Grade 3 Benchmarks Term Expectations with Full Standards

Expectations for report card line items can now be viewed by term and by year.
Each page has a math domain.
Expectations by term are now further broken down by MA Curriculum Frameworks standards.

Operations and Alebraic Reasoning

Understand relationship between multiplication and division 3.OA.1, OA.2, OA.5, OA.6 **A rating of 4 is not available for this standard**			
Standards	Term 1 Expectations	Term 2 Expectations	Term 3 Expectations
3.OA.1	Represent multiplication as equal groups with concrete objects and drawings.	Interpret whole-number products.	Interpret whole -number products. (Ex: describe a situation where a total number of objects can be expressed as 5x7)
3.OA.2			Interpret whole-number quotients of whole numbers (Ex: describe a situation where a number of shares or number of groups can be expressed as 56÷8)
3.OA.5		Understand and apply the Commutative property of multiplication (turn around rule), Associative property of multiplication (Ex: 7x5x2= 7x(5x2)). **Note:** Students do not need to use the formal terms for these properties.	Understand and apply the Commutative property of multiplication (turn around rule), Associative property of multiplication (Ex: 7x5x2= 7x(5x2)). **Note:** Students do not need to use the formal terms for these properties.
3.OA.6		Understand division as an unknown factor problem.	Understand division as an unknown factor problem.
Represents and Solves Problems Involving Multiplication and Division. 3.OA.3, 3.OA.4			
Standards	Term 1 Expectations	Term 2 Expectations	Term 3 Expectations
3.OA.3	Uses multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities by using drawings and equations with a symbol for the unknown number to represent the problem for the multiplication tables of 0, 1, 2, 5, and 10.	Uses multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities by using drawings and equations with a letter for the unknown number to represent the problem for the multiplication tables of 0, 1, 2, 5, and 10.	Uses multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities by using drawings and equations with a letter for the unknown number to represent the problem.

3.OA.4	Finds the unknown whole number in a multiplication or division equation relating 3 whole numbers for the multiplication tables of 0, 1, 2, 5, and 10. Ex: Find the unknown number that makes the equation true in each of the equations: 2 x ? = 12, 5 = ? ÷ 3, 4 x 4 = ?	Finds the unknown whole number in a multiplication or division equation relating 3 whole numbers for the multiplication tables of 0, 1, 2, 3, 4, 5, and 10. Ex: Find the unknown number that makes the equation true in each of the equations: 2 x ? = 12, 5 = ? ÷ 3, 4 x 4 = ?	Finds the unknown whole number in a multiplication or division equation relating three whole numbers. Ex: Find the unknown number that makes the equation true in each of the equations: 8 x ? = 48, 5 = ? ÷ 3, 6 x 6 = ?
Knows Multiplication and Related Division Facts Through 10 X 10 3.OA.7			
Standards	Term 1 Expectations	Term 2 Expectations	Term 3 Expectations
3.OA.7	Fluently multiplies using strategies for all products of 1 digit numbers and 1, 2, 5, and 10 and recognizes relationship between multiplication and division.	Knows from memory multiplication facts for the multiplication tables of **0-5 and 10.**	Knows from memory multiplication and related division facts **through 10 x 10**.
Solves Multi-step Problems Involving the Four Operations. 3.OA.8			
Standards	Term 1 Expectations	Term 2 Expectations	Term 3 Expectations
3.OA.8	Solves multi-step word problems involving addition and subtraction.	Solves multi-step word problems involving addition, subtraction, **and multiplication with 0-5 and 10.**	Solves multi-step word problems involving addition, subtraction, **multiplication and division.**
Identifies and Explains Patterns in Arithmetic 3.OA.9			
Standards	Term 1 Expectations	Term 2 Expectations	Term 3 Expectations
3.OA.9	N/A	Identify patterns in arithmetic involving addition, subtraction and multiplication.	Identify **and explain** patterns in arithmetic involving addition, subtraction, multiplication, **and division**. Explain the patterns using the properties of operations. Ex: Explain why 4 times a number can be decomposed into two equal addends.
Number and Operations in Base Ten			
Uses Place Value Understanding to Round Whole Numbers and Multiply. 3.NBT.1, NBT.3			
Standards	Term 1 Expectations	Term 2 Expectations	Term 3 Expectations
3.NBT.1	Round whole numbers to the nearest 10 or 100	Round whole numbers to the nearest 10 or 100	Round whole numbers to the nearest 10 or 100
3.NBT.3			Multiply one-digit whole numbers by multiples of 10 in the range 10-90. (Extension facts)
Uses Place Value Understanding and Properties of Operations to Add and Subtract NBT.2			
Standards	Term 1 Expectations	Term 2 Expectations	Term 3 Expectations
3.NBT.2	Fluently add and subtract 2-digit numbers using strategies based on place value, properties of operations and/or the relationship between addition and subtraction.	Fluently add and subtract **within 1000** using strategies based on place value, properties of operations and /or the relationship between addition and subtraction.	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.

Number and Operations- Fractions

Develops understanding of fractions as numbers
3.NF.1, NF.2, NF.3

Standards	Term 1 Expectations	Term 2 Expectations	Term 3 Expectations
3.NF.1	N/A	For fractions with denominators of 2, 3, 4, 6, and 8, identify and represent given unit (1/b) and non-unit (a/b) fractions using pictures, words, and fraction circles.	For fractions with denominators of 2, 3, 4, 6, and 8, identify and represent given unit (1/b) and non-unit (a/b) fractions using pictures, words, and fraction circles.
3.NF.2	N/A		For fractions with denominators of 2, 3, 4, 6, and 8: Understand a fraction as a number on a number-line and represent fractions on a number-line diagram. Students are able to redefine the area between 0 and 1 by partitioning the section into equal (b) parts to find 1/b or a/b.
3.NF.3	N/A		Understand that two fractions are equivalent if they are the same size or at the same point on the number line Using visual fraction models recognize and create simple equivalent fractions, e.g. ½=2/4. 4/6=2/3. Express whole numbers as fractions and recognize fractions that represent the same whole number. Ex: 3=3/1 and 3/1 = 6/2. Locate 4/4 at the same point on the number line as 1.

Measurement and Data

Solves Problems Involving Measurement and Estimation of Time, Liquid Volume and Masses of Objects.
3.MD.1, 3.MD.2

Standards	Term 1 Expectations	Term 2 Expectations	Term 3 Expectations
3.MD.1	Tell and write time to the nearest 5 minutes and use an open number line with other tools to add time intervals in minutes.	Tell and write time to the nearest minute **and measure elapsed time in minutes.** Solve word problems involving time intervals using open number lines and other tools.	Tell and write time to the nearest minute and measure elapsed time in minutes. Solve word problems involving time intervals using open number lines and other tools.
3.MD.3			Measure and estimate liquid volumes and masses (weight) of objects in grams (g), kilograms (kg) and liters (l). Use the four operations to solve one-step word problems involving masses or volumes that are given in the same metric units. May use drawings to represent the problem.

Represents and interprets data using picture graphs, bar graphs and line plots.
3.MD.3, MD.4

Standards	Term 1 Expectations	Term 2 Expectations	Term 3 Expectations

3.MD.3	Solve one-step "how many more" and "how many less" problems using information from bar graph.	Solve one-step "how many more" and "how many less" problems using information from bar graph. Represent a data set with several categories on a given scaled bar graph.	Solve one and two step "how many more'' and 'how many less' problems using information from bar graph. **Draw a scaled picture graph and a scaled bar graph** to represent data from several categories.
3.MD.4	Measure lengths to the nearest inch using rulers marked with whole and half inches.	Measure lengths to the **nearest half inch** using rulers marked with wholes, halves and fourths of an inch.	**Generate measurement data** by measuring lengths using rulers marked with halves and fourths of an inch. Show data by making a line (dot) plot where the horizontal scale is marked off in appropriate units-whole numbers, halves, or quarters.
Understands Area and Perimeter. 3.MD.5, MD.6, MD.7, MD.8			
Standards	Term 1 Expectations	Term 2 Expectations	Term 3 Expectations
3.MD.5	N/A	Understand area is a plane figure covered, without gap or overlap in square units. Understand a square with side length 1 unit is called a square unit.	Understand area is a plane figure covered, without gap or overlap in square units. Understand a square with side length 1 unit is called a square unit.
3.MD.6	N/A	Measure area by counting unit squares (square cm, m, in, ft, and non-standard units.)	Measure area by counting unit squares (square cm, m, in, ft, and non-standard units.)
3.MD.7	N/A	Relate area to multiplication and division: Find area of a rectangle with whole-number sides by tiling it, and show that the area is the same as it would be by multiplying the length and width. Use area formula to solve word problems and represent products as rectangular areas. Ex: 24 could represent area in square feet of a rectangular room that is 6ft by 4 ft or 8ft by 3ft.	Relate area to multiplication and division: Find area of a rectangle with whole-number sides by tiling it, and show that the area is the same as it would be by multiplying the length and width. Use area formula to solve word problems and represent products as rectangular areas. Ex: 24 could represent area in square feet of a rectangular room that is 6ft by 4 ft or 8ft by 3ft.
3.MD.8	N/A		Solve real-world and mathematical problems involving perimete
Geometry			
Reason with Shapes and Their Attributes 3.G.1, 3.G.2			
Standards	Term 1 Expectations	Term 2 Expectations	Term 3 Expectations

3.G.1	N/A	Understand that shapes in different categories may share attributes. Compare and classify shapes by their sides and angles (right angle/non-right angle)	Understand that shapes in different categories may share attributes **and that shared attributes can define a larger category. Ex: Rhombuses and rectangles have four sides and both belong to the larger category of quadrilateral.** Compare and classify shapes by their sides and angles (right angle/non-right angle)
3.G.2	N/A		Partition shapes into parts with equal areas and express the area of each part as a unit fraction of the whole. Ex: Partition a rectangle into 4 equal parts and describe each part as ¼ of the area of the shape.

Mathematical Practice

Listed below are examples of the use of mathematical practice. Practice and evidence are embedded in the lessons. Like the content standards, Mathematical Practices are scored by term. If a student is meeting the expectations of each lesson's mathematical practice, he/she is meeting the term expectations or benchmarks.

Makes Sense of Problems and Perseveres in Solving Them
SMP.1, SMP.2 SMP.7, SMP.8

Standards	Term 1 Expectations	Term 2 Expectations	Term 3 Expectations
Students explain the meaning of a problem to themselves and can discuss how they solved it. They ask themselves, "Does this make sense?" and "Can I solve this problem a different way?" They often use another method to check their answer.			
Students recognize that a number represents a specific quantity and can write simple expressions and create logical representations of problem situations.			
Students recognize pattern and structure. Ex: Students use properties of operations to explain calculations (Use Distributive property and partial products model to explain multi-digit multiplication).			
Students notice repetitive actions in computation and look for shortcut methods. Ex: Use Distributive property as a strategy to find products they don't know by using products they know. 7x8= (5x8) + (2x8)			

Models and Explains Using Tools
SMP.3, SMP.4 SMP.5, SMP.6

Standards	Term 1 Expectations	Term 2 Expectations	Term 3 Expectations
Students ask and can explain questions such as: "How did you get that? And "Why is that true?" They explain their thinking and respond to others. They experiment with representing problem situations in multiple ways as needed including: writing numbers and words (using mathematical language) drawing pictures using objects making a chart, list, or graph creating equations Students consider available tools (including estimation) when solving mathematical problems and decide when certain tools might be helpful. Ex: A student uses graph paper to find all possible rectangles that have a given perimeter. Students use clear and precise language (oral and written), organize their work, and are accurate. Ex: Students use square units when recording the area of a rectangle.			