



FIRST GRADE MATH

Approved by KSD Board of Education: May 19, 2025

Course Description:

In Grade 1, instructional time focuses on five areas: (1) developing understanding of whole number relationships and place value, including grouping in tens and ones; (2) developing understanding of addition and subtraction, including solving real-world problems, and developing strategies for addition and subtraction; (3) reasoning about attributes of, and composing and decomposing geometric shapes; (4) developing understanding of linear measurement and measuring lengths as iterating length units; and (5) representing and interpreting data.

Grade Level: First Grade

Unit Scope and Sequence

Unit 1: Adding, Subtracting, and Working with Data

Unit 2: Addition and Subtraction Story Problems

Unit 3: Adding and Subtracting within 20

Unit 4: Numbers to 99

Unit 5: Adding within 100

Unit 6: Measuring Lengths of Up to 120 Length Units

Unit 7: Geometry and Time

Course Enduring Understandings:

- Addition and subtraction can be represented with story problems, objects, pictures, or expressions.
- The position of a digit in a number determines its value.

Course Essential Questions:

- How do you know if your strategy is efficient?
- How are addition and subtraction related?

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Unit 1: Adding, Subtracting, and Working with Data

Students deepen their understanding of addition and subtraction within 10 as they organize, count, and represent data.

Unit Essential Learning Targets	
<i>Enduring Understandings</i>	<i>Essential Questions</i>
<ul style="list-style-type: none"> ● Addition and subtraction are related. ● When data is collected, organized and displayed; it can help us gather information. ● An equation is true if values on both sides of the equal sign are the same. 	<ul style="list-style-type: none"> ● How can you represent data in a way others can understand? ● How can you use counting to help you add and subtract?
<i>Students must know:</i>	<i>Students must be able to:</i>
<ul style="list-style-type: none"> ● Vocabulary <ul style="list-style-type: none"> ○ Category ○ Conjecture ○ Data ○ Difference ○ Equal ○ Sum ○ Survey 	<ul style="list-style-type: none"> ● Organize and represent data. ● Build toward fluency by adding and subtracting within 10. ● Interpret data representations to ask and answer questions. ● Represent data with labels. ● Sort objects into categories. ● Collect survey data. ● Find sums when adding 1 or 2. ● Explain strategies for adding 2. ● Justify whether given addition equations are true. ● Use manipulatives, drawings, and expressions to represent addition and subtraction stories. ● Notice the relationship between subtracting and counting back. ● Determine whether statements about data are true or false. ● Write equations to represent the sum of 2 groups.

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Unit 1: Adding, Subtracting, and Working with Data

Missouri Learning Standards

Priority Standards

- Use addition and subtraction within 20 to solve problems. (1.RA.A.1)
- Develop the meaning of the equal sign and determine if equations involving addition and subtraction are true or false. (1.RA.A.3)
- Demonstrate fluency with addition and subtraction within 10. (1.RA.C.8)
- Draw conclusions from object graphs, picture graphs, T-charts and tallies. (1.DS.A.2)

Supporting Standards

- Collect, organize and represent data with up to three categories. (1.DS.A.1)
- Solve problems that call for addition of three whole numbers whose sum is within 20. (1.RA.A.2)
- Use properties as strategies to add and subtract. (1.RA.B.5)
- Demonstrate that subtraction can be solved as an unknown-addend problem. (1.RA.B.6)
- Add and subtract within 20. (1.RA.C.7)

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Unit 2: Addition and Subtraction Story Problems

Students solve new types of story problems within 10 and work with equations to consider the relationship between addition and subtraction.

Unit Essential Learning Targets	
<i>Enduring Understandings</i>	<i>Essential Questions</i>
<ul style="list-style-type: none"> ● Addition and subtraction are related. 	<ul style="list-style-type: none"> ● What are the relationships between amounts in story problems? ● How can addition and subtraction equations be used to represent and solve story problems?
<i>Students must know:</i>	<i>Students must be able to:</i>
<ul style="list-style-type: none"> ● Vocabulary <ul style="list-style-type: none"> ○ Addend ○ Known ○ Unknown ○ Total ○ Compare ○ Difference 	<ul style="list-style-type: none"> ● Represent and solve <i>Add To</i> and <i>Take From, Result Unknown</i> and <i>Add To, Change Unknown</i> story problems. ● Make sense of equations with an underline that represents the unknown amount in a story problem. ● Represent and solve <i>Put Together/Take Apart</i> story problems with the unknown in all positions. ● Represent and solve Compare, Difference Unknown story problems. ● Represent and solve a variety of story problem types addressed in this unit. ● Relate addition and subtraction. ● Justify why more than 1 equation can represent a story problem.

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Unit 2: Addition and Subtraction Story Problems

Missouri Learning Standards

Priority Standards

- Use addition and subtraction within 20 to solve problems. (1.RA.A.1)
- Develop the meaning of the equal sign and determine if equations involving addition and subtraction are true or false. (1.RA.A.3)
- Demonstrate fluency with addition and subtraction within 10. (1.RA.C.8)

Supporting Standards

- Solve problems that call for addition of three whole numbers whose sum is within 20. (1.RA.A.2)
- Use properties as strategies to add and subtract. (1.RA.B.5)
- Demonstrate that subtraction can be solved as an unknown-addend problem. (1.RA.B.6)
- Add and subtract within 20. (1.RA.C.7)
- Count to 120, starting at any number less than 120. (1.NS.A.1)
- Read and write numerals and represent a number of objects with a written numeral. (1.NS.A.2)
- Count backward from a given number between 20 and 1. (1.NS.A.3)
- Count by 5s to 100 starting at any multiple of five. (1.NS.A.4)

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Unit 3: Adding and Subtracting within 20

Students apply the properties of operations to add and subtract within 20.

Unit Essential Learning Targets	
<i>Enduring Understandings</i>	<i>Essential Questions</i>
<ul style="list-style-type: none"> ● We can use objects, numbers, and pictures to help us solve addition and subtraction problems. 	<ul style="list-style-type: none"> ● How can you use your understanding of teen numbers as a ten and some ones to add and subtract within 20? ● How can you use the relationship between addition and subtraction to find unknown sums and differences?
<i>Students must know:</i>	<i>Students must be able to:</i>
<ul style="list-style-type: none"> ● Vocabulary <ul style="list-style-type: none"> ○ One(s) ○ Ten(s) 	<ul style="list-style-type: none"> ● Develop fluency with addition and subtraction within 10. ● Understand teen numbers are composed of a ten and a number of ones. ● Represent and solve <i>Add To, Start Unknown</i> story problems. ● Find sums within 20. ● Represent and solve story problems involving addition within 20. ● Find differences within 20. ● Represent and solve story problems involving subtraction within 20.

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Unit 3: Adding and Subtracting within 20

Missouri Learning Standards

Priority Standards

- Use addition and subtraction within 20 to solve problems. (1.RA.A.1)
- Develop the meaning of the equal sign and determine if equations involving addition and subtraction are true or false. (1.RA.A.3)
- Demonstrate fluency with addition and subtraction within 10. (1.RA.C.8)
- Understand two-digit numbers are composed of ten(s) and one(s). (1.NBT.A.2)

Supporting Standards

- Understand that 10 can be thought of as a bundle of 10 ones—called a “ten”. (1.NBT.A.1)
- Count by 10s to 120 starting at any number. (1.NBT.A.4)
- Solve problems that call for addition of three whole numbers whose sum is within 20. (1.RA.A.2)
- Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. (1.RA.A.4)
- Use properties as strategies to add and subtract. (1.RA.B.5)
- Demonstrate that subtraction can be solved as an unknown-addend problem. (1.RA.B.6)
- Add and subtract within 20. (1.RA.C.7)

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Unit 4: Numbers to 99

Students develop an understanding of the base-ten structure of numbers, allowing them to see that the 2 digits of a two-digit number represent amounts of tens and ones.

Unit Essential Learning Targets	
<i>Enduring Understandings</i>	<i>Essential Questions</i>
<ul style="list-style-type: none"> ● Place value and the properties of operations can help us to add and subtract. ● Place value can be useful in solving multi-digit addition and subtraction problems. 	<ul style="list-style-type: none"> ● How can we add and subtract tens? ● How can we represent and compare numbers to 99?
<i>Students must know:</i>	<i>Students must be able to:</i>
<ul style="list-style-type: none"> ● Vocabulary <ul style="list-style-type: none"> ○ Digit ○ Estimate ○ Ten(s) ○ One(s) ○ Greater Than ○ Less Than 	<ul style="list-style-type: none"> ● Represent the base-ten structure of two-digit multiples of 10. ● Add and subtract two-digit multiples of 10. ● Understand that the 2 digits of a two-digit number represent amounts of tens and ones. ● Add two-digit numbers and multiples of 10. ● Mentally find 10 more and 10 less than a two-digit number. ● Use place value understanding to compare 2 two-digit numbers, and record comparisons using the <, >, and = symbols. ● Create and interpret equivalent base-ten representations for two-digit numbers that show different amounts of tens and ones.

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Unit 4: Numbers to 99

Missouri Learning Standards

Priority Standards

- Develop the meaning of the equal sign and determine if equations involving addition and subtraction are true or false. (1.RA.A.3)
- Understand two-digit numbers are composed of ten (s) and ones (s). (1.NBT.A.2)
- Compare two two-digit numbers using the symbols $>$, $=$, or $<$. (1.NBT.A.3)
- Add or subtract a multiple of 10 from another two-digit number, and justify the solution. (1.NBT.B.7)
- Demonstrate fluency with addition and subtraction within 10. (1.RA.C.8)

Supporting Standards

- Count to 120, starting at any number less than 120. (1.NS.A.1)
- Read and write numerals and represent a number of objects with a written numeral. (1.NS.A.2)
- Understand that 10 can be thought of as a bundle of 10 ones – called a “ten”. (1.NBT.A.1)

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Unit 5: Adding Within 100

Students use place value understanding and properties of operations to add within 100.

Unit Essential Learning Targets

<i>Enduring Understandings</i>	<i>Essential Questions</i>
<ul style="list-style-type: none">Thinking about place value can help us solve addition problems.	<ul style="list-style-type: none">How can we add a one-digit number and a two-digit number?How can we add 2 two-digit numbers?When adding 2 numbers, what happens when the total amount of ones is 10 or more?
<i>Students must know:</i>	<i>Students must be able to:</i>
<ul style="list-style-type: none">Vocabulary<ul style="list-style-type: none">ComposeDecompose	<ul style="list-style-type: none">Add one-digit and two-digit numbers within 100, including adding a one-digit number and a two-digit number and adding 2 two-digit numbers, without composing a ten.Add two-digit numbers and one-digit numbers within 100 by composing a ten.Add 2 two-digit numbers within 100 by composing a ten.Solve story problems that require addition within 100.Use cubes or base 10 blocks to represent adding a two-digit number and one-digit number when composing a 10 is necessary.

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Unit 5: Adding Within 100

Missouri Learning Standards

Priority Standard

- Add or subtract a multiple of 10 from another two-digit number, and justify the solution. (1.NBT.B.7)

Supporting Standards

- Add within 100. (1.NBT.B.5)
- Use properties as strategies to add and subtract. (1.RA.B.5)
- Demonstrate fluency with addition and subtraction within 10. (1.RA.C.8)

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Unit 6: Measuring Lengths of Up to 120 Length Units

Students measure and count lengths up to 120 length units. They solve story problems with unknowns in all positions.

Unit Essential Learning Targets	
<i>Enduring Understandings</i>	<i>Essential Questions</i>
<ul style="list-style-type: none"> ● Objects can be compared and ordered by length. ● Two objects can be compared indirectly by comparing both to a third object. ● Measurement is a process of comparing a unit to the object being measured. ● The length of any object can be used as a measurement unit for length. 	<ul style="list-style-type: none"> ● How can we compare the lengths of objects? ● How can we measure and describe the lengths of objects? ● How can representing the relationship between the amounts in a story problem help us solve the problem?
<i>Students must know:</i>	<i>Students must be able to:</i>
<ul style="list-style-type: none"> ● Vocabulary <ul style="list-style-type: none"> ○ Length ○ Measure ○ Unit(s) ○ Compare 	<ul style="list-style-type: none"> ● Compare the lengths of objects directly and indirectly. ● Measure the lengths of objects using non-standard length units, from endpoint to endpoint with no gaps or overlaps. ● Measure the lengths of objects up to 120 length units using non-standard length units. ● Count groups of up to 120 objects and read and write numerals to 120. ● Solve addition and subtraction story problems, some involving length, with unknowns in all positions.

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Unit 6: Measuring Lengths of Up to 120 Length Units

Missouri Learning Standards

Priority Standards

- Compare the lengths of two objects indirectly by using a third object. (1.GM.B.6)
- Use addition and subtraction within 20 to solve problems. (1.RA.A.1)

Supporting Standards

- Order three or more objects by length. (1.GM.B.5)
- Demonstrate the ability to measure length or distance using objects. (1.GM.B.7)

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Unit 7: Geometry and Time

Students reason with shapes and their attributes, partition shapes into equal parts, and tell time to the hour and half hour.

Essential Learning Targets	
<i>Enduring Understandings</i>	<i>Essential Questions</i>
<ul style="list-style-type: none"> ● The hour hand tells the hour, and the minute hand tells the number of minutes after the hour. ● Time to the hour can be shown on an analog clock or on a digital clock and can be written in two ways: ___ o'clock or __:00. ● Shapes can be identified by their attributes. 	<ul style="list-style-type: none"> ● How can you describe and build shapes in your environment? ● How can you split shapes into equal parts? ● How can you use the positions of the hour and minute hands to tell time to the hour and half hour?
<i>Students must know:</i>	<i>Students must be able to:</i>
<ul style="list-style-type: none"> ● Vocabulary <ul style="list-style-type: none"> ○ Attribute ○ Fourth(s) ○ Half ○ Half Past ○ Halves ○ Hour Hand ○ Minute Hand ○ Rectangular Prism ○ Triangular Prism ○ Square Corner 	<ul style="list-style-type: none"> ● Compose and compare two- and three-dimensional shapes and identify and describe their defining attributes. ● Partition shapes into halves and fourths and describe the equal parts. ● Tell and write time to the hour and half hour.

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Unit 7: Geometry and Time

Missouri Learning Standards

Priority Standards

- Distinguish between defining attributes versus non-defining attributes; build and draw shapes that possess defining attributes. (1.GM.A.1)
- Compose and decompose two- and three- dimensional shapes to build an understanding of part-whole relationships and the properties of the original and composite shapes. (1.GM.A.2)
- Partition circles and rectangles into two or four equal shares, and describe the shares and the wholes verbally. (1.GM.A.4)

Supporting Standard

- Tell and write time in hours and half-hours using analog and digital clocks. (1.GM.C.8)