

WITH

GOLD[®] Objectives for Development and Learning, Birth Through Third Grade

aligned to

New Jersey Student Learning Standards

Mathematics

Grade: **K** Adopted: **2016**

CONTENT AREA / STANDARD	NJ.MP.	Mathematical Practices
STRAND	MP.1.	Make sense of problems and persevere in solving them. <u>GOLD[®] Objectives for Development and Learning</u> • Objective 11 Demonstrates positive approaches to learning c. Solves problems
		Objective 11c.6 Solves problems without having to try every possibility
STRAND	MP.2.	Reason abstractly and quantitatively.
		GOLD [®] Objectives for Development and Learning • Objective 11 Demonstrates positive approaches to learning e. Shows flexibility and inventiveness in thinking Objective 11e.8 Thinks through possible long-term solutions and takes on more abstract challenges
STRAND	MP.3.	Construct viable arguments and critique the reasoning of others. <u>GOLD[®] Objectives for Development and Learning</u> • Objective 11 Demonstrates positive approaches to learning c. Solves problems Objective 11c.6 Solves problems without having to try every possibility
STRAND	MP.4.	Model with mathematics. <u>GOLD[®] Objectives for Development and Learning</u> • Objective 14 Uses symbols and images to represent something not present a. Thinks symbolically Objective 14a.6 Plans and then uses drawings, constructions, movements, and dramatizations to represent ideas

STRAND	MP.5.	Use appropriate tools strategically.
		GOLD [®] Objectives for Development and Learning • Objective 11 Demonstrates positive approaches to learning e. Shows flexibility and inventiveness in thinking Objective 11e.8 Thinks through possible long-term solutions and takes on more abstract challenges
STRAND	MP.6.	Attend to precision.
		GOLD [®] Objectives for Development and Learning • Objective 11 Demonstrates positive approaches to learning a. Attends and engages Objective 11a.8 Sustains attention to tasks or projects over time (days to weeks); can return to activities after interruptions
STRAND	MP.7.	Look for and make use of structure.
		GOLD [®] Objectives for Development and Learning • Objective 14 Uses symbols and images to represent something not present a. Thinks symbolically Objective 14a.6 Plans and then uses drawings, constructions, movements, and dramatizations to represent ideas
STRAND	MP.8.	Look for and express regularity in repeated reasoning.
		GOLD [®] Objectives for Development and Learning • Objective 11 Demonstrates positive approaches to learning c. Solves problems Objective 11c.6 Solves problems without having to try every possibility
CONTENT AREA / STANDARD	NJ.K.CC.	Counting and Cardinality
STRAND	K.CC.A.	Know number names and the count sequence.
CONTENT STATEMENT	K.CC.A.1.	Count to 100 by ones and by tens. <u>GOLD[®] Objectives for Development and Learning</u> Objective 20 Uses number concepts and operations a. Counts Objective 20a.8 Uses number names while counting to 100 by 1s and 10s; counts 30 objects accurately; tells what number comes before and after a specified number up to 20
CONTENT STATEMENT	K.CC.A.2.	Count forward beginning from a given number within the known sequence (instead of having to begin at 1). <u>GOLD® Objectives for Development and Learning</u> Objective 20 Uses number concepts and operations a. Counts Objective 20a.8 Uses number names while counting to 100 by 1s and 10s; counts 30 objects accurately: tells what number comes before and after a specified number up to 20

CONTENT STATEMENT	K.CC.A.3.	 Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects). <u>GOLD® Objectives for Development and Learning</u> Objective 20 Uses number concepts and operations c. Connects numerals with their quantities Objective 20c.8 Identifies numerals to 20 by name and connects each to counted objects; represents how many by writing one-digit numerals and some two-digit numerals
CONTENT AREA / STANDARD	NJ.K.CC.	Counting and Cardinality
STRAND	K.CC.B.	Count to tell the number of objects.
CONTENT STATEMENT	K.CC.B.4.	Understand the relationship between numbers and quantities; connect counting to cardinality.
CUMULATIVE PROGRESS INDICATOR	K.CC.B.4.a.	When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object.
		Objective 20 Uses number concepts and operations a. Counts Objective 20a.6 Verbally counts to 20; counts 10–20 objects accurately; knows the last number states how many in all; tells what number (1–10) comes next in order by counting
CUMULATIVE PROGRESS INDICATOR	K.CC.B.4.b.	Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted. <u>GOLD®</u> Objectives for Development and Learning Objective 20 Uses number concents and operations a Counts
		Objective 20a.6 Verbally counts to 20; counts 10–20 objects accurately; knows the last number states how many in all; tells what number (1–10) comes next in order by counting
CUMULATIVE PROGRESS	K.CC.B.4.c.	Understand that each successive number name refers to a quantity that is one larger.
		GOLD® Objectives for Development and Learning Objective 20 Uses number concents and operations a Counts
		Objective 20 03es number concepts and operations at counts Objective 20a.8 Uses number names while counting to 100 by 1s and 10s; counts 30
		objects accurately; tells what number comes before and after a specified number up to 20
		Objective 23 Demonstrates knowledge of patterns Objective 23 8 Recognizes, creates, and explains more complex repeating and simple
		growing patterns
CONTENT AREA / STANDARD	NJ.K.CC.	Counting and Cardinality
STRAND	K.CC.B.	Count to tell the number of objects.



CONTENT STATEMENT	K.CC.B.5.	Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects. <u>GOLD® Objectives for Development and Learning</u> • Objective 20 Uses number concepts and operations b. Quantifies Objective 20b.8 Solves simple equal share problems; makes sets of 11–20 objects and then describes the parts • Objective 20 Uses number concepts and operations c. Connects numerals with their quantities Objective 20c.8 Identifies numerals to 20 by name and connects each to counted objects; represents how many by writing one-digit numerals and some two-digit numerals
CONTENT AREA / STANDARD	NJ.K.CC.	Counting and Cardinality
STRAND	K.CC.C.	Compare numbers.
CONTENT STATEMENT	K.CC.C.6.	Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies. <u>GOLD® Objectives for Development and Learning</u> Objective 20 Uses number concepts and operations b. Quantifies Objective 20b.6 Makes sets of 6–10 objects and then describes the parts; identifies which part has more, less, or the same (equal); counts all or counts on to find out how many
CONTENT STATEMENT	K.CC.C.7.	Compare two numbers between 1 and 10 presented as written numerals. <u>GOLD[®] Objectives for Development and Learning</u> • Objective 20 Uses number concepts and operations c. Connects numerals with their quantities Objective 20c.6 Identifies numerals to 10 by name and connects each to counted objects
CONTENT AREA / STANDARD	NJ.K.OA.	Operations and Algebraic Thinking
STRAND	K.OA.A.	Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.
CONTENT STATEMENT	K.OA.A.1.	Represent addition and subtraction up to 10 with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations. <u>GOLD[®] Objectives for Development and Learning</u> • Objective 20 Uses number concepts and operations b. Quantifies Objective 20b.8 Solves simple equal share problems; makes sets of 11–20 objects and then describes the parts



CONTENT STATEMENT	K.OA.A.2.	Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem. <u>GOLD®</u> Objectives for Development and Learning Objective 20 Uses number concepts and operations e. Applies properties of mathematical operations and relationships Objective 20e.2 Solves addition and subtraction word problems of whole numbers within 10 using a variety of strategies (counting objects or fingers, counting on, counting back); makes number pairs within 10
CONTENT STATEMENT	K.OA.A.3.	Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation (e.g., 5 = 2 + 3 and $5 = 4 + 1$). <u>GOLD® Objectives for Development and Learning</u> Objective 20 Uses number concepts and operations e. Applies properties of mathematical operations and relationships Objective 20e.2 Solves addition and subtraction word problems of whole numbers within 10 using a variety of strategies (counting objects or fingers, counting on, counting back); makes number pairs within 10
CONTENT STATEMENT	K.OA.A.4.	For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or equation. <u>GOLD® Objectives for Development and Learning</u> • Objective 20 Uses number concepts and operations b. Quantifies Objective 20b.6 Makes sets of 6–10 objects and then describes the parts; identifies which part has more, less, or the same (equal); counts all or counts on to find out how many
CONTENT STATEMENT	K.OA.A.5.	Demonstrate fluency for addition and subtraction within 5. <u>GOLD[®] Objectives for Development and Learning</u> Objective 20 Uses number concepts and operations f. Applies number combinations and mental number strategies in mathematical operations Objective 20f.2 Adds and subtracts whole numbers fluently within five
CONTENT AREA / STANDARD	NJ.K.NBT.	Number and Operations in Base Ten
STRAND	K.NBT.A.	Work with numbers 11–19 to gain foundations for place value.

CONTENT STATEMENT	K.NBT.A.1.	Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (e.g., 18 = 10 + 8); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones. <u>GOLD® Objectives for Development and Learning</u> • Objective 20 Uses number concepts and operations d. Understands and uses place value and base ten Objective 20d.2 Indicates base-ten equivalents for numbers 11–19 using objects and drawings; may use simple equations
CONTENT AREA / STANDARD	NJ.K.MD.	Measurement and Data
STRAND	K.MD.A.	Describe and compare measurable attributes.
CONTENT STATEMENT	K.MD.A.1.	Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object. <u>GOLD[®] Objectives for Development and Learning</u> Objective 22 Compares and measures a. Measures objects Objective 22a.8 Uses measurement words and some standard measurement tools accurately
CONTENT STATEMENT	K.MD.A.2.	Directly compare two objects with a measurable attribute in common, to see which object has "more of"/"less of" the attribute, and describe the difference. For example, directly compare the heights of two children and describe one child as taller/shorter. <u>GOLD® Objectives for Development and Learning</u> Objective 22 Compares and measures a. Measures objects Objective 22a.8 Uses measurement words and some standard measurement tools accurately
CONTENT AREA / STANDARD	NJ.K.MD.	Measurement and Data
STRAND	K.MD.B.	Classify objects and count the number of objects in each category.
CONTENT STATEMENT	K.MD.B.3.	 Classify objects into given categories; count the numbers of objects in each category and sort the categories by count. <u>GOLD® Objectives for Development and Learning</u> Objective 22 Compares and measures c. Represents and analyzes data Objective 22c.4 Creates and reads simple graphs; uses simple comparison and ordinal terms to describe findings
CONTENT AREA / STANDARD	NJ.K.G.	Geometry
STRAND	K.G.A.	Identify and describe shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres).



CONTENT STATEMENT	K.G.A.1.	Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind, and next to.
		GOLD [®] Objectives for Development and Learning Objective 21 Explores and describes spatial relationships and shapes a. Understands spatial relationships Objective 21a.6 Uses and responds appropriately to positional words indicating location, direction, and distance Objective 21 Explores and describes spatial relationships and shapes b. Understands shapes
		Objective 21b.6 Describes basic two- and three-dimensional shapes by using own words; recognizes basic shapes when they are presented in a new orientation
CONTENT STATEMENT	K.G.A.2.	Correctly name shapes regardless of their orientations or overall size.
		<u>GOLD[®] Objectives for Development and Learning</u> Objective 21 Explores and describes spatial relationships and shapes b. Understands shapes Objective 21b.6 Describes basic two- and three-dimensional shapes by using own words; recognizes basic shapes when they are presented in a new orientation
CONTENT STATEMENT	K.G.A.3.	Identify shapes as two-dimensional (lying in a plane, "flat") or three-dimensional ("solid"). <u>GOLD[®] Objectives for Development and Learning</u> Objective 21 Explores and describes spatial relationships and shapes b. Understands shapes Objective 21b.7 Emerging to 21b.8 Shows that shapes remain the same when they are moved, turned, flipped, or slid; breaks apart or combines shapes to create different shapes and sizes
CONTENT AREA / STANDARD	NJ.K.G.	Geometry
STRAND	K.G.B.	Analyze, compare, create, and compose shapes.
CONTENT STATEMENT	K.G.B.4.	Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/"corners") and other attributes (e.g., having sides of equal length). <u>GOLD® Objectives for Development and Learning</u> Objective 21 Explores and describes spatial relationships and shapes b. Understands
		snapes Objective 21b.8 Shows that shapes remain the same when they are moved, turned, flipped, or slid; breaks apart or combines shapes to create different shapes and sizes

CONTENT STATEMENT	K.G.B.5.	Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.
		<u>GOLD[®] Objectives for Development and Learning</u> Objective 21 Explores and describes spatial relationships and shapes b. Understands shapes Objective 21b.8 Shows that shapes remain the same when they are moved, turned, flipped, or slid; breaks apart or combines shapes to create different shapes and sizes
CONTENT STATEMENT	K.G.B.6.	Compose simple shapes to form larger shapes. For example, "Can you join these two triangles with full sides touching to make a rectangle?" <u>GOLD[®] Objectives for Development and Learning</u> Objective 21 Explores and describes spatial relationships and shapes b. Understands
		snapes Objective 21b.8 Shows that shapes remain the same when they are moved, turned, flipped, or slid; breaks apart or combines shapes to create different shapes and sizes

New Jersey Student Learning Standards

Mathematics

Grade: 1 - Adopted: 2016

CONTENT AREA / STANDARD	NJ.MP.	Mathematical Practices
STRAND	MP.1.	Make sense of problems and persevere in solving them.GOLD® Objectives for Development and Learning• Objective 11 Demonstrates positive approaches to learning c. Solves problemsObjective 11c.8 Thinks problems through, considering several possibilities and analyzing results
STRAND	MP.2.	Reason abstractly and quantitatively. <u>GOLD[®] Objectives for Development and Learning</u> • Objective Demonstrates positive approaches to learning e. Shows flexibility and inventiveness in thinking Objective 11e.10 Exhibits creative ways to complete tasks; uses own perspective when describing directions or rules
STRAND	MP.3.	Construct viable arguments and critique the reasoning of others. <u>GOLD[®] Objectives for Development and Learning</u> • Objective 11 Demonstrates positive approaches to learning c. Solves problems Objective 11c.8 Thinks problems through, considering several possibilities and analyzing results

STRAND	MP.4.	Model with mathematics.
		GOLD [®] Objectives for Development and Learning • Objective 14 Uses symbols and images to represent something not present a. Thinks symbolically Objective 14a.8 Represents objects, places, and ideas with increasingly abstract symbols
STRAND	MP.5.	Use appropriate tools strategically. <u>GOLD® Objectives for Development and Learning</u> • Objective Demonstrates positive approaches to learning e. Shows flexibility and inventiveness in thinking Objective 11e.10 Exhibits creative ways to complete tasks; uses own perspective when describing directions or rules
STRAND	MP.6.	 Attend to precision. <u>GOLD[®] Objectives for Development and Learning</u> Objective 11 Demonstrates positive approaches to learning a. Attends and engages Objective 11a.10 Selectively focuses attention based on task difficulty and shifts attention toward teacher's goal; demonstrates concentrated effort
STRAND	MP.7.	 Look for and make use of structure. <u>GOLD[®] Objectives for Development and Learning</u> Objective 14 Uses symbols and images to represent something not present a. Thinks symbolically Objective 14a.8 Represents objects, places, and ideas with increasingly abstract symbols
STRAND	MP.8.	 Look for and express regularity in repeated reasoning. <u>GOLD[®] Objectives for Development and Learning</u> Objective 11 Demonstrates positive approaches to learning c. Solves problems Objective 11c.8 Thinks problems through, considering several possibilities and analyzing results
CONTENT AREA / STANDARD	NJ.1.OA.	Operations and Algebraic Thinking
STRAND	1.OA.A.	Represent and solve problems involving addition and subtraction.

CONTENT STATEMENT	1.OA.A.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. <u>GOLD® Objectives for Development and Learning</u> Objective 20 Uses number concepts and operations e. Applies properties of mathematical operations and relationships Objective 20e.4 Solves three-number word problems with answers within 20 using addition properties (associative, commutative, and additive); solves addition and subtraction equations of different types with unknowns in various positions for amounts up to 20
CONTENT STATEMENT	1.OA.A.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. <u>GOLD® Objectives for Development and Learning</u> Objective 20 Uses number concepts and operations e. Applies properties of mathematical operations and relationships Objective 20e.4 Solves three-number word problems with answers within 20 using addition properties (associative, commutative, and additive); solves addition and subtraction equations of different types with unknowns in various positions for amounts up to
CONTENT AREA / STANDARD	NJ.1.OA.	Operations and Algebraic Thinking
STRAND	1.OA.B.	Understand and apply properties of operations and the relationship between addition and subtraction.
CONTENT STATEMENT	1.OA.B.3.	 Apply properties of operations as strategies to add and subtract. 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.) {Students need not use formal terms for these properties} <u>GOLD®</u> Objectives for Development and Learning Objective 20 Uses number concepts and operations e. Applies properties of mathematical operations and relationships Objective 20e.4 Solves three-number word problems with answers within 20 using addition properties (associative, commutative, and additive); solves addition and subtraction equations of different types with unknowns in various positions for amounts up to

CONTENT STATEMENT	1.OA.B.4.	Understand subtraction as an unknown-addend problem. For example, subtract 10 – 8 by finding the number that makes 10 when added to 8. <u>GOLD®</u> Objectives for Development and Learning Objective 20 Uses number concepts and operations e. Applies properties of mathematical operations and relationships Objective 20e.2 Solves addition and subtraction word problems of whole numbers within 10 using a variety of strategies (counting objects or fingers, counting on, counting back); makes number pairs within 10
CONTENT AREA / STANDARD	NJ.1.OA.	Operations and Algebraic Thinking
STRAND	1.OA.C.	Add and subtract within 20.
CONTENT STATEMENT	1.OA.C.5.	 Relate counting to addition and subtraction (e.g., by counting on 2 to add 2). <u>GOLD[®] Objectives for Development and Learning</u> Objective 20 Uses number concepts and operations b. Quantifies Objective 20b.9 Emerging to 20b.10 Answers how much questions about wholes partitioned into equal-size shares of two and four; verbally labels each part and describes its relationship to the whole
CONTENT STATEMENT	1.OA.C.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., knowing that $8 + 4 = 12$, one knows $12 - 8 = 4$); and creating equivalent but easier or known sums (e.g., adding $6 + 7$ by creating the known equivalent $6 + 6 + 1 = 12 + 1 = 13$). <u>GOLD®</u> Objectives for Development and Learning Objective 20 Uses number concepts and operations f. Applies number combinations and mental number strategies in mathematical operations Objective 20f.4 Adds and subtracts whole numbers fluently within 10 using mental strategies (counting on, making ten, decomposing/recomposing, addition/subtraction relationship, and easier equivalent known sums)
CONTENT AREA / STANDARD	NJ.1.OA.	Operations and Algebraic Thinking
STRAND	1.OA.D.	Work with addition and subtraction equations.

CONTENT STATEMENT	1.OA.D.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. <u>GOLD® Objectives for Development and Learning</u> Objective 20 Uses number concepts and operations e. Applies properties of mathematical operations and relationships Objective 20e.4 Solves three-number word problems with answers within 20 using addition properties (associative, commutative, and additive); solves addition and subtraction equations of different types with unknowns in various positions for amounts up to 20
CONTENT STATEMENT	1.OA.D.8.	 Determine the unknown whole number in an addition or subtraction equation relating to 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 = []. <u>GOLD®</u> Objectives for Development and Learning Objective 20 Uses number concepts and operations e. Applies properties of mathematical operations and relationships Objective 20e.4 Solves three-number word problems with answers within 20 using addition properties (associative, commutative, and additive); solves addition and subtraction equations of different types with unknowns in various positions for amounts up to 20
CONTENT AREA / STANDARD	NJ.1.NBT.	Number and Operations in Base Ten
STRAND	1.NBT.A.	Extend the counting sequence.
CONTENT STATEMENT	1.NBT.A.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. <u>GOLD® Objectives for Development and Learning</u> Objective 20 Uses number concepts and operations a. Counts Objective 20a.10 Counts to 120 to determine how many; uses skip counting by 2s, 5s, and 10s; begins counting forward at any number between 1 and 120; counts backward from 20 Objective 20 Uses number concepts and operations c. Connects numerals with their quantities Objective 20c.10 Represents how many by writing one-, two-, and three-digit numerals to 120; uses relational symbols (, =) to indicate relationships between whole numbers
CONTENT AREA / STANDARD	NJ.1.NBT.	Number and Operations in Base Ten
STRAND	1.NBT.B.	Understand place value.
CONTENT STATEMENT	1.NBT.B.2.	Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases:

CUMULATIVE PROGRESS INDICATOR	1.NBT.B.2.a.	10 can be thought of as a bundle of ten ones — called a "ten." <u>GOLD®</u> Objectives for Development and Learning Objective 20 Uses number concepts and operations d. Understands and uses place value and base ten Objective 20d.4 Uses place-value understanding to represent and write two-digit numbers, add one- and two-digit numbers (within 100), and subtract multiples of 10 from multiples of 10 (10–90)
CUMULATIVE PROGRESS INDICATOR	1.NBT.B.2.b.	The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones. <u>GOLD® Objectives for Development and Learning</u> Objective 20 Uses number concepts and operations d. Understands and uses place value and base ten Objective 20d.4 Uses place-value understanding to represent and write two-digit numbers, add one- and two-digit numbers (within 100), and subtract multiples of 10 from multiples of 10 (10–90)
CUMULATIVE PROGRESS INDICATOR	1.NBT.B.2.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). <u>GOLD®</u> Objectives for Development and Learning Objective 20 Uses number concepts and operations d. Understands and uses place value and base ten Objective 20d.4 Uses place-value understanding to represent and write two-digit numbers, add one- and two-digit numbers (within 100), and subtract multiples of 10 from multiples of 10 (10–90)
CONTENT AREA / STANDARD	NJ.1.NBT.	Number and Operations in Base Ten
STRAND	1.NBT.B.	Understand place value.
CONTENT STATEMENT	1.NBT.B.3.	Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <. <u>GOLD® Objectives for Development and Learning</u> Objective 20 Uses number concepts and operations c. Connects numerals with their quantities Objective 20c.10 Represents how many by writing one-, two-, and three-digit numerals to 120; uses relational symbols (, =) to indicate relationships between whole numbers • Objective 20 Uses number concepts and operations d. Understands and uses place value and base ten Objective 20d.4 Uses place-value understanding to represent and write two-digit numbers, add one- and two-digit numbers (within 100), and subtract multiples of 10 from multiples of 10 (10–90)
CONTENT AREA / STANDARD	NJ.1.NBT.	Number and Operations in Base Ten

STRAND	1.NBT.C.	Use place value understanding and properties of operations to add and subtract.
CONTENT STATEMENT	1.NBT.C.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 (e.g., base ten blocks) 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. <u>GOLD®</u> Objectives for Development and Learning Objective 20 Uses number concepts and operations d. Understands and uses place value and base ten Objective 204.4 Uses place-value understanding to represent and write two-digit numbers, add one- and two-digit numbers (within 100), and subtract multiples of 10 from multiples of 10 (10–90)
CONTENT STATEMENT	1.NBT.C.5.	Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used. <u>GOLD® Objectives for Development and Learning</u> Objective 20 Uses number concepts and operations d. Understands and uses place value and base ten Objective 20d.4 Uses place-value understanding to represent and write two-digit numbers, add one- and two-digit numbers (within 100), and subtract multiples of 10 from multiples of 10 (10–90)
CONTENT STATEMENT	1.NBT.C.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. <u>GOLD® Objectives for Development and Learning</u> Objective 20 Uses number concepts and operations d. Understands and uses place value and base ten Objective 20d.4 Uses place-value understanding to represent and write two-digit numbers, add one- and two-digit numbers (within 100), and subtract multiples of 10 from multiples of 10 from multiples of 10 (10–90)
CONTENT AREA / STANDARD	NJ.1.MD.	Measurement and Data
STRAND	1.MD.A.	Measure lengths indirectly and by iterating length units.

CONTENT STATEMENT	1.MD.A.1.	Order three objects by length; compare the lengths of two objects indirectly by using a third object. <u>GOLD®</u> Objectives for Development and Learning Objective 22 Compares and measures a. Measures objects Objective 22a.10 Measures length accurately and expresses the measurement in whole numbers
CONTENT STATEMENT	1.MD.A.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. <u>GOLD®</u> Objectives for Development and Learning Objective 22 Compares and measures a. Measures objects Objective 22a.10 Measures length accurately and expresses the measurement in whole numbers
CONTENT AREA / STANDARD	NJ.1.MD.	Measurement and Data
STRAND	1.MD.B.	Tell and write time.
CONTENT STATEMENT	1.MD.B.3.	Tell and write time in hours and half-hours using analog and digital clocks. <u>GOLD[®] Objectives for Development and Learning</u> Objective 22 Compares and measures b. Measures time and money Objective 22b.8 Tells and writes time in hours and half-hours using both analog and digital clocks; makes amounts using pennies (P), nickels (N), and dimes (D)
CONTENT AREA / STANDARD	NJ.1.MD.	Measurement and Data
STRAND	1.MD.C.	Represent and interpret data.
CONTENT STATEMENT	1.MD.C.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. <u>GOLD® Objectives for Development and Learning</u> Objective 22 Compares and measures c. Represents and analyzes data Objective 22c.6 Organizes, represents, and analyzes data with up to three categories; uses simple numerical summaries (counts, tallies) and ordinal terms to describe findings
CONTENT AREA / STANDARD	NJ.1.G.	Geometry
STRAND	1.G.A.	Reason with shapes and their attributes.

CONTENT STATEMENT	1.G.A.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. <u>GOLD® Objectives for Development and Learning</u> Objective 21 Explores and describes spatial relationships and shapes b. Understands shapes Objective 21b.10 Distinguishes essential attributes of triangles, rectangles, squares, trapezoids, half circles, and quarter circles; visualizes and creates known shapes
CONTENT STATEMENT	1.G.A.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. <u>GOLD® Objectives for Development and Learning</u> Objective 21 Explores and describes spatial relationships and shapes b. Understands shapes Objective 21b.10 Distinguishes essential attributes of triangles, rectangles, squares, trapezoids, half circles, and quarter circles; visualizes and creates known shapes
CONTENT STATEMENT	1.G.A.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. GOLD® Objectives for Development and Learning Objective 20 Uses number concepts and operations b. Quantifies Objective 20b.10 Answers how much questions about wholes partitioned into equal-size shares of two and four; verbally labels each part and describes its relationship to the whole

New Jersey Student Learning Standards

Mathematics

Grade: 2 - Adopted: 2016

CONTENT AREA / STANDARD	NJ.MP.	Mathematical Practices
STRAND	MP.1.	Make sense of problems and persevere in solving them.
		<u>GOLD[®] Objectives for Development and Learning</u> • Objective 11 Demonstrates positive approaches to learning c. Solves problems Objective 11c.10 Solves a wide range of problems using a variety of strategies; attempts to solve problems independently before asking for assistance from adults or peers

STRAND	MP.2.	Reason abstractly and quantitatively. <u>GOLD[®] Objectives for Development and Learning</u> • Objective 11 Demonstrates positive approaches to learning e. Shows flexibility and inventiveness in thinking
		Objective 11e.12 Accepts last minute changes and requires less detailed instructions; experiments with invention
STRAND	MP.3.	Construct viable arguments and critique the reasoning of others.
		GOLD [®] Objectives for Development and Learning • Objective 11 Demonstrates positive approaches to learning c. Solves problems Objective 11c.10 Solves a wide range of problems using a variety of strategies; attempts to solve problems independently before asking for assistance from adults or peers
STRAND	MP.4.	Model with mathematics.
		GOLD [®] Objectives for Development and Learning • Objective 14 Uses symbols and images to represent something not present a. Thinks symbolically Objective 14a.10 Shows increasing ability to interpret and record ideas and thoughts and to solve problems without concrete points of reference
STRAND	MP.5.	Use appropriate tools strategically.
		GOLD [®] Objectives for Development and Learning • Objective 11 Demonstrates positive approaches to learning e. Shows flexibility and inventiveness in thinking Objective 11e.12 Accepts last minute changes and requires less detailed instructions; experiments with invention
STRAND	MP.6.	Attend to precision.
		GOLD [®] Objectives for Development and Learning • Objective 11 Demonstrates positive approaches to learning a. Attends and engages Objective 11a.12 Concentrates on tasks for extended periods but may become restless, especially during activities viewed as less interesting; repeatedly practices activities thought to be enjoyable
STRAND	MP.7.	Look for and make use of structure.
		GOLD [®] Objectives for Development and Learning • Objective 14 Uses symbols and images to represent something not present a. Thinks symbolically Objective 14a.10 Shows increasing ability to interpret and record ideas and thoughts and to solve problems without concrete points of reference

STRAND	MP.8.	Look for and express regularity in repeated reasoning.
		OOL D [®] Objectives for Development and Learning
		GOLD [®] Objectives for Development and Learning
		• Objective 11 Demonstrates positive approaches to learning c. Solves problems
		objective Trc. to Solves a wide range of problems using a variety of strategies; attempts
		to solve problems independently before asking for assistance from adults of peers
CONTENT AREA / STANDARD	NJ.2.OA.	Operations and Algebraic Thinking
STRAND	2.OA.A.	Represent and solve problems involving addition and subtraction.
CONTENT STATEMENT	2.OA.A.1.	Use addition and subtraction within 100 to solve one- and two-step word problems
		involving situations of adding to, taking from, putting together, taking apart, and
		comparing, with unknowns in all positions, e.g., by using drawings and equations with a
		symbol for the unknown number to represent the problem.
		COLD [®] Objectives for Development and Learning
		Objective 20 Uses number concents and operations e Applies properties of mathematical
		operations and relationships
		Objective 20e.6 Solves one- and two-step word problems of various types using addition
		and subtraction (within 100) and explains strategies: uses repeated addition to find the
		number of objects presented in rectangular arrays (up to five rows and five columns)
CONTENT AREA / STANDARD	NJ.2.OA.	Operations and Algebraic Thinking
STRAND	2.OA.B.	Add and subtract within 20.
CONTENT STATEMENT	2.OA.B.2.	Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know from
		memory all sums of two one-digit numbers.
		GOLD [®] Objectives for Development and Learning Objective 20 Uses number concents and operations f. Applies number combinations and
		mental number strategies in mathematical operations
		Objective 20f 6 Adds and subtracts whole numbers fluently within 20 using previously
		learned mental strategies: knows all the addition combinations of two, one-digit numbers
		from memory
CONTENT AREA / STANDARD	NJ.2.OA.	Operations and Algebraic Thinking
STRAND	2.0A.C.	Work with equal groups of objects to gain foundations for multiplication.
CONTENT STATEMENT	2.0A.C.3.	Determine whether a group of objects (up to 20) has an odd or even number of members,
		e.g., by pairing objects or counting them by 2s; write an equation to express an even
		number as a sum of two equal addends.
		COLD® Objectives for Development and Learning
		Objective 22 Demonstrates knowledge of patterns
		Objective 23 Demonstrates knowledge of patterns Objective 23 12 Uses number natterns to count and to solve problems: uses and explains
		natterns in counting and addition
		parterns in counting and addition

CONTENT STATEMENT	2.OA.C.4.	Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends. <u>GOLD®</u> Objectives for Development and Learning Objective 20 Uses number concepts and operations e. Applies properties of mathematical operations and relationships Objective 20e.6 Solves one- and two-step word problems of various types using addition and subtraction (within 100) and explains strategies; uses repeated addition to find the number of objects presented in rectangular arrays (up to five rows and five columns)
CONTENT AREA / STANDARD	NJ.2.NBT.	Number and Operations in Base Ten
STRAND	2.NBT.A.	Understand place value.
CONTENT STATEMENT	2.NBT.A.1.	Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. Understand the following as special cases:
CUMULATIVE PROGRESS	2.NBT.A.1.a.	100 can be thought of as a bundle of ten tens — called a "hundred." <u>GOLD® Objectives for Development and Learning</u> Objective 20 Uses number concepts and operations d. Understands and uses place value and base ten Objective 20d.6 Uses place-value understanding to represent and write three-digit numbers (including expanded form); adds up to four two-digit numbers; adds and subtracts three-digit numbers (within 1,000) The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five
INDICATOR	2.NDT.A.T.D.	 The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, rour, rive, six, seven, eight, or nine hundreds (and 0 tens and 0 ones). <u>GOLD® Objectives for Development and Learning</u> Objective 20 Uses number concepts and operations d. Understands and uses place value and base ten Objective 20d.6 Uses place-value understanding to represent and write three-digit numbers (including expanded form); adds up to four two-digit numbers; adds and subtracts three-digit numbers (within 1,000)
CONTENT AREA / STANDARD	NJ.2.NBT.	Number and Operations in Base Ten
STRAND	2.NBT.A.	Understand place value.
CONTENT STATEMENT	2.NBT.A.2.	Count within 1000; skip-count by 5s, 10s, and 100s. <u>GOLD®</u> Objectives for Development and Learning Objective 20 Uses number concepts and operations a. Counts Objective 20a.12 Counts to 1,000 to determine how many; uses skip counting (2s, 5s, 10s, and 100s); begins counting at any number between 1 and 1,000; switches between skip counts

CONTENT STATEMENT	2.NBT.A.3.	Read and write numbers to 1000 using base-ten numerals, number names, and expanded form. <u>GOLD[®] Objectives for Development and Learning</u> Objective 20 Uses number concepts and operations c. Connects numerals with their quantities Objective 20c.12 Represents how many by writing one-, two-, three-, and four-digit numerals to 1.000; uses relational symbols to compare and order whole numbers
CONTENT STATEMENT	2.NBT.A.4.	Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using >, =, and < symbols to record the results of comparisons. <u>GOLD® Objectives for Development and Learning</u> Objective 20 Uses number concepts and operations c. Connects numerals with their quantities Objective 20c.12 Represents how many by writing one-, two-, three-, and four-digit numerals to 1,000; uses relational symbols to compare and order whole numbers
CONTENT AREA / STANDARD	NJ.2.NBT.	Number and Operations in Base Ten
STRAND	2.NBT.B.	Use place value understanding and properties of operations to add and subtract.
CONTENT STATEMENT	2.NBT.B.5.	Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction. <u>GOLD®</u> Objectives for Development and Learning Objective 20 Uses number concepts and operations f. Applies number combinations and mental number strategies in mathematical operations Objective 20f.6 Adds and subtracts whole numbers fluently within 20 using previously learned mental strategies; knows all the addition combinations of two, one-digit numbers from memory
CONTENT STATEMENT	2.NBT.B.6.	Add up to four two-digit numbers using strategies based on place value and properties of operations. <u>GOLD®</u> Objectives for Development and Learning Objective 20 Uses number concepts and operations d. Understands and uses place value and base ten Objective 20d.6 Uses place-value understanding to represent and write three-digit numbers (including expanded form); adds up to four two-digit numbers; adds and subtracts three-digit numbers (within 1,000)

CONTENT STATEMENT	2.NBT.B.7.	Add and subtract within 1000, 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. Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds. <i>GOLD®</i> Objectives for Development and Learning Objective 20 Uses number concepts and operations d. Understands and uses place value and base ten Objective 20d.6 Uses place-value understanding to represent and write three-digit numbers (including expanded form); adds up to four two-digit numbers; adds and subtracts three-digit numbers (within 1,000)
CONTENT STATEMENT	2.NBT.B.8.	Mentally add 10 or 100 to a given number 100–900, and mentally subtract 10 or 100 from a given number 100–900.
		GOLD® Objectives for Development and Learning Objective 20 Uses number concepts and operations d. Understands and uses place value and base ten Objective 20d.6 Uses place-value understanding to represent and write three-digit numbers (including expanded form); adds up to four two-digit numbers; adds and subtracts three-digit numbers (within 1,000)
CONTENT STATEMENT	2.NBT.B.9.	 Explain why addition and subtraction strategies work, using place value and the properties of operations. <u>GOLD® Objectives for Development and Learning</u> Objective 20 Uses number concepts and operations d. Understands and uses place value and base ten Objective 20d.6 Uses place-value understanding to represent and write three-digit numbers (including expanded form); adds up to four two-digit numbers; adds and subtracts three-digit numbers (within 1,000)
CONTENT AREA / STANDARD	NJ.2.MD.	Measurement and Data
SIRAND	2.MD.A.	Measure and estimate lengths in standard units.
CONTENT STATEMENT	2.MD.A.1.	Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes. <u>GOLD® Objectives for Development and Learning</u> Objective 22 Compares and measures a. Measures objects Objective 22a.11 Emerging to 22a.12 Measures and compares the length of two objects using standard length units

CONTENT STATEMENT	2.MD.A.2.	Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen. <u>GOLD®</u> Objectives for Development and Learning
		Objective 22 Compares and measures a. Measures objects
		Objective 22a.11 Emerging to 22a.12 Measures and compares the length of two objects using standard length units
CONTENT STATEMENT		Estimate lengthe using units of inches, feet, continutors, and meters
CONTENT STATEMENT	2.IVID.A.3.	Estimate lengths using units of inches, leet, centimeters, and meters.
		GOLD[®] Objectives for Development and Learning
		Objective 22 Compares and measures a. Measures objects
		Objective 22a.12 Measures and compares the length of two objects using standard length
		units
CONTENT STATEMENT	2.MD.A.4.	Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.
		$GOLD^{\mathbb{B}}$ Objectives for Development and Learning
		Objective 22 Compares and measures a. Measures objects
		Objective 22a.12 Measures and compares the length of two objects using standard length
		units
CONTENT AREA / STANDARD	NJ.2.MD.	Measurement and Data
STRAND	2.MD.B.	Relate addition and subtraction to length.
CONTENT STATEMENT	2.MD.B.5.	Use addition and subtraction within 100 to solve word problems involving lengths that are
		given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem.
		GOLD [®] Objectives for Development and Learning
		Objective 20 Uses number concepts and operations e. Applies properties of mathematical
		operations and relationships
		Objective 20e.6 Solves one- and two-step word problems of various types using addition
		and subtraction (within 100) and explains strategies; uses repeated addition to find the
		Bennesent whole numbers as lengths from 2 and number line the number with
CONTENT STATEMENT	2.WID.B.6.	Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, and represent whole-number
		sums and differences within 100 on a number line diagram.
		GOLD® Objectives for Development and Learning
		Objective 22 Compares and measures c. Represents and analyzes data
		Objective 22c.8 Reads and creates scaled picture or bar graphs where each picture/bar
		represents more than one data point; uses the graph to ask and answer questions
CONTENT AREA / STANDARD	NJ.2.MD.	Measurement and Data
STRAND	2.MD.C.	Work with time and money.



CONTENT STATEMENT	2.MD.C.7.	Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m. <u>GOLD® Objectives for Development and Learning</u> Objective 22 Compares and measures b. Measures time and money Objective 22b.10 Tells and writes time to the nearest five minutes; indicates a.m. and p.m.; solves word problems involving coins (P, N, D, Q) and dollar bills, and expresses the answer using currency symbols
CONTENT STATEMENT	2.MD.C.8.	Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using \$ and ¢ symbols appropriately. Example: If you have 2 dimes and 3 pennies, how many cents do you have? <u>GOLD® Objectives for Development and Learning</u> Objective 22 Compares and measures b. Measures time and money Objective 22b.10 Tells and writes time to the nearest five minutes; indicates a.m. and p.m.; solves word problems involving coins (P, N, D, Q) and dollar bills, and expresses the answer using currency symbols
CONTENT AREA / STANDARD	NJ.2.MD.	Measurement and Data
STRAND	2.MD.D.	Represent and interpret data.
CONTENT STATEMENT	2.MD.D.9.	Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. Show the measurements by making a line plot, where the horizontal scale is marked off in whole-number units. <u>GOLD® Objectives for Development and Learning</u> Objective 22 Compares and measures c. Represents and analyzes data Objective 22c.8 Reads and creates scaled picture or bar graphs where each picture/bar represents more than one data point; uses the graph to ask and answer questions
CONTENT STATEMENT	2.MD.D.10.	Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put together, take-apart, and compare problems using information presented in a bar graph. <u>GOLD® Objectives for Development and Learning</u> Objective 22 Compares and measures c. Represents and analyzes data Objective 22c.8 Reads and creates scaled picture or bar graphs where each picture/bar represents more than one data point; uses the graph to ask and answer questions
CONTENT AREA / STANDARD	NJ.2.G.	Geometry
STRAND	2.G.A.	Reason with shapes and their attributes.

CONTENT STATEMENT	2.G.A.1.	Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes. <u>GOLD® Objectives for Development and Learning</u> Objective 21 Explores and describes spatial relationships and shapes b. Understands shapes Objective 21b.12 Uses essential attributes to label and create quadrilaterals, pentagons, hexagons, and cubes; visualizes and predicts the results of combining and taking apart two-dimensional and three-dimensional shapes
CONTENT STATEMENT	2642	Partition a rectangle into rows and columns of same-size squares and count to find the
	2.0.A.2.	total number of them. <u>GOLD[®] Objectives for Development and Learning</u> Objective 20 Uses number concepts and operations b. Quantifies Objective 20b.12 Answers how much questions about wholes partitioned into equal shares of two (halves), four (fourths), and three (thirds); verbally labels each part and describes its relationship to the whole
CONTENT STATEMENT	2.G.A.3.	Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words halves, thirds, half of, a third of, etc., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.
		GOLD® Objectives for Development and Learning
		Objective 20 Uses number concepts and operations b. Quantifies
		Objective 20b.12 Answers how much questions about wholes partitioned into equal
		describes its relationship to the whole

New Jersey Student Learning Standards

Mathematics

Grade: 3 - Adopted: 2016

CONTENT AREA / STANDARD	NJ.MP.	Mathematical Practices
STRAND	MP.1.	Make sense of problems and persevere in solving them.
		<u>GOLD[®] Objectives for Development and Learning</u> • Objective 11 Demonstrates positive approaches to learning c. Solves problems Objective 11c.12 Plans, considers various alternatives, and combines skills and strategies needed to solve problems

STRAND	MP.2.	Reason abstractly and quantitatively.
		GOLD [®] Objectives for Development and Learning • Objective 11 Demonstrates positive approaches to learning e. Shows flexibility and inventiveness in thinking Objective 11e.14 Reverses thoughts mentally; understands directional perspectives other than his or her own
STRAND	MP.3.	Construct viable arguments and critique the reasoning of others. <u>GOLD[®] Objectives for Development and Learning</u>
		Objective 11 c.12 Plans, considers various alternatives, and combines skills and strategies needed to solve problems
STRAND	MP.4.	Model with mathematics.
		GOLD [®] Objectives for Development and Learning • Objective 14 Uses symbols and images to represent something not present a. Thinks symbolically Objective 14a.12 Mentally manipulates information and uses logical arguments with increasing regularity; needs concrete points of reference for complex concepts and text; reflects on her work
STRAND	MP.5.	Use appropriate tools strategically.
		Objective 11 Demonstrates positive approaches to learning e. Shows flexibility and inventiveness in thinking Objective 11e.14 Reverses thoughts mentally; understands directional perspectives other
		than his or her own
STRAND	MP.6.	Attend to precision. <u>GOLD[®] Objectives for Development and Learning</u> • Objective 11 Demonstrates positive approaches to learning a. Attends and engages Objective 11a.14 Directs attention based on previous performance and concentrates on activities that require additional study
STRAND	MP.7.	Look for and make use of structure. <u>GOLD[®] Objectives for Development and Learning</u> • Objective 14 Uses symbols and images to represent something not present a. Thinks symbolically Objective 14a.12 Mentally manipulates information and uses logical arguments with
		reflects on her work

STRAND	MP.8.	Look for and express regularity in repeated reasoning.
		Objective 11 Demonstrates positive approaches to learning c. Solves problems Objective 11c.12 Plans, considers various alternatives, and combines skills and strategies needed to solve problems
CONTENT AREA / STANDARD	NJ.3.OA.	Operations and Algebraic Thinking
STRAND	3.OA.A.	Represent and solve problems involving multiplication and division.
CONTENT STATEMENT	3.OA.A.1.	Interpret products of whole numbers, e.g., interpret 5×7 as the total number of objects in 5 groups of 7 objects each. For example, describe and/or represent a context in which a total number of objects can be expressed as 5×7 .
		Objective 20 Uses number concepts and operations e. Applies properties of
		mathematical operations and relationships
		Objective 20e.8 Solves, represents, and explains two-step word problems of various types (equal-sized groups, arrays, measurement quantities) using properties of whole number operations and multiplication/division inverse relationships; uses estimation strategies (mental number line, rounding) to determine if answers are reasonable
CONTENT STATEMENT	3.OA.A.2.	Interpret whole-number quotients of whole numbers, e.g., interpret $56 \div 8$ as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each. For example, describe and/or represent a context in which a number of shares or a number of groups can be expressed as $56 \div 8$.
		GOLD® Objectives for Development and Learning Objective 20 Uses number concepts and operations e. Applies properties of mathematical operations and relationships Objective 20e.8 Solves, represents, and explains two-step word problems of various types (equal-sized groups, arrays, measurement quantities) using properties of whole number operations and multiplication/division inverse relationships; uses estimation strategies (mental number line, rounding) to determine if answers are reasonable
CONTENT STATEMENT	3.OA.A.3.	Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.
		GOLD® Objectives for Development and Learning Objective 20 Uses number concepts and operations e. Applies properties of mathematical operations and relationships Objective 20e.8 Solves, represents, and explains two-step word problems of various types (equal-sized groups, arrays, measurement quantities) using properties of whole number operations and multiplication/division inverse relationships; uses estimation strategies (mental number line, rounding) to determine if answers are reasonable

CONTENT STATEMENT	3.OA.A.4.	Determine the unknown whole number in a multiplication or division equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations $8 \times ? = 48$, $5 = [] \div 3$, $6 \times 6 = ?$. <u>GOLD®</u> Objectives for Development and Learning Objective 20 Uses number concepts and operations e. Applies properties of mathematical operations and relationships Objective 20e.8 Solves, represents, and explains two-step word problems of various types (equal-sized groups, arrays, measurement quantities) using properties of whole number operations and multiplication/division inverse relationships; uses estimation strategies (mental number line, rounding) to determine if answers are reasonable
CONTENT AREA / STANDARD	NJ.3.OA.	Operations and Algebraic Thinking
STRAND	3.OA.B.	Understand properties of multiplication and the relationship between multiplication and division.
CONTENT STATEMENT	3.OA.B.5.	Apply properties of operations as strategies to multiply and divide. Examples: If $6 \times 4 = 24$ is known, then $4 \times 6 = 24$ is also known. (Commutative property of multiplication.) $3 \times 5 \times 2$ can be found by $3 \times 5 = 15$, then $15 \times 2 = 30$, or by $5 \times 2 = 10$, then $3 \times 10 = 30$. (Associative property of multiplication.) Knowing that $8 \times 5 = 40$ and $8 \times 2 = 16$, one can find 8×7 as $8 \times (5 + 2) = (8 \times 5) + (8 \times 2) = 40 + 16 = 56$. (Distributive property.) <u>GOLD®</u> Objectives for Development and Learning Objective 20 Uses number concepts and operations e. Applies properties of mathematical operations and relationships Objective 20e.8 Solves, represents, and explains two-step word problems of various types (equal-sized groups, arrays, measurement quantities) using properties of whole number operations and multiplication/division inverse relationships; uses estimation strategies (mental number line, rounding) to determine if answers are reasonable
CONTENT STATEMENT	3.OA.B.6.	Understand division as an unknown-factor problem. For example, find 32 ÷ 8 by finding the number that makes 32 when multiplied by 8. <u>GOLD® Objectives for Development and Learning</u> Objective 20 Uses number concepts and operations e. Applies properties of mathematical operations and relationships Objective 20e.8 Solves, represents, and explains two-step word problems of various types (equal-sized groups, arrays, measurement quantities) using properties of whole number operations and multiplication/division inverse relationships; uses estimation strategies (mental number line, rounding) to determine if answers are reasonable
CONTENT AREA / STANDARD	NJ.3.OA.	Operations and Algebraic Thinking
STRAND	3.OA.C.	Multiply and divide within 100.

CONTENT STATEMENT	3.OA.C.7.	Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that 8 × 5 = 40, one knows 40 ÷ 5 = 8) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers. <u>GOLD® Objectives for Development and Learning</u> Objective 20 Uses number concepts and operations f. Applies number combinations and mental number strategies in mathematical operations Objective 20f.8 Adds and subtracts whole numbers fluently within 1,000; multiplies and divides whole numbers fluently within 100 using previously learned mental strategies, the relationships between addition/subtraction and multiplication/division, and algorithms based on place value; identifies the products of all one-digit numbers from memory
CONTENT AREA / STANDARD	NJ.3.OA.	Operations and Algebraic Thinking
STRAND	3.OA.D.	Solve problems involving the four operations, and identify and explain patterns in arithmetic.
CONTENT STATEMENT	3.OA.D.8.	Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding. <u>GOLD®</u> Objectives for Development and Learning Objective 20 Uses number concepts and operations e. Applies properties of mathematical operations and relationships Objective 20e.8 Solves, represents, and explains two-step word problems of various types (equal-sized groups, arrays, measurement quantities) using properties of whole number operations and multiplication/division inverse relationships; uses estimation strategies (mental number line, rounding) to determine if answers are reasonable
CONTENT STATEMENT	3.OA.D.9.	Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends. <u>GOLD® Objectives for Development and Learning</u> • Objective 23 Demonstrates knowledge of patterns Objective 23.14 Recognizes arithmetic patterns and explains them using properties of operations
CONTENT AREA / STANDARD	NJ.3.NBT.	Number and Operations in Base Ten
STRAND	3.NBT.A.	Use place value understanding and properties of operations to perform multi-digit arithmetic.

CONTENT STATEMENT	3.NBT.A.1.	Use place value understanding to round whole numbers to the nearest 10 or 100.
		<u>GOLD[®] Objectives for Development and Learning</u> Objective 20 Uses number concepts and operations d. Understands and uses place value and base ten Objective 20d.8 Uses place-value understanding to represent and write four-digit numbers; multiplies one-digit whole numbers by 10s (10–90); rounds three-digit whole numbers to the nearest ten or hundred
CONTENT STATEMENT	3.NBT.A.2.	Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.
		<u>GOLD® Objectives for Development and Learning</u> Objective 20 Uses number concepts and operations f. Applies number combinations and mental number strategies in mathematical operations Objective 20f.8 Adds and subtracts whole numbers fluently within 1,000; multiplies and divides whole numbers fluently within 100 using previously learned mental strategies, the relationships between addition/subtraction and multiplication/division, and algorithms based on place value; identifies the products of all one-digit numbers from memory
CONTENT STATEMENT	3.NBT.A.3.	 Multiply one-digit whole numbers by multiples of 10 in the range 10–90 (e.g., 9 × 80, 5 × 60) using strategies based on place value and properties of operations. <u>GOLD[®] Objectives for Development and Learning</u> Objective 20 Uses number concepts and operations d. Understands and uses place value and base ten Objective 20d.8 Uses place-value understanding to represent and write four-digit numbers; multiplies one-digit whole numbers by 10s (10–90); rounds three-digit whole numbers to the nearest ten or hundred
CONTENT AREA / STANDARD	NJ.3.NF.	Number and Operations—Fractions
STRAND	3.NF.A.	Develop understanding of fractions as numbers.
CONTENT STATEMENT	3.NF.A.1.	Understand a fraction 1/b as the quantity formed by 1 part when a whole is partitioned into b equal parts; understand a fraction a/b as the quantity formed by a parts of size 1/b. <u>GOLD®</u> Objectives for Development and Learning Objective 20 Uses number concepts and operations b. Quantifies Objective 20b.14 Compares fractions and explains them using physical models, pictorial representations, and number lines Objective 20 Uses number concepts and operations c. Connects numerals with their quantities Objective 20c.14 Represents fractional quantities as parts of a whole (a/2, a/3, a/4, a/6, a/8); uses relation symbols (, =) to show fractional comparisons
CONTENT AREA / STANDARD	NJ.3.NF.	Number and Operations—Fractions
STRAND	3.NF.A.	Develop understanding of fractions as numbers.



CONTENT STATEMENT	3.NF.A.2.	Understand a fraction as a number on the number line; represent fractions on a number line diagram.
CUMULATIVE PROGRESS INDICATOR	3.NF.A.2.a.	Represent a fraction 1/b on a number line diagram by defining the interval from 0 to 1 as the whole and partitioning it into b equal parts. Recognize that each part has size 1/b and that the endpoint of the part based at 0 locates the number 1/b on the number line. <u>GOLD® Objectives for Development and Learning</u> Objective 20 Uses number concepts and operations b. Quantifies Objective 20b.14 Compares fractions and explains them using physical models, pictorial representations, and number lines
CUMULATIVE PROGRESS INDICATOR	3.NF.A.2.b.	Represent a fraction a/b on a number line diagram by marking off a lengths 1/b from 0. Recognize that the resulting interval has size a/b and that its endpoint locates the number a/b on the number line. <u>GOLD® Objectives for Development and Learning</u> Objective 20 Uses number concepts and operations b. Quantifies Objective 20b.14 Compares fractions and explains them using physical models, pictorial representations, and number lines
CONTENT AREA / STANDARD	NJ.3.NF.	Number and Operations—Fractions
STRAND	3.NF.A.	Develop understanding of fractions as numbers.
CONTENT STATEMENT	3.NF.A.3.	Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size.
CUMULATIVE PROGRESS INDICATOR	3.NF.A.3.a.	Understand two fractions as equivalent (equal) if they are the same size, or the same point on a number line. <u>GOLD® Objectives for Development and Learning</u> Objective 20 Uses number concepts and operations b. Quantifies Objective 20b.14 Compares fractions and explains them using physical models, pictorial representations, and number lines Objective 20 Uses number concepts and operations c. Connects numerals with their quantities Objective 20c.14 Represents fractional quantities as parts of a whole (a/2, a/3, a/4, a/6, a/8); uses relation symbols (, =) to show fractional comparisons
CUMULATIVE PROGRESS INDICATOR	3.NF.A.3.b.	Recognize and generate simple equivalent fractions, e.g., 1/2 = 2/4, 4/6 = 2/3). Explain why the fractions are equivalent, e.g., by using a visual fraction model. <u>GOLD®</u> Objectives for Development and Learning Objective 20 Uses number concepts and operations b. Quantifies Objective 20b.14 Compares fractions and explains them using physical models, pictorial representations, and number lines

CUMULATIVE PROGRESS INDICATOR	3.NF.A.3.c.	 Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers. Examples: Express 3 in the form 3 = 3/1; recognize that 6/1 = 6; locate 4/4 and 1 at the same point of a number line diagram. <u>GOLD® Objectives for Development and Learning</u> Objective 20 Uses number concepts and operations b. Quantifies Objective 20b.14 Compares fractions and explains them using physical models, pictorial representations, and number lines Objective 20 Uses number concepts and operations c. Connects numerals with their quantities Objective 20c.14 Represents fractional quantities as parts of a whole (a/2, a/3, a/4, a/6, a/8); uses relation symbols (, =) to show fractional comparisons
CUMULATIVE PROGRESS INDICATOR	3.NF.A.3.d.	Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with the symbols >, =, or <, and justify the conclusions, e.g., by using a visual fraction model. <u>GOLD® Objectives for Development and Learning</u> Objective 20 Uses number concepts and operations b. Quantifies Objective 20b.14 Compares fractions and explains them using physical models, pictorial representations, and number lines Objective 20 Uses number concepts and operations c. Connects numerals with their quantities Objective 20c.14 Represents fractional quantities as parts of a whole (a/2, a/3, a/4, a/6, a/8); uses relation symbols (, =) to show fractional comparisons
CONTENT AREA / STANDARD	NJ.3.MD.	Measurement and Data
STRAND	3.MD.A.	Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects.
CONTENT STATEMENT	3.MD.A.1.	Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram.GOLD® Objectives for Development and Learning Objective 22 Compares and measures b. Measures time and money Objective 22b.12 Solves one-step word problems related to time to the nearest minute

CONTENT STATEMENT	3.MD.A.2.	Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem. <u>GOLD®</u> Objectives for Development and Learning Objective 22 Compares and measures a. Measures objects Objective 22a.14 Solves one-step word problems related to measurement of liquid volume, mass, area, and perimeter
CONTENT AREA / STANDARD	NJ.3.MD.	Measurement and Data
STRAND	3.MD.B.	Represent and interpret data.
CONTENT STATEMENT	3.MD.B.3.	Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled bar graphs. For example, draw a bar graph in which each square in the bar graph might represent 5 pets.
		GOLD [®] Objectives for Development and Learning Objective 22 Compares and measures c. Represents and analyzes data Objective 22c.10 Reads and creates scaled picture or bar graphs where each picture/bar represents more than one data point; uses the graph to ask and answer questions
CONTENT STATEMENT	3.MD.B.4.	Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units— whole numbers, halves, or quarters. <u>GOLD® Objectives for Development and Learning</u> Objective 22 Compares and measures a. Measures objects Objective 22a.13 Emerging to 22a.14 Solves one-step word problems related to measurement of liquid volume, mass, area, and perimeter
CONTENT AREA / STANDARD	NJ.3.MD.	Measurement and Data
STRAND	3.MD.C.	Geometric measurement: understand concepts of area and relate area to multiplication and to addition.
CONTENT STATEMENT	3.MD.C.5.	Recognize area as an attribute of plane figures and understand concepts of area measurement.
CUMULATIVE PROGRESS INDICATOR	3.MD.C.5.a.	A square with side length 1 unit, called "a unit square," is said to have "one square unit" of area, and can be used to measure area. <u>GOLD® Objectives for Development and Learning</u> Objective 22 Compares and measures a. Measures objects Objective 22a.14 Solves one-step word problems related to measurement of liquid volume, mass, area, and perimeter

CUMULATIVE PROGRESS INDICATOR	3.MD.C.5.b.	A plane figure which can be covered without gaps or overlaps by n unit squares is said to have an area of n square units. <u>GOLD®</u> Objectives for Development and Learning Objective 22 Compares and measures a. Measures objects Objective 22a.14 Solves one-step word problems related to measurement of liquid volume, mass, area, and perimeter
CONTENT AREA / STANDARD	NJ.3.MD.	Measurement and Data
STRAND	3.MD.C.	Geometric measurement: understand concepts of area and relate area to multiplication and to addition.
CONTENT STATEMENT	3.MD.C.6.	 Measure areas by counting unit squares (square cm, square m, square in, square ft, and non- standard units). <u>GOLD[®] Objectives for Development and Learning</u> Objective 22 Compares and measures a. Measures objects Objective 22a.14 Solves one-step word problems related to measurement of liquid volume, mass, area, and perimeter
CONTENT AREA / STANDARD	NJ.3.MD.	Measurement and Data
STRAND	3.MD.C.	Geometric measurement: understand concepts of area and relate area to multiplication and to addition.
CONTENT STATEMENT	3.MD.C.7.	Relate area to the operations of multiplication and addition.
CUMULATIVE PROGRESS INDICATOR	3.MD.C.7.a.	 Find the area of a rectangle with whole-number side lengths by tiling it, and show that the area is the same as would be found by multiplying the side lengths. <u>GOLD®</u> Objectives for Development and Learning Objective 22 Compares and measures a. Measures objects Objective 22a.14 Solves one-step word problems related to measurement of liquid volume, mass, area, and perimeter
CUMULATIVE PROGRESS INDICATOR	3.MD.C.7.b.	 Multiply side lengths to find areas of rectangles with whole number side lengths in the context of solving real world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning. <u>GOLD®</u> Objectives for Development and Learning Objective 22 Compares and measures a. Measures objects Objective 22a.14 Solves one-step word problems related to measurement of liquid volume, mass, area, and perimeter

CUMULATIVE PROGRESS INDICATOR	3.MD.C.7.c.	Use tiling to show in a concrete case that the area of a rectangle with whole-number side lengths a and b + c is the sum of a × b and a × c. Use area models to represent the distributive property in mathematical reasoning. <u>GOLD[®] Objectives for Development and Learning</u> • Objective 22 Compares and measures a. Measures objects Objective 22a.14 Solves one-step word problems related to measurement of liquid volume, mass, area, and perimeter
CUMULATIVE PROGRESS INDICATOR	3.MD.C.7.d.	Recognize area as additive. Find areas of rectilinear figures by decomposing them into non- overlapping rectangles and adding the areas of the non-overlapping parts, applying this technique to solve real world problems. GOLD® Objectives for Development and Learning • Objective 22 Compares and measures a. Measures objects Objective 22a.14 Solves one-step word problems related to measurement of liquid volume, mass, area, and perimeter
CONTENT AREA / STANDARD	NJ.3.MD.	Measurement and Data
STRAND	3.MD.D.	Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures.
CONTENT STATEMENT	3.MD.D.8.	Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters. <u>GOLD[®] Objectives for Development and Learning</u> • Objective 22 Compares and measures a. Measures objects Objective 22a.14 Solves one-step word problems related to measurement of liquid volume, mass, area, and perimeter
CONTENT AREA / STANDARD	NJ.3.G.	Geometry
STRAND	3.G.A.	Reason with shapes and their attributes.
CONTENT STATEMENT	3.G.A.1.	Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories. <u>GOLD® Objectives for Development and Learning</u> Objective 21 Explores and describes spatial relationships and shapes b. Understands shapes Objective 21b.14 Classifies known shapes into higher and subordinate categories; provides rationale for classifications; divides shapes into parts with equal areas and expresses the parts as unit fractions

CONTENT STATEMENT	3.G.A.2.	Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. For example, partition a shape into 4 parts with equal area, and describe the area of each part as 1/4 of the area of the shape.
		<i>GOLD[®]</i> Objectives for Development and Learning Objective 21 Explores and describes spatial relationships and shapes b. Understands shapes
		Objective 21b.14 Classifies known shapes into higher and subordinate categories; provides rationale for classifications; divides shapes into parts with equal areas and expresses the parts as unit fractions

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