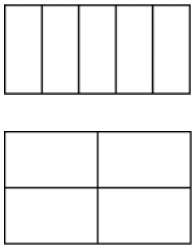
Grade 3:	Unit: Operations and Algebraic Thinking (Topics 4-8)		Time:	
Critical Skills: (Student Outcomes)	NJ Learning Standards:	Samples/Exemplars:	Resources:	Assessments:
A. Represent and solve problems involving multiplication and division.	3.OA.A.1: Interpret products of whole numbers, e.g., interpret 5 × 7 as the total number of objects in 5 groups of 7 objects each.	describe and/or represent a context in which a total number of objects can be expressed as 5 × 7	Text(units/Pages) Lessons 4-1 and 4-5 Technology/Open Resources	Operations and Algebraic Thinking Assessment
	3.OA.A.2: Interpret whole number quotients of whole numbers, e.g., interpret 56 ÷ 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.	Describe and/or represent a story in which a number of shares or a number of groups can be expressed as 56 ÷ 8.	Text(units/Pages) Lessons 7-1 and 7-2 Technology/Open Resources Fish Tanks	
	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	Sam ran 21 miles total on Friday, Saturday, and Sunday. He ran the same number of miles on each day. How far did Sam run on Friday?	Text(units/Pages) Lessons 4-2 and 4-4 Lessons 5-1 and 5-7 Lessons 6-2 thru 6-9 Lessons 7-1, 7-2, 7-5, 7-6 Lessons 8-5 thru 8-7 and 8-9 Technology/Open Resources	

	represent the problem.		Interpretations of Division Multiplication Word Problems	
	3.OA.A.4: Determine the unknown whole number in a multiplication or division equation relating three whole numbers.	determine the unknown number that makes the equation true in each of the equations 8 × ? = 48, 5= ?/3, 6x6=?	Text(units/Pages) Lessons 7-4 Technology/Open Resources Division: Finding the Unknown	
B. Understand properties of multiplication and the relationship between multiplication and division.	3.OA.B.5: Apply properties of operations as strategies to multiply and divide	Commutative Property: 6 × 4 = 24 is known, then 4 × 6 = 24 is also known. Associative Property: 3 x 5 × 2 can be found by 3 × 5 = 15, then 15 × 2 = 30, or by 5 × 2 = 10, then 3 × 10 = 30 Distributive Property: find 8 × 7 as 8 × (5 + 2) = (8 × 5) + (8 × 2) = 40 + 16=56	Text(units/Pages) Lessons 4-3 Lessons 6-1 Technology/Open Resources Valid Equalities Part 2	
	3.OA.B.6: Understand division as an	find 32 ÷ 8 by finding the number that makes	Text(units/Pages) Lessons 7-3	

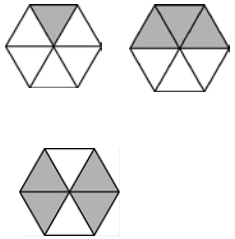
	unknown factor problem.	32 when multiplied by 8. (8x?=32)	Technology/Open Resources	
C. Multiply and divide within 100.	3.OA.C.7: Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that 8 × 5 = 40, one knows 40 ÷ 5 = 8) or properties of operations. By the end of Grade 3, know from memory all products of two one digit numbers.	Students must know/memorize all facts through 10's Knowing that 8 × 5 = 40, one knows 40 ÷ 5 = 8 (relate multiplication with division)	Text(units/Pages) Lessons 8-1 thru 8-4 and 8-8 Technology/Open Resources Multiplication Matching Game	
D. Solve problems involving the four operations, and identify and explain patterns in arithmetic.	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	Mary had 10 carrots. She ate 5 carrots, and then Joe gave her some more carrots. Mary then had 8 carrots. Write an equation that can be used to find how many carrots Joe gave Mary.	Text(units/Pages) Lessons Technology/Open Resources The Class Trip	

	computation and estimation strategies including rounding.			
	3.OA.D.9: Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations.	observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends.	Text(units/Pages) Lessons 5-2 thru 5-5 Technology/Open Resources Addition Properties	

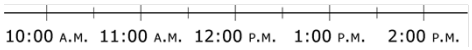
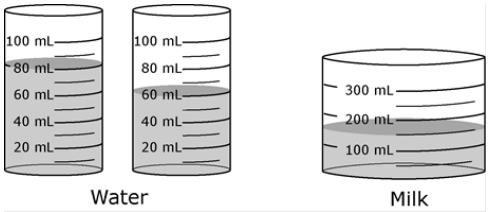
Grade 3:	Unit: Number and Operations in Base Ten (Topics 1-3)		Time:	
Critical Skills: (Student Outcomes)	NJ Learning Standards:	Samples/Exemplars:	Resources:	Assessments:
A. Use place value understanding and properties of operations to perform multi-digit arithmetic	3.NBT.1: Use place value understanding to round whole numbers to the nearest 10 or 100	In which list will every number round to 530 when rounded to the nearest ten? a. 527, 531, 537 b. 525, 529, 533 c. 522, 528, 536 d. 524, 536, 528	Text(units/Pages) Lessons 2-5 Technology/Open Resources Rounding to the Nearest Ten Round to 50 or 500	NBT Assessment
	3.NBT.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.	There are 36 birds in the city zoo. There are 19 birds in the pet store. What is the total number of birds total in the city zoo and the pet store?	Text(units/Pages) Lessons 2-1 thru 2-4 and 2-7 thru 2-9 Lessons 3-1 thru 3-9 Technology/Open Resources	
	3.NBT.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.	30 x 7 = 210, should be able to compute by multiplying 3 x 7 and adding the 0.	Text(units/Pages) Lessons Technology/Open Resources Colored Pencils	

Grade 3:	Unit: Numbers and Operations: Fractions (Topics 9-10 and 12)		Time:	
Critical Skills: (Student Outcomes)	**NJ Learning Standards:**	**Samples/Exemplars:**	**Resources:**	**Assessments:**
A. Develop understanding of fractions as numbers	3.NF.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.	Which of the following pictures show 1/6 	Text (Units/Pages) Lessons 9-1 thru 9-4 (combine 9-1 thru 9-3) Technology/Open Resources Halves, Sixths and Eights	Fractions Assessment (Includes Time)
	3.NF.2:Understand a fraction as a number on the number line; represent fractions on a number line diagram.		Text (Units/Pages) Lessons 10-9 Technology/Open Resources	
	3.NF.2a: 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	Brian's music player can hold 5 songs. Brian has put 1 song on the player. Mark on the number line to show what fraction 1 song is of the 5 songs. Label 0 and 1 on the number line.	Text (Units/Pages) Lessons 9-5 and 9-6 Technology/Open Resources Closest to 1/2	

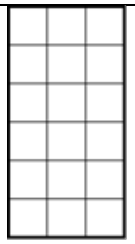
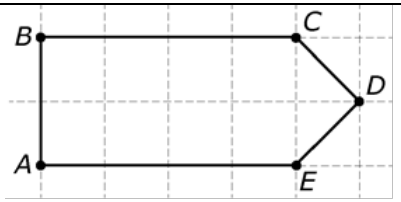
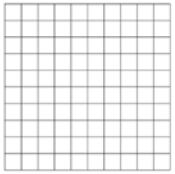
	number line.			
	3.NF.2b: Represent a fraction a/b on a number line diagram by marking off a lengths 1/b from 0. Recognize that the resulting interval has size a/b and that its endpoint locates the number a/b on the number line	The point on the number line below represents the fraction 5/6 Locate and label 1/6 Label 0 and 1 on the number line. 	Text (Units/Pages) Lessons 9-7 (must add supplemental material for measuring length to the quarter inch) Technology/Open Resources Fractions on a Number Line	
	3.NF.3: Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size.		Text (Units/Pages) Lessons 10-8 Technology/Open Resources	
	3.NF.3a: Understand two fractions as equivalent (equal) if they are the same size, or the same point on a number line.	Are the fractions 2/3 and 2/6 equivalent? Circle yes or no. Yes No Use a number line to show why your answer is correct.	Text (Units/Pages) Lessons 10-8 Technology/Open Resources Halves, Sixths and Eights	
	3.NF.3b: Recognize and generate simple	Which picture is equivalent to 2/3?	Text (Units/Pages) Lessons 10-5 and 10-6	

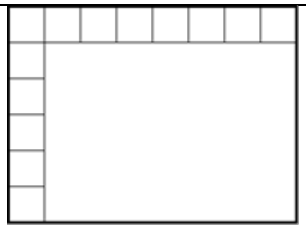
	equivalent fractions, e.g., 1/2 =2/4, 4/6 = 2/3). Explain why the fractions are equivalent, e.g., by using a visual fraction model.		Technology/Open Resources	
	3.NF.3c: Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers.	Mark a number line below to show 0, 4/1, 2/1, 3/3 and 1.	Text (Units/Pages) Lessons 10-7 Technology/Open Resources Starting at 5/3	
	3.NF.3d: 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,	$\frac{2}{5} \bigcirc \frac{2}{8}$ $\frac{4}{10} \bigcirc \frac{5}{10}$	Text (Units/Pages) Lessons 10-1thru 10-4 Technology/Open Resources	

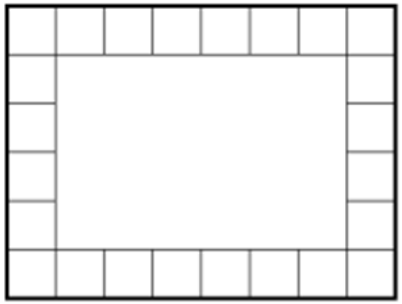
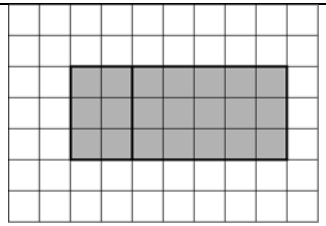
	e.g., by using a visual fraction model			

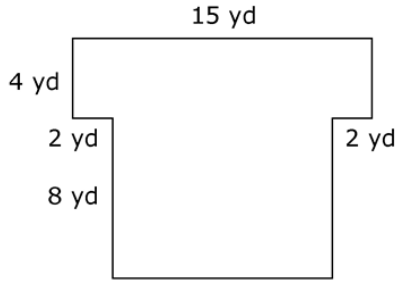
Grade 3:	Unit: Measurement and Data (Topics 13-16)		Time:	
Critical Skills: (Student Outcomes)	NJ Learning Standards:	Samples/Exemplars:	Resources:	Assessments:
A. Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects.	3.MD.1: Tell and write time 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	Pablo took a trip from New York to Florida. His plane left New York at 10:30 a.m. and arrived in Florida at 1:00 p.m. How long, in minutes, was Pablo's flight? Use the number line below to help answer the question  	Text (Units/Pages) Lessons 12-1 and 12-5 (combine 12-1 and 12-2) Technology/Open Resources Dajuana's Homework	This standard is addressed in the fraction assessment
	3.MD.2: Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l).6 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.	Marcus compares the amount of water in the two containers with the amount of milk. He says the amount of water is greater than the amount of milk. Is Marcus correct? Explain your answer below.  	Text (Units/Pages) Lessons 15-1 thru 15-5 Technology/Open Resources How Heavy	

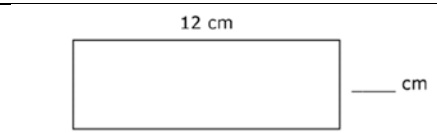
B. Represent and interpret data	3.MD.3: Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one and two step "how many more" and "how many less" problems using information presented in scaled bar graphs.	draw a bar graph in which each square in the bar graph might represent 5 pet	Text (Units/Pages) Lessons 16-3 thru 16-6 Technology/Open Resources Classroom Supplies	
	3.MD.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	Measure a variety of pencils and then use the data to create one of each type of graph (line plot, bar and pictograph)	Text (Units/Pages) Lessons 16-1 and 16-2 Technology/Open Resources	
C. Geometric measurement: understand concepts of area and relate area to multiplication and to addition	3.MD.5: Recognize area as an attribute of plane figures and understand concepts of area measurement.	Find the area, in square units, of the rectangle shown below. The area of each small square is 1 square unit.	Text (Units/Pages) Lessons 14-1 and 14-10 Technology/Open Resources	Area and Perimeter Assessment

	3.MD.5a: 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.			
	3.MD.5b: 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.	 Area = _____	Text (Units/Pages) Lessons 14-2 Technology/Open Resources	
	3.MD.6: Measure areas by counting unit squares (square cm, square m, square in, square ft, and non-standard units).	Part A: Draw a figure in the grid below that has 3 rows of squares with 6 squares in each row. What is the area, in square units, of the figure?  Answer: Area = _____ square units	Text (Units/Pages) Lessons 14-3 and 14-6 Technology/Open Resources The Area of Polygons	
	3.MD.7: Relate area to the operations of multiplication and addition.		Text (Units/Pages) Technology/Open Resources	

		 The rectangle above is partially filled with square tiles. Explain how the area of the rectangle above can be found without counting the rest of the square tiles that would be needed to fill the rectangle.		
	3.MD.7a: 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.	Meghan would like to practice cheerleading in her home's basement, which is 9 feet by 8 feet. The local hardware store has a sale on square pads that have sides that are 1 foot in length. In order to cover the floor, what is the minimum number of square pads that must be used? Explain your answer.	Text (Units/Pages) Lessons 14-4 Technology/Open Resources India's Bathroom Tiles	
	3.MD.7b: Multiply side lengths to find areas of rectangles with whole Number side lengths in the	Derek tiles a path that is 1-foot wide on each side around a pool, as shown below. What is the total area around the path and the pool?	Text (Units/Pages) Lessons 14-8 Technology/Open Resources	

	context of solving real world and mathematical problems, and represent whole number products as rectangular areas in mathematical reasoning			
	3.MD.7c: 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.	 Which of the following equations represents the total area of the shaded region shown above? a. Area = $3 + 2 + 5$ b. Area = $3 \times 2 + 5$ c. Area = $3 + (2 \times 5)$	Text (Units/Pages) Lessons 14-5 Technology/Open Resources The Distributive Property	

		d. Area = $3 \times (2 + 5)$		
	3.MD.7d: 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.	The figure below represents the floor plan and dimensions of a school auditorium and stage. What is the area, in square yards, of the figure below? What is the perimeter of the auditorium?  	Text (Units/Pages) Lessons 14-7 Technology/Open Resources Three Hidden Rectangles	
D. Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures.	3.MD.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	A rectangle is formed by bending a wire that is 32cm. long. The length of the rectangle is 12 cm. What is the width, in centimeters, of the rectangle?	Text (Units/Pages) Lessons 13-1 thru 13-5 Technology/Open Resources Shapes and Their Insides	

	perimeter and different areas or with the same area and different perimeters.	 a. 2 b. 4 c. 6 d. 8		

Grade 3:	Unit: Geometry (Topics 11)		Time:	
Critical Skills: (Student Outcomes)	NJ Learning Standards:	Samples/Exemplars:	Resources:	Assessments:
A. Reason with shapes and their attributes.	3.G.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	Circle all words that can describe the shape of the computer screen (not including the base) below. More than one word may be circled.  • Square • Parallelogram • Rectangle • Rhombus • Trapezoid	Text (Units/Pages) Lessons 11-1 thru 11-5 Technology/Open Resources	Geometry Assessment

	these subcategories			
	3.G.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.	Relate fractional parts to area	Text (Units/Pages) 11-6 and 11-7 Technology/Open Resources Half a Circle	