KPBSD MATH CURRICULUM
1st GRADE
Year at a Glance

This document provides a birds-eye view of the First Grade math "curriculum map." Please note, some standards are partially taught in early units and re-visited throughout the year. For complete understanding of content to be taught, please visit the First Grade "curriculum map."

	Unit 1	**Unit 2**	**Unit 3**	**Unit 4**	**Unit 5**	**Unit 6**	**Unit 7**	**Unit 8**	**Money**
Title	Using Numbers to Explore Our Mathematical Community	Building a Conceptual Understanding of Addition and Subtraction	Using Place Value to Compare Numbers	Understanding Measurement and Data as a Context to Compare Numbers	Operating with Place Value	Distinguishing, Composing, and Partitioning Shapes	Telling Time to the Half Hour	Developing Flexibility with Numbers	Money
Duration	3-4 Weeks	3-4 Weeks	4-6 Weeks	3-4 Weeks	4-6 Weeks	3 Weeks	3 Weeks	3 Weeks	1-2 Week
Content Standards	1.OA.9 1.CC.1 1.CC.2 1.CC.3 1.CC.6 1.NBT.1	1.OA.1 1.OA.6 1.OA.2 1.OA.3 1.OA.5 1.OA.7 1.OA.8	1.OA.1 1.CC.4 1.CC.5 1.NBT.1 1.NBT.2 1.NBT.3	1.MD.1 1.MD.7 1.CC.5 1.OA.2 1.MD.2 1.NBT.3	1.NBT.4 1.NBT.6 1.OA.1 1.CC.4 1.NBT.5 1.OA.3 1.OA.7	1.G.3 1.G.1 1.G.2	1.MD.3 1.MD.4 1.CC.1	1.OA.1 1.OA.6 1.OA.8 1.OA.2 1.OA.3 1.OA.4	MD.6 MD.5 1.CC.1
Practice Standards									

KPBSD MATH CURRICULUM
1st GRADE
MONEY

Desired Results

Priority Standards

1.MD.5. Recognize and read money symbols including $ and ¢.
1.MD.6. Identify values of coins (e.g., nickel = 5 cents, quarter = 25 cents). Identify equivalent values of coins up to $1 (e.g., 5 pennies = 1 nickel, 5 nickels = 1 quarter).
1.CC.1. Skip count by 2s and 5s.

Transfer

Students will be able to independently use their learning to…
Correctly identifying US coins helps us manage our finances.

Meaning

ENDURING UNDERSTANDINGS

Students will understand that…

- Coins have specific values.

ESSENTIAL QUESTIONS

Students will keep considering…

- How can I represent the value of money?

Acquisition

Students will know…

- The values of quarters, dimes, nickels, pennies, and dollars.
- The appropriate way to show dollars and cents using the $ and ¢ symbols.

Students will be skilled at…

- I can identify pennies, nickels, dimes, and quarters.
- I know the value of pennies, nickels, dimes, and quarters.
- I can count the value of pennies, nickels, dimes, and quarters.
- I can recognize that ¢ represents cents and $ represents dollars.
- I can put various coins together to create equivalent values.

Evidence

Vocabulary

- Number
- Numeral
- Quantity
- Identify
- Count on
- Represent
- One-to-one correspondence
- Sequential

Mathematical Practices (Bolded practices are priority for this unit)

- Make sense of problems and persevere in solving them.
- Reason abstractly and quantitatively.
- Construct viable arguments and critique the reasoning of others.
- **Model with mathematics.**
- Use appropriate tools strategically.
- **Attend to precision.**
- Look for and make use of structure.
- Look for and express regularity in repeated reasoning.

KPBSD MATH CURRICULUM
1st GRADE
UNIT 1 –USING NUMBERS TO EXPLORE OUR MATHEMATICAL COMMUNITY

Desired Results

Priority Standards

1.OA.9. Identify, continue, and label patterns (e.g., aabb, abab). Create patterns using numbers, shapes, sizes, rhythms, or colors.

Supporting Standards

1.CC.1. Skip count by 2s and 5s.

1.CC.2. Use ordinal numbers correctly when identifying object position (e.g., first, second, third, etc.).

1.CC.3. Order numbers from 1 - 100. Demonstrate ability in counting forward and backward.

1.CC.6. Estimate how many and how much in a given set to 20 and then verify estimate by counting.

1.NBT.1. Count to 120. In this range, read, write, and order numerals and represent a number of objects with a written numeral.

Transfer

Students will be able to independently use their learning to…

Build a community of mathematical problem solvers and explore how numbers are used in their world.

Meaning

ENDURING UNDERSTANDINGS

Students will understand that…

- Numbers help us to understand and order our surroundings.
- Patterns help us organize and predict events in our world.
- Skip counting helps us count more efficiently.
- Counting verifies our estimation.

ESSENTIAL QUESTIONS

Students will keep considering…

- How do I use numbers to make sense of my surroundings?
- What are different ways I can count efficiently?
- Why do I estimate?

Acquisition

Students will know…

- How to count to 120.
- How to write and order numbers to 120.
- How to count forward & backwards 1-100.
- How to estimate in a given set to 20 and count to verify the answer.

Students will be skilled at…

- I can count to 120.
- I can recognize number patterns.
- I can skip count by 2’s and 5’s.
- I can use ordinal numbers to identify an objects position correctly.
- I can count forward to 100 and backward from 100.
- I can create, identify, and label patterns.
- I can estimate a number within a set of 20 and count to verify.

KPBSD MATH CURRICULUM
1st GRADE
UNIT 1 –USING NUMBERS TO EXPLORE OUR MATHEMATICAL COMMUNITY

Evidence	
Vocabulary • Number • Numeral • Quantity • Identify • Count on • Represent • One-to-one correspondence • Sequential	**Mathematical Practices (Bolded practices are priority for this unit)** • Make sense of problems and persevere in solving them. • Reason abstractly and quantitatively. • Construct viable arguments and critique the reasoning of others. • **Model with mathematics.** • Use appropriate tools strategically. • **Attend to precision.** • Look for and make use of structure. • Look for and express regularity in repeated reasoning.

KPBSD MATH CURRICULUM
1st GRADE
UNIT 2 –BUILDING A CONCEPTUAL UNDERSTANDING OF ADDITION AND SUBTRACTION

Desired Results

Priority Standards

1.OA.1. Use addition and subtraction strategies to solve word problems (using numbers up to 20), involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, using a number line (e.g., by using objects, drawings and equations). Record and explain using equation symbols and a symbol for the unknown number to represent the problem.

1.OA.6. Add and subtract using numbers up to 20, demonstrating fluency for addition and subtraction up to 10. Use strategies such as:

- Counting on.
- Making ten (8 + 6 = 8 + 2 + 4 = 10 + 4 = 14).
- Decomposing a number leading to a ten (13 - 4 = 13 - 3 - 1 = 10 - 1 = 9).
- Using the relationship between addition and subtraction, such as fact families, (8 + 4 = 12 and 12 - 8 = 4).
- Creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13).

Supporting Standards

1.OA.3. Apply properties of operations as strategies to add and subtract. (Students need not know the name of the property.)

Transfer

Students will be able to independently use their learning to…
Add and subtract to solve real-world problems.

Meaning

ENDURING UNDERSTANDINGS

Students will understand that…

- There is a relationship between addition and subtraction.
- There are various strategies (properties of operation) that can be used to solve addition and subtraction problems.
- Numbers represent a value and symbols represent an operation.

ESSENTIAL QUESTIONS

Students will keep considering…

- What are strategies I can use to solve addition and subtraction problems?
- How are addition and subtraction related?
- How do I determine if equations are true or false?

Acquisition

Students will know…

- Addition means combining to find the sum.
- Subtraction means taking away to find the difference.
- An equal sign represents balance on both sides of the equation, not “the answer is.”
- Properties of operations are strategies to add and subtract problems within 20.
- Addition and subtraction strategies.
- Addition and subtraction problems up to 10 fluently.
- There is a correlation between number and quantities.
- Addition and subtraction strategies to determine if an equation is true or false.

Students will be skilled at…

- I can add numbers up to 20 in many different ways.
- I can subtract numbers up to 20 in many different ways.
- I can use strategies to solve word problems.
- I can write an equation using the correct symbols to solve problems up to 20.
- I can fluently solve addition up to 10.
- I can fluently solve subtraction up to 10.
- I can determine whether an addition or subtraction number sentence is true or false.
- I can explain how the two sides of an equation are equal.

For example: If 8 + 3 = 11 is known, then 3 + 8 = 11 is also known (Commutative property of addition). To add 2 + 6 + 4, the second two numbers can be added to make a ten, so 2 + 6 + 4 = 2 + 10 = 12 (Associative property of addition). Demonstrate that when adding zero to any number, the quantity does not change (Identity property of addition). **1.OA.5.** Relate counting to addition and subtraction (e.g., by counting on 2 to add 2). **1.OA.7.** Understand the meaning of the equal sign (e.g., read equal sign as "same as") and determine if equations involving addition and subtraction are true or false. *For example, which of the following equations are true and which are false?6 = 6, 7 = 8 - 1, 5 + 2 = 2 + 5, 4 + 1 = 5 + 2).* **1.OA.8.** Determine the unknown whole number in an addition or subtraction equation. *For example, determine the unknown number that makes the equation true in each of the equations 8 + ? = 11, 6 + 6 = ?, 5 = ? - 3.*		

KPBSD MATH CURRICULUM
1st GRADE
UNIT 2 –BUILDING A CONCEPTUAL UNDERSTANDING OF ADDITION AND SUBTRACTION

Evidence	
Vocabulary • Add (+) • Subtract (-) • Solve • Compare • Sum • Difference • Equal (=) symbol • Strategies • Addition • Subtraction • Fluency • Balanced equation • Number sentence • True and false • Equation • Determine • Unknown • Whole number • Relating	**Mathematical Practices (Bolded practices are priority for this unit)** • **Make sense of problems and persevere in solving them.** • **Reason abstractly and quantitatively.** • Construct viable arguments and critique the reasoning of others. • **Model with mathematics.** • Use appropriate tools strategically. • Attend to precision. • **Look for and make use of structure.** • **Look for and express regularity in repeated reasoning.**

KPBSD MATH CURRICULUM
1st GRADE
UNIT 3 – USING PLACE VALUE TO COMPARE NUMBERS

Desired Results

Priority Standards

1.OA.1. Use addition and subtraction strategies to solve word problems (using numbers up to 20), involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, using a number line (e.g., by using objects, drawings, and equations). Record and explain using equation symbols and a symbol for the unknown number to represent the problem.

1.CC.4. Count a large quantity of objects by grouping into 10s and counting by 10s and 1s to find the quantity.

Supporting Standards

1.NBT.1. Count to 120. In this range, read, write, and order numerals and represent a number of objects with a written numeral.

1.NBT.2. Model and identify place value positions of two digit numbers. Include:

a) 10 can be thought of as a bundle of ten ones, called a "ten".
b) The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.
c) The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90, refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones).

1.NBT.3. Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, <.

1.CC.5. Use the symbols for greater than, less than, or equal to when comparing two numbers or groups of objects.

Transfer

Students will be able to independently use their learning to…
Use place value to compare and order numbers.

Meaning

ENDURING UNDERSTANDINGS

Students will understand that…

- The base ten number system is based on groups of ten.
- The value of a digit in the base ten number system is determined by its place value position.

ESSENTIAL QUESTIONS

Students will keep considering…

- How does a digit's placement determine its value?

Acquisition

Students will know…

- Digits are 0 to 9.
- The highest digit that any place can hold is nine.
- 100's, 10's and 1's can be represented with concrete materials.
- Numbers have place value.
- The meaning of greater than, less than, and equal when comparing numbers.
- Numbers are compared beginning with the highest place value.

Students will be skilled at…

- I can identify the ones digit, tens digit in a two-digit number.
- I can identify the value of each digit.
- I can use manipulatives or a picture to show the ones and tens in a two-digit number.
- I can compare two-digit numbers by looking at the tens and ones digits.
- I can use the symbols >, <, and = to compare 3-digit numbers.
- I can write numbers using place value.

KPBSD MATH CURRICULUM
1st GRADE
UNIT 3 – USING PLACE VALUE TO COMPARE NUMBERS

Evidence	
Vocabulary • Ones • Tens • Hundreds • Place value • Less than • Greater than • Equal to • Digit • Symbol • Compare	**Mathematical Practices (Bolded practices are priority for this unit)** • Make sense of problems and persevere in solving them. • **Reason abstractly and quantitatively.** • **Construct viable arguments and critique the reasoning of others.** • **Model with mathematics.** • Use appropriate tools strategically. • Attend to precision. • **Look for and make use of structure.** • Look for and express regularity in repeated reasoning.

KPBSD MATH CURRICULUM
1st GRADE
UNIT 4 – UNDERSTANDING MEASUREMENT AND DATA AS A CONTEXT TO COMPARE NUMBERS

Desired Results

Priority Standards

1.MD.1. Measure and compare three objects using standard or non-standard units.

1.MD.7. Organize, represent, and interpret data with up to three categories. Ask and answer comparison and quantity questions about the data.

Supporting Standards

1.MD.2. Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps.

1.CC.5. Use the symbols for greater than, less than, or equal to when comparing two numbers or groups of objects.

1.OA.2. Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20 (e.g., by using objects, drawings, and equations). Record and explain using equation symbols and a symbol for the unknown number to represent the problem.

1.NBT.3. Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, <.

Transfer

Students will be able to independently use their learning to…

Compare information by collecting and analyzing data and measurements.

Meaning

ENDURING UNDERSTANDINGS

Students will understand that…

- Measurement is a process of comparing units to the object being measured.
- Different units can be used to measure length.
- Data can be represented in a visual model.

ESSENTIAL QUESTIONS

Students will keep considering…

- How can measurements be used to solve problems?
- How can the collection, organization, interpretation, and display of data be used to answer questions?
- How does the length of the unit of measure affect the number of units needed to measure an object's length?

Acquisition

Students will know…

- Data can be created, collected, and analyzed.
- Objects can be compared.
- The length of an object is the number of same-size units that span its length with no gaps end to end.
- Objects can be compared and ordered according to length.
- Nonstandard units can be used to estimate and measure length.

Students will be skilled at…

- I can order three objects by length.
- I can compare the lengths of the two objects by using a third object.
- I can express how many units long an object is.
- I can organize, represent, and interpret data with up to three categories.

KPBSD MATH CURRICULUM
1st GRADE
UNIT 4 – UNDERSTANDING MEASUREMENT AND DATA AS A CONTEXT TO COMPARE NUMBERS

Evidence	
Vocabulary • Measure • Length • Standard • Non-standard • End-to-end • Overlaps • Gaps • Picture graph • Bar graph • Data • Tally mark • Table • Chart	**Mathematical Practices (Bolded practices are priority for this unit)** • **Make sense of problems and persevere in solving them.** • **Reason abstractly and quantitatively.** • Construct viable arguments and critique the reasoning of others. • **Model with mathematics.** • **Use appropriate tools strategically.** • Attend to precision. • Look for and make use of structure. • Look for and express regularity in repeated reasoning.

KPBSD MATH CURRICULUM
1st GRADE
UNIT 5 – OPERATING WITH PLACE VALUE

Desired Results

Priority Standards

1.NBT.4. Add using numbers up to 100 including adding a two-digit number and a one-digit number and adding a two-digit number and a multiple of 10. Use:

- Concrete models or drawings and strategies based on place value.
- Properties of operations.
- And/or relationship between addition and subtraction.

Relate the strategy to a written method and explain the reasoning used. Demonstrate in adding two-digit numbers, tens and tens are added, ones and ones are added and sometimes it is necessary to compose a ten from ten ones.

1.NBT.6. Subtract multiples of 10 up to 100. Use:

- Concrete models or drawings.
- Strategies based on place value.
- Properties of operations.
- And/or the relationship between addition and subtraction.

Relate the strategy to a written method and explain the reasoning used.

1.OA.1. Use addition and subtraction strategies to solve word problems (using numbers up to 20), involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, using a number line (e.g., by using objects, drawings, and equations). Record and explain using equation symbols and a symbol for the unknown number to represent the problem.

Transfer

Students will be able to independently use their learning to…
Use place value to solve real-world problems.

Meaning

ENDURING UNDERSTANDINGS

Students will understand that…

- Our number system is based on groups of ten.
- The value of a digit in our number system is determined by its place value position.

ESSENTIAL QUESTIONS

Students will keep considering…

- Why does place value matter when adding and subtracting?

Acquisition

Students will know…

- Digits are 0 through 9.
- The highest digit that any place can hold is nine.
- How to add two-digit numbers.
- Numbers have place value.
- A variety of strategies can be used to solve addition and subtraction problems.
- Equations represent problems in a numerical form.

Students will be skilled at…

- I can use objects or drawings and explain how I solved a 2-digit addition problem.
- I can mentally add 10 to any 1- or 2-digit number.
- I can mentally subtract 10 from any 2-digit number.
- I can write numbers using place value.
- I can explain why I used a strategy to solve a problem.
- I can determine if an equation is true or false.
- I can add two numbers in any order to get the same sum.
- I can accurately align numbers according to place value to add and subtract.

KPBSD MATH CURRICULUM
1st GRADE
UNIT 5 – OPERATING WITH PLACE VALUE

Supporting Standards **1.CC.4.** Count a large quantity of objects by grouping into 10s and counting by 10s and 1s to find the quantity. **1.NBT.5.** Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used. **1.OA.3.** Apply properties of operations as strategies to add and subtract. (Students need not know the name of the property.) *For example, If 8 + 3 = 11 is known, then 3 + 8 = 11 is also known (Commutative property of addition). To add 2 + 6 + 4, the second two numbers can be added to make a ten, so 2 + 6 + 4 = 2 + 10 = 12 (Associative property of addition). Demonstrate that when adding zero to any number, the quantity does not change (Identity property of addition).* **1.OA.7.** Understand the meaning of the equal sign (e.g., read equal sign as "same as") and determine if equations involving addition and subtraction are true or false. *For example, which of the following equations are true and which are false? 6 = 6, 7 = 8 - 1, 5 + 2 = 2 + 5, 4 + 1 = 5 + 2).*		

KPBSD MATH CURRICULUM
1st GRADE
UNIT 5 – OPERATING WITH PLACE VALUE

Evidence	
Vocabulary • Subtraction • Addition • Place value • Multiples of 10 • Number sentence • True • False • Sum • Difference • Add (+) • Subtract (-) • Equal Symbol (=) • Solve • Fact Families • Compare	**Mathematical Practices (Bolded practices are priority for this unit)** • **Make sense of problems and persevere in solving them.** • Reason abstractly and quantitatively. • Construct viable arguments and critique the reasoning of others. • **Model with mathematics.** • Use appropriate tools strategically. • Attend to precision. • **Look for and make use of structure.** • Look for and express regularity in repeated reasoning.

KPBSD MATH CURRICULUM
1st GRADE
UNIT 6 – DISTINGUISHING, COMPOSING, AND PARTITIONING SHAPES

Desired Results

Priority Standards

1.G.3. Partition circles and rectangles into two and four equal shares. Describe the shares using the words halves, fourths, and quarters and phrases half of, fourth of, and quarter of. Describe the whole as two of or four of the shares. Understand for these examples that decomposing (break apart) into more equal shares creates smaller shares.

Supporting Standards

1.G.1. Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes. Identify shapes that have non-defining attributes (e.g., color, orientation, overall size). Build and draw shapes given specified attributes.

1.G.2. Compose (put together) two-dimensional or three-dimensional shapes to create a larger, composite shape, and compose new shapes from the composite shape.

Transfer

Students will be able to independently use their learning to…
Identify, describe, classify and compose shapes based on their attributes.

Meaning

ENDURING UNDERSTANDINGS

Students will understand that…

- Shapes have attributes and characteristics that define them.
- Composite shapes are formed by combining shapes based on attributes.
- A shape can be decomposed by partitioning.

ESSENTIAL QUESTIONS

Students will keep considering…

- What is the difference between defining and non defining attributes?
- How can a shape be divided into equal parts?
- How can I break a shape into smaller shapes?
- How can I use smaller shapes to make a new shape?
- What is the difference between a 2-dimensional and 3-dimensional shape?

Acquisition

Students will know…

- Shapes may or may not have non-defining attributes.
- 2D or 3D shapes can be used to make composite shapes.
- Shapes can be broken apart into other shapes.
- Shapes can be divided into smaller, equal parts.

Students will be skilled at…

- I can identify the attributes of shapes.
- I can build shapes using specific attributes.
- I can compose shapes using smaller 2D and 3D shapes.
- I can use manipulatives to make shapes.
- I can name the equal shares of a shape.
- I can break apart a circle or rectangle into smaller shares that are equal.

KPBSD MATH CURRICULUM
1st GRADE
UNIT 6 – DISTINGUISHING, COMPOSING, AND PARTITIONING SHAPES

Evidence	
Vocabulary • Defining attributes • Non-defining attributes • Similarities • Differences • Build • Draw • Compare • Sort • 2-D shapes • 3-D shapes • Composite shapes • Equal • Circle • Rectangle • Shares • Halves • Fourths • Quarters • Wholes • Decompose • Divide	**Mathematical Practices (Bolded practices are priority for this unit)** • **Make sense of problems and persevere in solving them.** • Reason abstractly and quantitatively. • **Construct viable arguments and critique the reasoning of others.** • **Model with mathematics.** • **Use appropriate tools strategically.** • **Attend to precision.** • Look for and make use of structure. • Look for and express regularity in repeated reasoning.

KPBSD MATH CURRICULUM
1st GRADE
UNIT 7 – TELLING TIME TO THE HALF HOUR

Desired Results

Priority Standards

1.MD.3. Tell and write time in half hours using both analog and digital clocks.

1.MD.4. Read a calendar distinguishing yesterday, today, and tomorrow. Read and write a date.

Supporting Standards

1.CC.1. Skip count by 2s and 5s.

Transfer

Students will be able to independently use their learning to…
Read time and use it to answer questions about their world.

Meaning

ENDURING UNDERSTANDINGS

Students will understand that…

- Minutes, hours, and days are units that can be used to estimate and order time durations.
- Reading a calendar helps us tell a longer measurement of time.
- Writing dates help us organize our information.

ESSENTIAL QUESTIONS

Students will keep considering…

- Why do I need to tell time?
- What are ways time is represented?
- What are the different ways to estimate time?

Acquisition

Students will know…

- Minutes and hours are represented by the hands on an analog clock or the numbers on a digital clock.
- The relationship between the hour and minutes.
- A calendar is used to tell time.
- The different ways to write the date.

Students will be skilled at…

- I can tell and write time in hours and half-hours using analog and digital clocks.
- I can read the date and identify the month, day, and year.
- I can write the date.
- I can read a calendar and tell today, yesterday, and tomorrow.

KPBSD MATH CURRICULUM
1st GRADE
UNIT 7 – TELLING TIME TO THE HALF HOUR

Evidence	
Vocabulary • Hour • Minute • Second • Half hour • Clock face • Minute hand • Hour hand • Second hand • Analog • Digital	**Mathematical Practices (Bolded practices are priority for this unit)** • Make sense of problems and persevere in solving them. • **Reason abstractly and quantitatively.** • Construct viable arguments and critique the reasoning of others. • **Model with mathematics.** • **Use appropriate tools strategically.** • **Attend to precision.** • **Look for and make use of structure.** • Look for and express regularity in repeated reasoning.

KPBSD MATH CURRICULUM
1st GRADE
UNIT 8 – DEVELOPING FLEXIBILITY WITH NUMBERS

Desired Results

Priority Standards

1.OA.1. Use addition and subtraction strategies to solve word problems (using numbers up to 20), involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, using a number line (e.g., by using objects, drawings, and equations). Record and explain using equation symbols and a symbol for the unknown number to represent the problem.

1.OA.6. Add and subtract using numbers up to 20, demonstrating fluency for addition and subtraction up to 10. Use strategies such as:

- Counting on.
- Making ten (8 + 6 = 8 + 2 + 4 = 10 + 4 = 14).
- Decomposing a number leading to a ten (13 - 4 = 13 - 3 - 1 = 10 - 1 = 9).
- Using the relationship between addition and subtraction, such as fact families, (8 + 4 = 12 and 12 - 8 = 4).
- Creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13).

Supporting Standards

1.OA.2. Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20 (e.g., by using

Transfer

Students will be able to independently use their learning to…
Use addition and subtraction to solve real-world problems.

Meaning

ENDURING UNDERSTANDINGS

Students will understand that…

- Real-world problems can be solved using addition and subtraction.
- There are various strategies (properties of operation) that can be used to solve addition and subtraction problems.

ESSENTIAL QUESTIONS

Students will keep considering…

- What are strategies I can use to solve addition and subtraction problems?
- What symbols do I use to write problems?
- How can I express unknown values?

Acquisition

Students will know…

- Equations for addition or subtraction word problems can have unknown values in different positions.
- Explain how equations represent an addition or subtraction word problem.
- Solve word problems with unknown numbers in different positions.
- Know strategies to find sums and differences.
- Addition and subtraction word problems can be represented using objects and drawings.

Students will be skilled at…

- I can use models to explain addition and subtraction.
- I can draw pictures to show addition and subtraction.
- I can write number sentences to show addition and subtraction.
- I can solve addition problems to 20 in many different ways.
- I can solve subtraction problems to 20 in many different ways.
- I can use a variety of mental math strategies to solve addition and subtraction problems.

objects, drawings, and equations). Record and explain using equation symbols and a symbol for the unknown number to represent the problem. **1.OA.3.** Apply properties of operations as strategies to add and subtract. (Students need not know the name of the property.) *For example: If 8 + 3 = 11 is known, then 3 + 8 = 11 is also known (Commutative property of addition). To add 2 + 6 + 4, the second two numbers can be added to make a ten, so 2 + 6 + 4 = 2 + 10 = 12 (Associative property of addition). Demonstrate that when adding zero to any number, the quantity does not change (Identity property of addition).* **1.OA.4.** Understand subtraction as an unknown-addend problem. *For example, subtract 10 - 8 by finding the number that makes 10 when added to 8.* **1.OA.8.** Determine the unknown whole number in an addition or subtraction equation. *For example, determine the unknown number that makes the equation true in each of the equations 8 + ? = 11, 6 + 6 = ?, 5 = ? - 3.*		

KPBSD MATH CURRICULUM
1st GRADE
UNIT 8 – DEVELOPING FLEXIBILITY WITH NUMBERS

Evidence	
Vocabulary • Sum • Equal • Symbol • Unknown • Addend • Equation • Addition • Subtraction • Fluency • Strategies	**Mathematical Practices (Bolded practices are priority for this unit)** • **Make sense of problems and persevere in solving them.** • **Reason abstractly and quantitatively.** • Construct viable arguments and critique the reasoning of others. • **Model with mathematics.** • Use appropriate tools strategically. • Attend to precision. • **Look for and make use of structure.** • **Look for and express regularity in repeated reasoning.**