	er 2			
Domain	<b>Operations and Algebraic Thinking</b>	Numbers and Operations Base Ten	Measurement & Data	Geometry
Standard	2.OA.1 Use addition and	2.NBT.1 Understand that the three	2.MD.1 Measure the length of an	2.G.3 Partition circles and
	subtraction within 100 to solve	digits of a three-digit number	object by selecting and using	rectangles into two, three, or
	one- and twostep word problems	represent amounts of hundreds, tens,	appropriate tools such as rulers,	four equal shares; describe the
	involving situations of adding to,	and ones; e.g., 706 equals 7 hundreds,	yardsticks, meter sticks, and	shares using the words halves,
	taking from, putting together,	0 tens, and 6 ones. Understand the	measuring tapes.	thirds, or fourths and quarters,
	taking apart, and comparing, with	following as special cases:		and use the phrases half of,
	unknowns in all positions, e.g., by	a. 100 can be thought of as a bundle	2.MD.2 Measure the length of an	third of, or fourth of and quarter
	using drawings and equations with	of ten tens - called a "hundred."	object twice, using length units of	of. Describe the whole as two
	a symbol for the unknown number	b. The numbers 100, 200, 300, 400,	different lengths for the two	halves, three thirds, or four
	to represent the problem.	500, 600, 700, 800, 900 refer to one,	measurements; describe how the	fourths in real -world contexts.
		two, three, four, five, six, seven, eight,	two measurements relate to the	Recognize that equal shares of
	2.OA.2 Fluently add and subtract	or nine hundreds (and 0 tens and 0	size of the unit chosen.	identical wholes need not have
	within 20 using mental strategies.	ones).		the same shape.
	By end of Grade 2, know from		2.MD.3 Estimate lengths using	
	memory all sums of two one-digit	2.NBT.3 Read and write numbers to	units of inches, feet, centimeters,	
	numbers. See standard 1.OA.6 for a	1,000 using base-ten numerals,	and meters.	
	list of mental strategies.	number names, expanded form, and		
		equivalent representations, e.g., 716 is	2.MD.4 Measure to determine	
		700 + 10 + 6, or 6 + 700 + 10, or 6 ones	how much longer one object is	
		and 71 tens, etc.	than another, expressing the	
			length difference in terms of a	
		2.NBT.5 Fluently add and subtract	standard length unit.	
		within 100 using strategies based on		
		place value, properties of operations,	2.MD.5 Use addition and	
		and/or the relationship between	subtraction within 100 to solve	
		addition and subtraction.	word problems involving lengths	
			that are given in the same whole	
		2.NBT.6 Add up to four two-digit	number units, e.g., by using	
		numbers using strategies based on	drawings and equations with a	
		place value and properties of	symbol for the unknown number	
		operations.	to represent the problem.	
			Drawings need not show details,	

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		2.NBT.8 Mentally add 10 or 100 to a	but should show the mathematics	
		given number 100-900, and mentally	in the problem. (This applies	
		subtract 10 or 100 from a given	wherever drawings are mentioned	
		number 100-900.	in the Standards.)	
			2.MD.6 Represent whole numbers	
			as lengths from 0 on a number line	
			diagram with equally spaced	
			points corresponding to the	
			numbers 0, 1, 2,, and represent	
			whole-number sums and	
			differences within 100 on a	
			number line diagram.	
			2.MD.10 Organize, represent, and	
			interpret data with up to four	
			categories; complete picture	
			graphs when single -unit scales are	
			provided; complete bar graphs	
			when single -unit scales are	
			provided; solve simple put -	
			together, take -apart, and	
			compare problems in a graph.	
Resource	Bridges – Unit 3 & 4	Bridges – Unit 3 & 4	Bridges – Unit 3 & 4	Bridges – Unit 3 & 4

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Quarter 3				
Domain	<b>Operations and Algebraic Thinking</b>	Numbers in Base Ten	Measurement and Data	Geometry
Standard	<ul> <li>2.OA.1 Use addition and subtraction within 100 to solve one- and twostep word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.</li> <li>2.OA.2 Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers. See standard 1.OA.6 for a list of mental strategies.</li> <li>2.OA.4 Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends.</li> </ul>	<ul> <li>2.NBT.1 Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. Understand the following as special cases: <ul> <li>a. 100 can be thought of as a bundle of ten tens - called a "hundred."</li> <li>b. The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones).</li> </ul> </li> <li>2.NBT.2 Count forward and backward within 1,000 by ones, tens, and hundreds starting at any number; skip-count by 5s starting at any multiple of</li> <li>5. 2.NBT.3 Read and write numbers to 1,000 using base-ten numerals, number names, expanded form, and equivalent representations, e.g., 716 is 700 + 10 + 6, or 6 + 700 + 10, or 6 ones and 71 tens, etc.</li> </ul>	<ul> <li>2.MD.7 Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.</li> <li>2.MD.8 Solve problems with money.</li> <li>a. Identify nickels and quarters by name and value.</li> <li>b. Find the value of a collection of quarters, dimes, nickels, and pennies.</li> <li>c. Solve word problems by adding and subtracting within 100, dollars with dollars and cents with cents (not using dollars and cents simultaneously) using the \$ and \$ symbols appropriately (not including decimal notation).</li> </ul>	<ul> <li>2.G.1 Recognize and identify triangles, quadrilaterals, pentagons, and hexagons based on the number of sides or vertices. Recognize and identify cubes, rectangular prisms, cones, and cylinders.</li> <li>2.G.2 Partition a rectangle into rows and columns of same -size squares and count to find the total number of them.</li> <li>2.G.3 Partition circles and rectangles into two, three, or four equal shares; describe the shares using the words halves, thirds, or fourths and quarters, and use the phrases half of, third of, or fourth of and quarter of. Describe the whole as two halves, three thirds, or four four fourths in real -world contexts. Recognize that equal shares of identical wholes need not have the same shape.</li> </ul>

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Resource	Bridges – Unit 5 & 6	Bridges – Unit 5 & 6	Bridges – Unit 5 & 6	Bridges – Unit 5 & 6	
		given number 100-900.			
		mentally subtract 10 or 100 from a			
		given number 100-900, and			
		2.NBT.8 Mentally add 10 or 100 to a			
		operations.			
		place value and properties of			
		numbers using strategies based on			
		2.NBT.6 Add up to four two-digit			
		supported by drawings or objects.			
		operations. Explanations may be			
		place value and the properties of			
		subtraction strategies work, using			
		2.NBT.9 Explain why addition and			
		between addition and subtraction.			
		operations, and/or the relationship			
		place value, properties of			
		within 100 using strategies based on			
		2 NBT 5 Fluently add and subtract			
		the results of comparisons.			
		using >, =, and < symbols to record			
		using > - and < symbols to record			

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Quart	er 4			
Domain	<b>Operations and Algebraic Thinking</b>	Numbers & Operations in Base Ten	Measurement & Data	Geometry
Standard	2.OA.1 Use addition and subtraction	2.NBT.3 Read and write numbers to	2.MD.1 Measure the length of	2.G.2 Partition a rectangle into
	within 100 to solve one- and twostep	1,000 using base-ten numerals,	an object by selecting and using	rows and columns of same -size
	word problems involving situations of	number names, expanded form, and	appropriate tools such as rulers,	squares and count to find the
	adding to, taking from, putting	equivalent representations, e.g., 716	yardsticks, meter sticks, and	total number of them.
	together, taking apart, and comparing,	is 700 + 10 + 6, or 6 + 700 + 10, or 6	measuring tapes.	
	with unknowns in all positions, e.g., by	ones and 71 tens, etc.		2.G.3 Partition circles and
	using drawings and equations with a		2.MD.3 Estimate lengths using	rectangles into two, three, or
	symbol for the unknown number to	2.NBT.4 Compare two three-digit	units of inches, feet,	four equal shares; describe the
	represent the problem.	numbers based on meanings of the	centimeters, and meters.	shares using the words halves,
		hundreds, tens, and ones digits,		thirds, or fourths and quarters,
	2.OA.2 Fluently add and subtract within	using >, =, and < symbols to record	2.MD.4 Measure to determine	and use the phrases half of,
	20 using mental strategies. By end of	the results of comparisons.	how much longer one object is	third of, or fourth of and quarter
	Grade 2, know from memory all sums		than another, expressing the	of. Describe the whole as two
	of two one-digit numbers. See standard	2.NBT.7 Add and subtract within	length difference in terms of a	halves, three thirds, or four
	1.OA.6 for a list of mental strategies.	1,000, using concrete models or	standard length unit.	fourths in real -world contexts.
		drawings and strategies based on		Recognize that equal shares of
	2.OA.4 Use addition to find the total	place value, properties of	2.MD.5 Use addition and	identical wholes need not have
	number of objects arranged in	operations, and/or the relationship	subtraction within 100 to solve	the same shape.
	rectangular arrays with up to 5 rows	between addition and subtraction;	word problems involving lengths	
	and up to 5 columns; write an equation	record the strategy with a written	that are given in the same whole	
	to express the total as a sum of equal	numerical method (drawings and,	number units, e.g., by using	
	addends.	when appropriate, equations) and	drawings and equations with a	
		explain the reasoning used.	symbol for the unknown	
		cubtracting three digit numbers	number to represent the	
		bundrods are added or subtracted	problem. Drawings need not	
		from hundreds, tens are added or	the mathematics in the	
		subtracted from tens, ones are	nrohlem (This applies wherever	
		added or subtracted from ones, and	drawings are mentioned in the	
		sometimes it is necessary to	Standards )	
		compose or decompose tens or		
		hundreds.		

			2.MD.7 Tell and write time from	
			analog and digital clocks to the	
			nearest five minutes, using a.m.	
			and p.m.	
			2.MD.8 Solve problems with	
			money.	
			a. Identify nickels and quarters	
			by name and value.	
			b. Find the value of a collection	
			of quarters, dimes, nickels, and	
			pennies.	
			c. Solve word problems by	
			adding and subtracting within	
			100, dollars with dollars and	
			cents with cents (not using	
			dollars and cents	
			simultaneously) using the \$ and	
			¢ symbols appropriately (not	
			including decimal notation).	
			2.MD.9 Generate measurement	
			data by measuring lengths of	
			several objects to the nearest	
			whole unit or by making	
			repeated measurements of the	
			same object. Show the	
			measurements by creating a line	
			plot, where the horizontal scale	
			is marked off in whole-number	
			units.	
Resource	Bridges – Unit 7 & 8	Bridges – Unit 7 & 8	Bridges – Unit 7 & 8	Bridges – Unit 7 & 8

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	Quarter 1 Learning Targets			
Ohio Standard	Learning Targets	Notes		
	Solve for an unknown (represented by an empty box or picture in any position). <sup>1</sup>			
2.0A.1	Use addition within 20 to solve one-step word problems by using drawings and equations with a symbol for the unknown number to represent the problem. Use subtraction within 20 to solve one-step word problems by using drawings and equations with a symbol for the unknown number to represent the problem.	Problems should include solving for result unknown, change unknown, start unknown, total unknown, addend unknown, both addends unknown (See table 1 in Appendix for problem examples).		
	<ul> <li>(Introductory) Fluently add within 20 using mental strategies.</li> <li>(Introductory) Fluently subtract within 20 using mental strategies.</li> </ul>	Strategies may include counting on; making ten, e.g., $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$ ; decomposing a number leading to a ten, e.g., $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$ ; using the		
2 04 2		relationship between addition and subtraction, e.g., knowing that 8 + 4 = 12, one knows 12 - 8 = 4; and creating equivalent but easier or known sums, e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13		
2.0A.3	Determine whether a group of objects (up to 20) has odd or even number of members and explain why. <sup>1</sup>			
2.0A.4	Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns.			
2.NBT.1	Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones.			
2.NBT.3	Read and write 3-digit numbers using base ten numerals and number names. Read and write 3-digit numbers using expanded form.			
2.NBT.5	Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.	Mastery expected in Quarter 2		
2.MD.6	Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2Represent whole-number sums within 100 on a number line diagram.	Sums to be mastered this quarter; differences will be mastered in Quarter 2		

Quarter 2 Learning Targets				
Ohio Standard	Learning Targets			
2.OA.1	Use addition within 100 to solve one-step word problems by using drawings and equations with a symbol for the unknown number to represent the problem.	Problems should include solving for result unknown, change unknown, start unknown, total unknown, addend unknown, both addends unknown (See table 1 in Appendix for problem		
	Use subtraction within 100 to solve one-step word problems by using drawings	examples).		
	and equations with a symbol for the unknown number to represent the problem.	Mastery expected for one-step word problems in Quarter 3		
2.0A.2	Fluently add within 20 using mental strategies.	Mastery expected by Quarter 4		
	Fluently subtract within 20 using mental strategies.	Mastery expected by quarter 4		
2.NBT.1	Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones.			
2.NBT.2	(Introductory) Count forward and backward within 1,000 by ones, tens, and hundreds starting at any given number.	Mastery expected by Quarter 3		
	(Introductory) Skip count by 5s starting at any multiple of 5.	Mastery expected by Quarter 3		
	Read and write numbers to 1,000 using base ten numerals and number names.			
2.NBT.3	Read and write numbers to 1,000 using expanded form.			
	Read and write numbers to 1,000 using equivalent representations.			
2.NBT.5	Fluently add and subtract within 100 using strategies based on place value,			
	properties of operations, and/or the relationship between addition and			
	subtraction.			
2.NBT.6	(Introductory) Add up to four two-digit numbers using strategies based on place	Mastery expected in Quarter 3		
	value and properties of operations.			
	(Introductory) Mentally add 10 or 100 to a given number 100-900.	Mastery expected in Quarter 3		
2.NBT.8	(Introductory) Mentally subtract 10 or 100 to a given number 100-900.	Mastery expected in Quarter 3		
2.MD.1	Measure the length of an object by selecting and using appropriate tools such as	Scholars will need to be able to identify appropriate tools		
	rulers, yardsticks, meter sticks, and measuring tapes. (focus on measuring inches	before measuring (i.e. when to use a measuring tape vs. a		
	and feet)	ruler)		
	Measure the length of an object twice, using length units of different lengths for			
2.MD.2	the two measures.			
	Describe how the two different measurements of the same object relate to the size of the unit chosen.			
2.MD.3	Estimate lengths using units of inches and feet.			

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2.MD.4	Measure to determine how much longer one object is than another, expressing	
	the length difference in inches or feet.	
2.MD.5	Use addition and subtraction within 100 to solve word problems involving length	
	that are given the same whole number units by using drawings and equations	
	with a symbol for the unknown number to represent the problem.	
2.MD.6	Represent whole-number sums and differences within 100 on a number line	
	diagram.	
	Organize, represent and interpret data in picture graphs with single-unit scales	
	are provided with up to four categories.	
2.MD.10	Solve simple put-together, take-apart and compare problems in a picture graph.	
	Organize, represent and interpret data bar graphs with single-unit scales are	
	provided with up to four categories.	
	Solve simple put-together, take-apart and compare problems in a picture graph.	

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Quarter 3 Learning Targets				
Ohio Standard	Learning Targets	Notes		
	Use addition within 100 to solve one-step word problems by using drawings and	Problems should include solving for result unknown, change		
	equations with a symbol for the unknown number to represent the problem.	unknown, start unknown, total unknown, addend unknown,		
	Use subtraction within 100 to solve one-step word problems by using drawings	both addends unknown (See table 1 in Appendix for problem		
	and equations with a symbol for the unknown number to represent the problem.	examples).		
2.0A.1				
	Fluently add within 20 using mental strategies (know from memory)	Mastery expected by Quarter 4		
2.0A.2	Fluently subtract within 20 using mental strategies (know from memory)	Mastery expected by quarter 4		
	Use addition to find the total number of objects arranged in rectangular arrays			
2.0A.4	with up to 5 rows and up to 5 columns.			
	Write an equation to express the total of objects arranged in an array as a sum of			
	equal addends.			
	Count forward and backward within 1,000 by ones, tens, and hundreds starting at			
2.NBT.2	any given number.			
	Skip count by 5s starting at any multiple of 5.			
2.NBT.4	(Introductory) Compare two and three-digit numbers based on the meanings of	Mastery expected by Quarter 4		
	the hundreds, tens, and ones using >, =, and < symbols to record the results of			
	comparisons.			
2.NBT.5	Fluently add and subtract within 100 using strategies based on place value,			
	properties of operations, and/or the relationship between addition and			
	subtraction. (Teach with 2.NBT.9)			
2.NBT.6	Add up to four two-digit numbers using strategies based on place value and			
	properties of operations.			
2.NBT.8	Mentally add 10 or 100 to a given number 100-900.			
	Mentally subtract 10 or 100 to a given number 100-900.			
2.NBT.9	Explain why addition and subtraction work, using place value and the properties			
	of operations. (Teach with 2.NBT.5)			
	Identify pennies, nickels, dimes and quarters by name and value.	Pennies and dimes were taught in grade 1 in connection with		
		place value, but added to learning target for review & intro, if		
2.MD.8		needed (not part of standard).		
	Find the value of a collection of quarters, dimes, nickels, and pennies.			

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	(Introductory) Solve word problems by adding and subtracting with 100, dollars with dollars and cents with cents using \$ and cent symbols appropriately.	Mastery expected by Quarter 4
2.G.1	Recognize and identify triangles, quadrilaterals, pentagons, and hexagons based on the number of sides or vertices (2D shapes).	
	Recognize and identify cubes, rectangular prisms, cones and cylinders.	
2.G.2	Partitions a rectangle into rows and columns of same-size squares and count to	
	find the total number of them.	
	Partitions circles into two, three, or four equal shares.	
	Partition rectangles into two, three, or four equal shares.	
2.G.3	Describe shares of partitions as halves, thirds, fourths or quarters and use the phrases half of, third of, fourth of, or quarter of.	
	Describe the whole as two halves, three thirds, or four fourths in real-world context.	
	Recognize that equal shares of identical wholes need not have the same shape.	

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Quarter 4 Learning Targets			
Ohio Standard	Learning Targets	Notes	
	Use addition within 100 to solve two-step word problems by using drawings and equations with a symbol for the unknown number to represent the problem. Use subtraction within 100 to solve two-step word problems by using drawings and equations with a symbol for the unknown number to represent the problem.	Problems should include solving for result unknown, change unknown, start unknown, total unknown, addend unknown, both addends unknown (See table 1 in Appendix for problem examples).	
2.OA.1	· · · · · · · · · · · · · · · · · · ·		
2.OA.2	Fluently add within 20 using mental strategies (know from memory).		
	Fluently subtract within 20 using mental strategies (know from memory).		
2.NBT.4	Compare two and three-digit numbers based on the meanings of the hundreds, tens, and ones using >, =, and < symbols to record the results of comparisons.		
	Add within 1,000 using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.		
	Subtract within 1,000 using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.		
2.NBT.7	Record the chosen strategy with a written numerical method using a drawing or equation		
	Explain the reason a strategy was chosen to solve.		
	Understand that in adding or subtracting three-digit numbers, hundreds are added or subtracted from hundreds, tens are added and subtracted from tens, ones are added or subtracted from ones; and sometimes it is necessary to compose and decompose tens or hundreds.		
2.MD.1	Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes. (focus on centimeters and meters)		
2.MD.3	Estimate lengths using units of centimeters and meters.		
2.MD.4	Measure to determine how much longer one object is than another, expressing the length difference in centimeters and meters.		
2.MD.5	Use addition and subtraction within 100 to solve word problems involving length that are given the same whole number units by using drawings and equations with a symbol for the unknown number to represent the problem.		

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2.MD.7	Tell and write time from an analog and digital clock to the nearest five.	Link back to 2.NBT.2 with skip counting to 5; review time to the hour and half hour as needed as this was taught in 1 <sup>st</sup> grade, but not part of this standard.
	Identify the number of hours in a day and determine when to represent a.m. and	
	p.m. <sup>1</sup>	
2.MD.8	Solve word problems by adding and subtracting with 100, dollars with dollars and	
	cents with cents using \$ and cent symbols appropriately.	
	Generate measurement data by measuring lengths of several objects to the	
2.MD.9	nearest whole unit or by making repeated measurements of the same object.	
	Show measurements by creating a line plot, where the horizontal scale is marked	
	off in whole-number units.	