1st Grade Math Curriculum

Board Approved: March 21, 2024

Course Information

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.

Transfer Goals:
- Apply mathematics to problems arising in everyday life, society, and the workplace by using a problem solving model that incorporates analyzing information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution.
- Select tools as appropriate, including real objects, manipulatives, paper/pencil, and technology to solve problems.
- Select techniques as appropriate, including mental math, estimation, and number sense, to solve problems.
- Organize, record, and communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate.
- Analyze mathematical patterns and relationships to connect and communicate mathematical ideas.
- Display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication.

Curriculum Standards: [Missouri Learning Standards for Mathematics, Grade 1](#)

Curriculum Resource(s): *enVisionMATH Realize Edition © 2015, Savvas Education*

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Unit 1: Number Sense

Timeframe: *See current resource scope and sequence*

Unit Description: This unit extends students' counting sequence and understanding of the base ten number system (including reading, writing, comparing, and ordering numbers). Students will: ● Extend the counting sequence to understand, use, read, and write numbers up to 120. ● Understand place value.	

Enduring Understandings:	Essential Questions:
● Base ten blocks, number lines, ten-frames, patterns on a hundreds chart, number bonds, and other models can be used to better understand numbers, number patterns, and place value. ● Skip counting can be used to find the total number of objects in a collection of equal groups. ● Digits have different values in a number depending on their location.	● How does counting make use of patterns? ● How does place value make use of patterns? ● How can I represent the value of a given number using pictures, manipulatives, and numbers? ● What tools and models can I use to help me count, understand place value, and compare numbers?

Unit 1 Standards	
STANDARD CODE	**STUDENTS WILL KNOW, BE ABLE TO, AND UNDERSTAND:**
1.NS.A.1	● **I can count to 120 beginning at 0.** ● **I can count to 120 starting at any number less than 120.** ● **I can use the strategy of counting by tens to support "counting across the decade."**
1.NS.A.2	● **I can verbally identify numerals (written form) 0-120, when given numerals out of sequence.** ● **I can identify the next numeral (written form) in a forward number sequence up to 120.** ● **I can write numerals 0-120, when verbally prompted, in and out of sequence.** ● **I can produce a set of objects representing a given numeral up to 120.** ● **I can write a numeral to represent the quantity of objects in a given set 0-120.**
1.NS.A.3	● I can count backward from 20 to 0.

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	● I can identify the next numeral (written form) in a backward sequence, where the first numeral is less than or equal to 20. ● I can count backward from 20 starting at any number less than 20.
1.NS.A.4	● I can count by 5s from 0 to 100. ● I can count by 5s up to 100 starting at any multiple of five between 0 and 100.

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Unit 2: Number Sense and Operations in Base Ten
Timeframe: *See current resource scope and sequence*

Unit Description: This unit continues students' understanding of numbers using a variety of materials, drawing, and symbolic notation, including <, >, and =. Students also extend their understanding of and ability to add and subtract. Students will:
- Understand the place value of two-digit numbers.
- Use place value understanding and properties of operations to add and subtract within 100 and justify solutions.

Enduring Understandings:
- Digits have different values in a number depending on their location.
- An equation is a math sentence that has two equal sides separated by an equal sign.
- The equal sign is a math symbol that means "the same value as"; each side of the equal sign should show the same amount.
- Addition is adding on to a group, combining groups, or joining parts to make a whole.
- Subtraction is separating parts from a whole, finding a missing part, or comparing two quantities.
- Numbers can be broken into parts in different ways to make adding and subtracting easier.
- Base ten blocks, number lines, ten-frames, patterns on a hundreds chart, number bonds, and other models can be used to add or subtract numbers and to develop mental math strategies and number sense.
- Addition and subtraction have an inverse relationship. This relationship can be used to find subtraction facts- every subtraction fact has a related addition fact.
- There are many ways to solve addition and subtraction problems. Some are more efficient than others.
- Answers to problems should always be checked for reasonableness, and this

Essential Questions:
- What tools and models can I use to help me understand place value and compare numbers?
- What does it mean for two quantities to be equal or have the same value?
- What strategies can I use to add and subtract numbers?
- How can I use equations to represent what is happening in a math problem?
- How can I use addition to help me with subtraction?
- How can models help me when adding and subtracting?
- What efficient strategies can I use for adding and subtracting two numbers?
- How can I check if my answer is reasonable?

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	can be done in different ways.	

Unit 2 Standards	
STANDARD CODE	**STUDENTS WILL KNOW, BE ABLE TO, AND UNDERSTAND:**
1.NBT.A.1	● I can decompose 1 ten into 10 ones. ● I can compose 10 ones into a bundle of 1 ten, called a "ten."
1.NBT.A.2	● **I can decompose a two-digit number using ten(s) and one(s), in multiple ways.** ● **I can compose ten(s) and one(s) to form a two-digit number.** ● **I can decompose a given set of tens into the equivalent ones.** ● **I can compose a given set of ones (that are multiples of ten) into bundle(s) of ten(s), called a "ten" and zero "ones."**
1.NBT.A.3	● I can compare two two-digit numbers based on the meaning (value) of the tens and ones digits. ● I can use the meaning (value) of the tens and ones digits to explain the comparison of two two-digit numbers. ● I can record the results of comparison using the symbols >, =, and <.
1.NBT.A.4	● I can count by 10s from 0 to 120. ● I can count by 10s to 120 starting at any multiple of ten less than 120. ● I can count by 10s within 120 starting at any given number between 0 and 110.
1.NBT.B.5	● I can add a one-digit number and a one-digit number. For sums that are 10 or more, I can justify the answer using concrete models, drawings, and/or symbols to convey strategies that connect to place value understanding. ● I can add within 100 by adding a two-digit number and a one-digit number and justify the answer using concrete models, drawings, and/or symbols to convey strategies that connect to place value understanding. ● I can add within 100 by adding a two-digit number and a multiple of 10 and justify the answer using concrete models, drawings, and/or symbols to convey strategies that connect to place value understanding. ● I can add two two-digit numbers whose sum is within 100 by adding tens to tens and ones to ones and justify the answer using concrete models, drawings, and/or symbols to convey strategies that connect to place value understanding..
1.NBT.B.6	● I can mentally find 10 more than a given two-digit number without having to count. ● I can mentally find 10 less than a given two-digit number without having

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	to count.
1.NBT.B.7	**I can add a multiple of 10 to a two-digit number within 100.** **I can subtract a multiple of 10 from a two-digit number within 100.** **I can justify answers when adding a multiple of 10 within 100 using concrete models, drawings, and/or symbols that convey strategies that connect to place value understanding.** **I can justify answers when subtracting a multiple of 10 within 100 using concrete models, drawings, and/or symbols that convey strategies that connect to place value understanding.** **I can solve for two-digit numbers by adding tens to tens and ones to ones.** **I can solve for two-digit numbers by subtracting tens from tens and ones from ones.**

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Unit 3: Relationships and Algebraic Thinking

Timeframe: *See current resource scope and sequence*

Unit Description: This unit builds a deeper understanding of problem situations for addition and subtraction. Students extend their work from kindergarten by representing additional situations for addition and subtraction and develop more sophisticated strategies for addition and subtraction. Students will:
- Represent and solve problems involving addition and subtraction.
- Understand and apply properties of operations and the relationship between addition and subtraction.
- Develop fluency for basic addition facts.
- Work with addition and subtraction equations.

Enduring Understandings:
- Base ten blocks, number lines, ten-frames, patterns on a hundreds chart, number bonds, and other models can be used to add or subtract numbers and to develop mental math strategies and number sense.
- Addition problems represent adding on to a group, combining groups, or joining parts to make a whole.
- Subtraction problems represent separating parts from a whole, finding a missing part, or comparing two quantities.
- The relationship of numbers to five and ten are useful in thinking about various combinations of numbers.
- There are some rules (called properties in math) that are always true in math.
  - One of these properties is the identity property, which states that any number plus or minus 0 equals the start number. For example, 6 + 0 = 6, and 6 - 0 = 6.
  - Another property is the commutative property, which states that numbers can be added in any order. For example, 1+2=3, and 2+1=3.
  - The associative property states that when more than 2 numbers are added together, the way they are grouped gives us the same

Essential Questions:
- How do I decide what strategy will work best in a given problem situation?
- How can I use what I know about similar problems to help me be a more efficient problem solver?
- How do I know when I need to regroup?
- How does place value help me add and subtract?
- How can number properties (special math rules) assist me in computation?
- What strategies will help me add multiple numbers quickly and accurately?
- How do I know when my answer makes sense?

	sum. For example, (2+1)+3=6, and 2+(1+3)=6.	

Unit 3 Standards

STANDARD CODE	STUDENTS WILL KNOW, BE ABLE TO, AND UNDERSTAND:
1.RA.A.1	● **I know that word problems about adding to, putting together, and sometimes comparing with unknowns use addition.** ● **I know that word problems about taking from, taking apart, and sometimes comparing with unknowns use subtraction.** ● **I can solve problems involving addition within 20 by using strategies such as adding to, putting together, and comparing with unknowns in all positions.** ● **I can solve problems involving subtraction within 20 by using strategies such as taking from, taking apart, and comparing with unknowns in all positions.**
1.RA.A.2	● I can solve addition problems of three whole numbers with sums/totals less than 20. ● I can solve word problems that call for addition of three whole numbers with sums/totals than 20. ● I can use objects, drawings, and equations with a symbol for the unknown number to represent the problem of three whole numbers with sums/totals than 20.
1.RA.A.3	● I can show my understanding of the meaning of the equal sign using objects, drawings, etc. ● I can determine if equations involving addition and subtraction are true or false.
1.RA.A.4	● I can find the unknown whole number in an addition or subtraction equation relating three whole numbers.
1.RA.B.5	● **I can use what I know about fact families to solve addition and subtraction equations.** ● **I can make a 10 to solve addition equations.** ● **I can explain patterns in addition and subtraction.**
1.RA.B.6	● I can model how subtraction can be solved using unknown-addend problems. ● I can find the unknown addend in a subtraction equation.
1.RA.C.7	● I can add using a variety of strategies within 20, such as: 　○ counting on; 　○ making ten;

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	○ using the relationship between addition and subtraction; ○ creating equivalent but easier or known sums. - I can subtract using a variety of strategies within 20, such as: ○ decomposing a number leading to a ten; ○ using the relationship between addition and subtraction.
1.RA.C.8	- I can use multiple representations to model real-world and mathematical problems involving addition and subtraction within ten. - I can respectfully critique the reasoning of others, identifying errors and alternate approaches to solving problems involving addition and subtraction within ten. - I can represent a situation using symbols and find solutions to explain my reasoning in addition and subtraction problems. - I can make meaning of the symbols in a problem to find solutions and explain my reasoning in addition and subtraction problems. - I can identify and explain patterns and the structure of the problems with specific focus on the properties of mathematics when solving problems involving addition and subtraction within ten. - I can precisely communicate my reasoning to problems involving addition and subtraction within ten.

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Unit 4: Geometry and Measurement
Timeframe: *See current resource scope and sequence*

Unit Description: Students reason with shapes and their attributes, building on their kindergarten experiences of sorting, analyzing, comparing, and creating a variety of 2-D and 3-D shapes and objects. They will use 2-D and 3-D shapes to create a larger composite shape and will divide circles and rectangles into halves and fourths/quarters. Students will learn how to measure length with non-standard units and objects, begin telling time, and understand the value of coins. Students will:
- Reason with shapes and their attributes.
- Measure lengths in non-standard units.
- Work with time and money.

Enduring Understandings:
GEOMETRY
- Shapes have attributes that make them different from one another.
- Two-dimensional shapes can be described by their sides and corners.
- Shapes can be combined or broken apart to make other shapes.
- Equal shares can be created by partitioning wholes.

MEASUREMENT- LENGTH
- Length is the distance from one end on an object to its other end.
- Objects can be compared and ordered by length.

MEASUREMENT- TIME
- Minutes and hours are units of time.
- The hour hand tells the hour, and the minute hand tells the number of minutes after the hour.

MEASUREMENT- MONEY
- Each coin has a unique value.
- A given amount of money can be represented in multiple ways.

Essential Questions:
GEOMETRY
- What are different ways shapes can be sorted or grouped?
- What makes a half a half?
- What makes a fourth a fourth?

MEASUREMENT- LENGTH
- How can I tell when one object is longer than another?
- How can I use objects to measure other objects?

MEASUREMENT- TIME
- How do I tell the difference between minutes and hours on a clock?
- What are different ways to write and tell time on a clock?

MEASUREMENT- MONEY
- What are the benefits of having coins of different values?
- How can I find the value of a combination of coins?
- How can I combine coins to create a given value?

Unit 4 Standards	
STANDARD CODE	**STUDENTS WILL KNOW, BE ABLE TO, AND UNDERSTAND:**
1.GM.A.1	- **I can identify defining attributes, such as the number of sides or types**

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	of corners, in shapes. ● **I can identify non-defining attributes, such as size or color, in shapes.** ● **I know the difference between defining attributes and non-defining attributes.** ● **I can build and draw shapes to possess defining attributes.** ● **I can describe the similarities and differences of two two-dimensional shapes.**
1.GM.A.2	● I can draw two-dimensional shapes. ● I can put two or more shapes together to make a new, larger shape (2-dimensional and 3-dimensional). ● I can break apart a larger shape into two or more smaller shapes (2-dimensional and 3-dimensional). ● I can identify the properties of original and composite shapes.
1.GM.A.3	● I can recognize 2- and 3-dimensional shapes from different perspectives and orientations.
1.GM.A.4	● I can partition (divide) circles into two equal shares. ● I can partition (divide) rectangles into two equal shares. ● I can partition (divide) circles into four equal shares. ● I can partition (divide) rectangles into four equal shares. ● I can describe the partitioned shapes using the phrases half of, fourth of, and quarter of. ● I can describe the whole of a partitioned shape as "two of" or "four of" the shares. ● I understand that decomposing into more equal shares creates smaller shares.
1.GM.B.5	● I can compare three or more objects by their length using the terms short, shorter, shortest, long, longer, longest, same as, equal to. ● I can order three or more objects by length.
1.GM.B.6	● I can compare the lengths of two objects indirectly by using a third object.
1.GM.B.7	● **I can use non-standard units of measurement to measure length.** ● **I can find the length of an object as a whole number of length units by laying the same size length units end to end.**
1.GM.C.8	● I can tell time in hours using digital clocks. ● I can tell time in half hours using digital clocks. ● I can tell time in hours using analog clocks. ● I can tell time in half hours using analog clocks. ● I can write time in hours using digital clocks. ● I can write time in half hours using digital clocks. ● I can write time in hours using analog clocks. ● I can write time in half hours using analog clocks.

1.GM.C.9	- I know the value of a penny. - I know the value of a nickel. - I know the value of a dime. - I know the value of a quarter.

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Unit 5: Data and Statistics

Timeframe: *See current resource scope and sequence*

Unit Description:

Students will pose questions and collect, interpret, and analyze data. Students will represent and interpret data for up to three categories in object graphs, picture graphs, T-charts, and tally charts.

Enduring Understandings:
- Graphs can be used to visually organize information and make comparisons.
- Data can be displayed in a variety of ways.

Essential Questions:
- How can graphs be used to show data and answer questions?
- How do I create, label, and put data in an object or picture graph?
- How do I create, label, and put data in a T-chart or tally chart?

Unit 5 Standards	
STANDARD CODE	**STUDENTS WILL KNOW, BE ABLE TO, AND UNDERSTAND:**
1.DS.A.1	- I can collect data for up to three categories using object graphs. - I can organize data for up to three categories using object graphs. - I can represent data for up to three categories using object graphs. - I can collect data for up to three categories using picture graphs. - I can organize data for up to three categories using picture graphs. - I can represent data for up to three categories using picture graphs. - I can collect data for up to three categories using T-charts. - I can organize data for up to three categories using T-charts. - I can represent data for up to three categories using T-charts. - I can collect data for up to three categories using tally charts. - I can organize data for up to three categories using tally charts. - I can represent data for up to three categories using tally charts.
1.DS.A.2	**I can draw conclusions from given object graphs.** **I can draw conclusions from given picture graphs.** **I can draw conclusions from given T-charts.** **I can draw conclusions from given tally charts.** Drawing conclusions includes: asking and answering questions about the total number of data points; finding how many in each category; and finding how many more or less are in one category compared to another category.