Mississippi College and Career Readiness Standards for Mathematics Scaffolding Document

Grade 1

GRADE 1

Operations and Algebraic Thinking

Represent and solve problems involving addition and subtraction

1.OA.1
Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.[2]

[2] See Glossary, Table 1.

Desired Student Performance

A student should know	A student should understand	A student should be able to do
• Write numbers to 20. • Recognize the symbols used when writing addition and subtraction equations (+, -, =). • Solve addition and subtraction word problems within 10 using objects or drawings. • Decompose numbers less than or equal to 10.	• There are strategies for adding within 20 (e.g., counting on, making 10; decomposing a number leading to 10; using the relationship between addition and subtraction; and creating easier, equivalent facts). • There are strategies for subtracting within 20 (same as above). • A symbol can represent an unknown number. • There is more than one strategy that can be used to solve a word problem (using objects, drawings, and equations). • Make sense of a word problem. • Equal means the same as.	• Solve addition and subtraction word problems within 20. • Solve addition and subtraction facts with unknowns in all positions. • Use various strategies to solve for unknowns in word problems (using objects, drawings, and equations). • Use symbols for unknown numbers in number sentences. • Compare equations with unknowns. • Model with mathematics to solve and justify word problems.

GRADE 1

Operations and Algebraic Thinking

Represent and solve problems involving addition and subtraction

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 with a symbol for the unknown number to represent the problem).

Desired Student Performance

A student should know	A student should understand	A student should be able to do
• Write numbers to 20. • Use strategies for solving addition word problems within 10. • Represent an addition number sentence. • Recognize the symbols used when writing addition number sentences (+, =). • Represent addition with mental images, drawings, sounds, etc. • Fluently add within 5. • Understand part and whole relationships.	• There can be more than two addends (parts) when adding. • There is more than one strategy that can be used to solve a word problem (using objects, drawings, equations). • A symbol can be used in a number sentence to represent an unknown number. • Use the associative property of addition to find easier facts when using more than two addends. • Recognize how to make sense of word problems. • Know how to check one's answer for reasonableness.	• Add three numbers with a sum less than 20. • Use a strategy to solve word problems when adding three numbers with a sum less than 20 (using objects, drawings, and equations). • Apply the associative property of addition as a strategy. • Write an equation using a symbol to represent an unknown number in a problem. • Model with mathematics to solve and justify answers.

GRADE 1

Operations and Algebraic Thinking

Understand and apply properties of operations and the relationship between addition and subtraction

	Desired Student Performance		
1.OA.3 Apply properties of operations as strategies to add and subtract.[2] *Examples: 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.)* [2] Students need not use formal terms for these properties.	**A student should know** • Write numbers to 20. • Represent an addition number sentence. • Represent a subtraction number sentence. • Add and subtract facts within 10. • Apply strategies for addition and subtraction facts. • Decompose numbers.	**A student should understand** • Numbers do not have to be added in the order of the number sentence. • There are strategies for adding within 20 (e.g., making a 10).	**A student should be able to do** • Add within 20 using various strategies. • Recognize and apply the commutative property when adding. • Recognize and apply the associative property when adding. • Look for and make use of structure (e.g., 7 + 3 = 3 + 7).

GRADE 1

Operations and Algebraic Thinking

Understand and apply properties of operations and the relationship between addition and subtraction

	Desired Student Performance		
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.*	**A student should know** • Represent a subtraction number sentence. • Add facts within 10. • Identify strategies for addition within 10. • Use the strategy of "counting on" to find the difference.	**A student should understand** • There is an inverse relationship between addition and subtraction (e.g., 2 + 3 = 5 and 5 – 3 = 2). • There are patterns in the structure of numbers (e.g., how to compose 10 using 8 and another part). • A symbol can be used for an unknown number. • Equal means the same as.	**A student should be able to do** • Use addition strategies to solve subtraction number sentences (e.g., counting on, making a ten). • Represent an unknown subtraction number sentence as an unknown addition number sentence (e.g., 10 - 2 =? as 2 + ? = 10).

GRADE 1

Operations and Algebraic Thinking

Add and subtract within 20

1.OA.5
Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).

Desired Student Performance

A student should know	A student should understand	A student should be able to do
• Count to 100. • Count forward starting at any number. • Understand the relationship between counting numbers and quantities. • Add and subtract facts within 10. • Compare numbers.	• The strategy of counting on (adding) results in a higher quantity. • The strategy of counting back (subtracting) results in a smaller quantity. • Addition is the same as counting on. • Subtraction is the same as counting back. • There are ways to model counting, addition, and subtraction (e.g., number lines)	• Start with any given number and count forward to add (within 20). • Start with any given number and count back to subtract (within 20). • Model counting on for addition and counting back for subtraction, using a number line. • Understand and make use of the structure of the number system.

GRADE 1

Operations and Algebraic Thinking

Add and subtract within 20

	Desired Student Performance		
1.OA.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as 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 relationship between addition and subtraction (e.g., known 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).	**A student should know** • Write numbers to 20. • Add and subtract facts within 10. • Fluently add and subtract within 5. • Decompose numbers less than 10 into pairs.	**A student should understand** • There is an inverse relationship between addition and subtraction. • There are many ways to make a 10. • Common addition strategies (doubles, making 10, etc.) can be applied to other facts. • Make sense of numbers abstractly and quantitatively. • The commutative property of addition is used to solve known facts. • The associative property of addition.	**A student should be able to do** • Fluently add and subtract within 10. • Use strategies such as: counting on, making 10, decomposing a number leading to 10, using inverse operations, and creating equivalent facts (e.g., doubles + 1) to solve addition and subtraction facts within 20. • Use properties of addition. • Know all number pairs that equal 10.

GRADE 1

Operations and Algebraic Thinking

Work with addition and subtraction equations

1.OA.7
Understand the meaning of the equal sign, 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.*

Desired Student Performance

A student should know	A student should understand	A student should be able to do
• Understand the word *equal* (and the equal symbol) mean the same (e.g., 3 = 3). • Understand the meaning of *true* as being something that is correct. • Understand the meaning of the word *false* as being something that is incorrect/wrong. • Write numbers to 20. • Add and subtract facts within 10.	• Number sentences can be written in different orders (e.g., addition sentences can be written as 5 + 3 = 8 or as 8 = 3 + 5, and subtraction sentences can be written as 8 – 3 = 5 or as 5 = 8 - 3). • The presence of an equal sign doesn't mean a number sentence is true. • An equal sign can represent two equal equations (e.g., 3 + 2 = 4 + 1).	• Understand the placement of the equal sign. • Solve addition and subtraction facts within 20. • Identify number sentences that are true. • Identify number sentences that are false. • Work with precision when solving addition and subtraction number sentences for accuracy. • Solve to find if equations are true or false.

GRADE 1

Operations and Algebraic Thinking

Work with addition and subtraction equations

1.OA.8
Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations 8+? =11, 5=☐ -3, 6+6= ☐.

Desired Student Performance

A student should know	A student should understand	A student should be able to do
• Write numbers to 20. • Add and subtract within 10. • Identify symbols used in number sentences (+, -, =). • Count forward from a given number. • Compare numbers.	• Use strategies for solving addition and subtraction facts within 20. • There is an inverse relationship between addition and subtraction (3 + 5 = 8 and 8 – 5 = 3). • An unknown number can be represented using symbols in a number sentence. • An unknown number is a number that is not known. • There are strategies for solving for an unknown number. • Number sentences are not all written with the problem first and the sum or difference last. • The meaning of “true.”	• Solve for an unknown number in any position in an addition or subtraction equation within 20. • Apply the inverse operation to solve for an unknown number.

GRADE 1

Number and Operations in Base Ten

Extend the counting sequence

1.NBT.1
Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.

Desired Student Performance

A student should know	A student should understand	A student should be able to do
• Count to 100 by ones and tens. • Write numbers from 0–20. • Understand numbers represent quantities. • Count forward from a given number. • Understand the relationship between spoken words and written numerals (e.g., 5 is five). • Know when reading the numbers 13–19, the ones place is read first, but in 20–99, the tens place is read first.	• When counting on, you begin at a number one more than the previous or given number. • The counting sequence is never ending. • Represent a number of objects with a written number. • Use the structure of counting and sequence. • A numeral is defined as a symbol or word.	• Count to 120 starting at any number. • Read the numbers 0–120. • Write the numbers 0–120. • Write a number 0–120 to represent an amount of objects. • Represent a number of objects 0–120.

GRADE 1

Number and Operations in Base Ten

Understand place value

1.NBT.2	Desired Student Performance		
Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases: 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, and 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones).	**A student should know** • Understand a number represents a quantity. • Count the numbers 0–100. • Write the numbers 0–20. • Compose and decompose numbers 11–19 into 10 ones and some more ones. • Know when reading the numbers 13–19, the ones place is read first, but in 20–99, the tens place is read first.	**A student should understand** • The base-ten number system is composed of the numerals 0–9. • Ten ones' units equal 1 ten. • The value of a number depends on the placement of a digit (e.g., the 4s do not have the same value in 24 and 47). • When two digits are written together, they represent one number (e.g., 35 is not 3 and 5, but 35).	**A student should be able to do** • Identify the numbers in the tens and ones' places in a two-digit number. • Determine the value of a numeral based on its placement in a two-digit number. • Model two-digit numbers. • Compose and decompose two-digit numbers in to tens and ones.

GRADE 1

Number and Operations in Base Ten

Understand place value

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 >, =, or <.

Desired Student Performance

A student should know	A student should understand	A student should be able to do
• Use a number represents a quantity. • Identify numbers 0–100. • Compare two written numbers between 0 and 10. • Understand when two numerals are written together, they represent 1 number (e.g., 23 is not 2 and 3, but 23). • Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group.	• The value of a numeral is based on its placement in a two-digit number. • “>” is a symbol that means “greater than.” • “<” is a symbol that means “less than.” • “=” is a symbol that means “equal to” (same). • When comparing two-digit numbers with the same amount of tens, look at the value of the ones.	• Identify when one number is larger than another. • Verbally compare 2 two-digit numbers using the terms “greater than,” “less than,” or “equal to.” • Use symbols (>, <, or =) to compare 2 two-digit numbers in written form.

GRADE 1

Number and Operations in Base Ten

Use place value understanding and properties of operations to add and subtract

1.NBT.4
Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and 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. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones, and sometimes it is necessary to compose a ten.

Desired Student Performance

A student should know	A student should understand	A student should be able to do
• Identify numbers 0–100. • Use strategies for addition within 20. • Fluently add within 10. • Count by 10s, starting with a number less than 120. • Represent an addition number sentence using the "+" and "=" signs in the correct placement. • Understand the sum is the whole, and the addends are the parts.	• The value of a numeral is based on its placement in a two-digit number. • Reasoning is used to make sense of problems while solving them. • When adding two-digit numbers, add tens with tens and ones with ones. • If the amount of added ones is more than 9, it will be necessary to compose another ten and add it to the remaining tens.	• Work with precision. • Model with mathematics using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction. • Justify the reasoning used to solve for the sum. • Add a two-digit number with a one-digit number. • Add a two-digit number and a multiple of 10.

GRADE 1

Number and Operations in Base Ten

Use place value understanding and properties of operations to add and subtract

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.

Desired Student Performance

A student should know	A student should understand	A student should be able to do
• Identify numbers 0–120. • Count to 100 by 10s. • Understand when adding on (counting on), the total will be a larger number than either of the addends.	• Mentally means "in your head" (without using pencil/paper and other manipulatives including a hundreds chart). • When adding tens, the digit in the ones place doesn't change, as there aren't any ones in 10 (identity property of addition). • When subtracting tens, the digit in the ones place doesn't change, as there aren't any ones in 10 (identity property of subtraction). • Place value of tens and ones.	• Make use of the structure of the number system. • Mentally add 10 more to a given number (without counting). • Mentally subtract 10 less from a given number (without counting). • Justify the reasoning used when mentally adding or subtracting 10 to or from a given number.

GRADE 1

Number and Operations in Base Ten

Use place value understanding and properties of operations to add and subtract

1.NBT.6
Subtract multiples of 10 in the range 10-90 from multiples of 10 in the range 10-90 (positive or zero differences), using concrete models or drawings and 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.

Desired Student Performance

A student should know	A student should understand	A student should be able to do
• Identify numbers 0-100. • Count by 10s to 100. • Understand in subtraction the difference in the numbers will be less than the total. • Understand the place-value system.	• When subtracting a multiple of 10, the digit in the ones place will not change as there are no ones in 10 (identity property of subtraction). • When subtracting a multiple of 10 from a multiple of 10, it is easier to think of the tens as ones to subtract (for example, 80 - 30 could be worked as 8 - 3 = 5, so 80 - 30 = 50). • Subtraction is taking apart and taking from.	• Start with a multiple of 10, and count back (thinking of each problem as 10 less). • Subtract a multiple of 10 from a multiple of 10. • Use concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction. • Look for and make use of structure of the place-value system. • Justify the reasoning used when subtracting a multiple of 10 from a multiple of 10.

GRADE 1

Measurement and Data

Measure lengths indirectly and by iterating length units

	Desired Student Performance		
1.MD.1 Order three objects by length; compare the lengths of two objects indirectly by using a third object.	**A student should know** • Identify "length" is a term used to describe how long an object is. • Describe the length of an object. • Compare the length of two objects and describe the difference (e.g., longer, smaller, more of). • Sort and classify objects.	**A student should understand** • When comparing the length of objects, the objects should start at the same point (be lined up). • Length is maintained when objects are moved in different directions (e.g., when a pencil is turned horizontally instead of vertically).	**A student should be able to do** • Compare the length of three objects. • Order three objects based on length (e.g., longest to shortest). • Use an object to compare the length of two other objects (e.g., the pencil and book are longer than the crayon, or the pencil is longer than the crayon but shorter than the book).

GRADE 1

Measurement and Data

Measure lengths indirectly and by iterating length units

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. *Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.*	**Desired Student Performance**		
	A student should know	**A student should understand**	**A student should be able to do**
	• Identify "length" as a term used to describe how long an object is. • Understand when measuring the length of an object, the length spans from one end to the opposite end. • Describe the length of an object.	• Length can be measured in different units. • When using an object to measure length, there cannot be any gaps or overlays in the measurement. • When measuring the length of an object, the unit must remain constant throughout the measurement. • The numerical length of an object can change depending upon the size of the unit being used to measure.	• Use a smaller unit to measure the length of an object by laying multiple copies of the unit onto the object. • Measure the length of objects using nonstandard measurement units in whole units. • Measure with precision. • Select appropriate tools strategically.

GRADE 1

Measurement and Data

Tell and write time with respect to a clock and a calendar

	Desired Student Performance		
1.MD.3a Tell and write time in hours and half-hours using analog and digital clocks.	**A student should know** • Write the numbers 0–20. • Count to 60.	**A student should understand** • An analog clock is a continuation of time (a circular number line). • Sixty minutes equal 1 hour. • The "short hand" tells the number of hours on an analog clock. The "long hand" tells the number of minutes on an analog clock. • The numbers on an analog clock represent hours and minutes. A colon is used to separate the hour from the minutes when writing time. • On a digital clock, the numbers on the left of the colon are hours, and those to the right of the colon are minutes.	**A student should be able to do** • Tell time in hours using a digital and analog clock. • Write time in hours using a digital and analog clock. • Tell time in half-hours using a digital and analog clock. • Write time in half-hours using a digital and analog clock. • Use the terminology "o'clock" when describing a time in hours.

GRADE 1

Measurement and Data

Tell and write time with respect to a clock and a calendar

	Desired Student Performance		
1.MD.3b Identify the days of the week, the number of days in a week, and the number of weeks in each month.	**A student should know** • Verbally say the days of the week. • Verbally say the months of the year.	**A student should understand** • There are seven days in a week. • There are twelve months in a year. • A full week consists of seven days. • When a month ends in the middle of the week, that week is not considered to be a full week in that month. • Months and weeks can start and end on different days.	**A student should be able to do** • Identify the days of the week and where they fall on the calendar. • Understand there are seven days in a week, with Monday through Friday being weekdays while Saturday and Sunday are weekend days. • Understand most months have four full weeks; however, there are times when months will have more or less, depending on how the days are on the calendar.

GRADE 1

Measurement and Data

Represent and interpret data

1.MD.4 Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.	Desired Student Performance		
	A student should know	**A student should understand**	**A student should be able to do**
	• Sort objects into given categories. • Count the number of objects in each category. • Order categories based on the total number of objects in each category (e.g., more/less). • Count to answer "how many?". • Understand vocabulary terms "more than," "less than," and "equal to." • Solve addition and subtraction word problems within 10.	• Categories are groups of "like objects." • Each category represents a separate set of data. • A number can be written to represent the amount of objects in each category. • "How many more?" is the difference between two numbers.	• Organize objects into up to three categories. • Represent the data in each category. • Interpret the data in each category. • Ask questions about the data. • Answer questions about the categories (e.g., how many in each category, how many objects in all, how many more, how many less?).

GRADE 1

Measurement and Data

Work with money

	Desired Student Performance		
1.MD.5a Identify the value of all U.S. coins (penny, nickel, dime, quarter, half-dollar, and dollar coins). Use appropriate cent and dollar notation (e.g., 25¢, $1).	**A student should know** • Identify each U.S. coin by its color. (e.g., A penny is the only coin that is copper, and a dollar coin is the only coin that can be gold. All other coins are silver.) • Identify each coin according to other identifying characteristics (e.g., size, Presidents, etc.).	**A student should understand** • The value of a penny is one cent. • The value of a nickel is five cents. • The value of a dime is ten cents. • The value of a quarter is twenty-five cents. • The value of a half-dollar is fifty cents. • The value of a dollar coin is one dollar. • Cent notations are used to record values of U.S. coins less that $1.00 • Dollar notations are normally used when recording the value of U.S. coins equal to or greater than $1.00; however, these notations can be used with amounts less than $1.00.	**A student should be able to do** • Identify the value of all U.S. coins (penny, nickel, dime, quarter, half-dollar, and dollar coins). • Use appropriate cent and dollar notations when representing U.S. coin amounts (e.g., 25¢ or $.25 represents twenty-five cents and $1.00 represents one dollar).

GRADE 1

Measurement and Data

Work with money

	Desired Student Performance		
1.MD.5b Know the comparative values of all U.S. coins (e.g., a dime is of greater value than a nickel).	**A student should know** • Identify the value of each U.S. coin. (e.g., The value of a penny is one cent, the value of a nickel is five cents, the value of a dime it ten cents, the value of a quarter is twenty-five cents, the value of a half-dollar is fifty cents, and the value of a dollar coin is one dollar.) • Locate numbers 1-100 on a number line or hundreds chart.	**A student should understand** • Having a greater value means one coin is worth more that the other. • Having a lesser value means one coin is worth less than the other. • Comparing values is accomplished by analyzing the two values and deciding which value is worth more.	**A student should be able to do** • Compare the values of two coins, and identify which coin is worth more. (e.g., A dime has a greater value than a nickel.) • Compare the values of two coins, and identify which coin is worth less.

GRADE 1

Measurement and Data

Work with money

	Desired Student Performance		
1.MD.5c Count like U.S. coins up to the equivalent of a dollar.	**A student should know** • Count to 100. • Identify each U.S. coin (visually) based upon its identifying characteristics. (e.g., A penny is copper and has President Abraham Lincoln on one side.) • Know the value of each U.S. coin. (e.g., The value of a penny is one cent, the value of a nickel is five cents, the value of a dime it ten cents, the value of a quarter is twenty-five cents, the value of a half-dollar is fifty cents, and the value of a dollar coin is one dollar.)	**A student should understand** • Count by 1s when counting a set of pennies. • Count by 5s when counting a set of nickels. • Count by 10s when counting a set of dimes. • Count by 25s when counting by quarters. • Count by 50s when counting by half-dollars.	**A student should be able to do** • Organize U.S. coins into like groups. (e.g., From a set of mixed coins, organize all pennies together.) • Count sets of like U.S. coins up to the equivalent of a dollar. .

GRADE 1

Measurement and Data

Work with money

1.MD.5d Find the equivalent value for all greater value U.S. coins using like value smaller coins (e.g., 5 pennies equal 1 nickel; 10 pennies equal one dime, but not 1 nickel and 5 pennies equal 1 dime).	**Desired Student Performance**		
	A student should know	**A student should understand**	**A student should be able to do**
	• Count to 100. • Identify each U.S. coin (visually) based upon its identifying characteristics. (e.g., A penny is copper and has President Abraham Lincoln on one side.) • Identify the value of each U.S. coin. (e.g., The value of a penny is one cent, the value of a nickel is five cents, the value of a dime it ten cents, the value of a quarter is twenty-five cents, the value of a half-dollar is fifty cents, and the value of a dollar coin is one dollar.)	• Counting by 1s with pennies to five cents is equivalent to the value of a nickel. • Counting by 1s with pennies or by 5s with nickels to ten cents is equivalent to the value of a dime. • Counting by 1s with pennies, 5s with nickels, 10s with dimes or 25s with quarters to fifty cents is equivalent to the value of a half-dollar. • Counting by 1s with pennies, 5s with nickels, 10s with dimes, 25s with quarters, or 50s with half-dollars is equivalent to the value of a dollar coin.	• Represent a nickel using 5 pennies. • Represent a dime using 10 pennies or 2 nickels. • Represent a half-dollar using 50 pennies, 10 nickels, or 5 dimes. • Represent a dollar coin using 100 pennies, 20 nickels, 10 dimes, 4 quarters, or 2 half-dollars.

GRADE 1

Geometry

Reason with shapes and their attributes

	Desired Student Performance		
1.G.1 Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes.	**A student should know** • Identify and describe squares, circles, triangles, rectangles, and hexagons, cubes, cones cylinders, and spheres. • Identify attributes of squares, circles, triangles, rectangles, and hexagons. • Sort shapes based on attributes. • Identify shapes and two- or three-dimensional.	**A student should understand** • A shape can change location and orientation without changing shape. • Identify the difference in a defining attribute and a non-defining attribute. • A shape can change color and size and remain the same shape. • Identify descriptions of shapes.	**A student should be able to do** • Draw a shape using given attributes. • Identify attributes of common shapes. (e.g., these are all triangles because they have three sides and are closed.) • Build a shape using given attributes.

GRADE 1

Geometry

Reason with shapes and their attributes

1.G.2
Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape.[4]

[4] Students do not need to learn formal names such as "right rectangular prism."

Desired Student Performance

A student should know	A student should understand	A student should be able to do
• Identify two-dimensional shapes (rectangles, squares, trapezoids, triangles, rectangles, and hexagons.). • Identify three-dimensional shapes (cubes, right rectangular prisms, right rectangular cones, and right circular cylinders, spheres). • Build and draw shapes. • Analyze and compare shapes of different sizes and orientations. • Composing simple shapes from larger shapes.	• Identify the difference between a two-dimensional and a three-dimensional shape. (a two-dimensional shape is flat, and a three-dimensional shape has volume.) • Identify the attributes that compose shapes. (e.g., a shape with three sides is a triangle.) • Shapes can be put together to create new shapes (composed). • Shapes can be taken apart to create smaller shapes (decomposed).	• Compose a two-dimensional shape using other two-dimensional shapes. (e.g., two trapezoids can make a hexagon.) • Compose a three-dimensional shape using other two- or three-dimensional shapes. (e.g., two cubes can make a rectangular prism.) • Decompose a two-dimensional shape into other two-dimensional shapes. (e.g., a hexagon can be broken into 6 triangles.) • Decompose a three-dimensional shape into other three-dimensional shapes. (e.g., a rectangular prism can be broken into two cubes.)

GRADE 1

Geometry

Reason with shapes and their attributes

	Desired Student Performance		
1.G.3 Partition circles and rectangles into two and four equal shares, describe the shares using the words *halves*, *fourths*, and *quarters*, and use the 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 into more equal shares creates smaller shares.	**A student should know** • Identify a circle and a rectangle. • Understand *equal* means "the same amount." • Understand shapes can be decomposed into smaller shapes. • Model shapes.	**A student should understand** • Circles and rectangles can be partitioned (divided) into equal parts. • "Halves," "fourths," and "quarters" are terms used to represent shares. • Partitioning shapes into smaller shares can create new shapes. • The more shares in which a shape is partitioned, the smaller the shares. • There can be more than one way to partition a shape into equal shares.	**A student should be able to do** • Partition a circle or rectangle into two equal shares. • Describe the shares. • Describe the whole. • Model decomposing and explain the shares get smaller. • Partition a circle or rectangle into four equal shares. • Describe four equal shares as quarters.