

3rd Grade BIE Essential Math

Interim 1 Standards

1.	M.BIES.2.NBT.B.07	The Highly Proficient student can demonstrate understanding of addition and subtraction within 1000, connecting objects or drawings to strategies based on place value (including multiples of 10), properties of operations, and/or the relationship between addition and subtraction. Relate the strategy to a written form. (6-8 days)
2.	M.BIES.3.NBT.A.01	Use place value understanding to round whole numbers to the nearest 10 or 100. (6-8 days)
3.	M.BIES.3.NBT.A.02	The Highly Proficient student can explain the method used in finding the sum or difference and recognizes and identifies an error and shows the correct answer. (8-10 days)
4.	M.BIES.3.NBT.A.03	The Highly Proficient student can use multiple strategies to find the product of single-digit whole numbers by multiples of 10. (6-8 days)
5.	M.BIES.3.OA. A.01	The Highly Proficient student can interpret products of whole numbers as the total number of objects in equal groups. (4-6 days)
6.	M.BIES.3.OA.A.03	The Highly Proficient student can multiply and divide within 144 to solve word problems, using a wide range of strategies. (Use multiplication & division within 144 to solved word problems in situations involving equal groups, arrays, & measurement quantities.) (4-6 days)
7.	M.BIES.3.OA.A.04	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 $8 \times ? = 48$ , $5 = \_ \div 3$ , $6 \times 6 = ?$ (4-6 days)
8.	M.BIES.3.OA.C.07	The Highly Proficient student can multiply and divide within 144 using a wide range of contexts. (fluently multiply and divide within 144, using strategies such as the relationship between multiplication and division.) (4-6days)
9.	M.BIES.3.OA.D.08	The Highly Proficient student can create two-step word problems using multiple operations. (6-8 days)

Suggested Standards:

10.	M.BIES.3OA.B.05	The Highly Proficient student can apply multiple strategies of operations within a problem.

Interim 2 Standards

1.	M.BIES.3.OA. A.01	The Highly Proficient student can interpret products of whole numbers as the total number of objects in equal groups.
2.	M.BIES.3.OA.A.02	The Highly Proficient student can interpret quotients of whole numbers within 100, by representing context using pictures, numbers, and words.
3.	M.BIES.3.OA.A.03	The Highly Proficient student can multiply and divide within 144 to solve word problems, using a wide range of strategies. (use multiplication & division within 144 to solve word problems in situations involving equal groups, arrays, & measurement quantities.)

4.	M.BIES.3.OA.A.04	The Highly Proficient student can determine an unknown whole number in a multiplication and division equation.
5.	M.BIES.3.OA.B.06	Understand division as an unknown-factor problem (e.g., find $32 \div 8$ by finding the number that makes 32 when multiplied by 8).
6.	M.BIES.3.OA.C.07	The Highly Proficient student can multiply and divide within 144 using a wide range of contexts. (fluently multiply and divide within 144, using strategies such as the relationship between multiplication and division.)
7.	M.BIES.3.OA.D.08	The Highly Proficient student can create two-step word problems using multiple operations.
8.	M.BIES.3.OA.D.09	The Highly Proficient student can create and extend arithmetic patterns and explain patterns using properties of operations.
<b>Interim 3 Standards</b>		
1.	M.BIES.3.G.A.02	The Highly Proficient student can partition shapes in multiple ways into parts with equal areas and expresses the area as a unit fraction of the whole.
2.	M.BIES.3.MD.B.04	The Highly Proficient student can create and show measurement data to the nearest $\frac{1}{4}$ inch using a line plot graph, in order to answer multi-step questions.
3.	M.BIES.3.MD.C.05	The Highly Proficient student can understand area as an attribute of plane figures and understand concepts of area measurement.
		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.
		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.
4.	M.BIES.3.MD.C.06	The Highly Proficient student can measure areas by counting unit squares (square cm, square m, square in, square ft, and improvised units).
5.	M.BIES.3.MD.C.07	The Highly Proficient student can find the area of 2 plane figures by counting the square units or multiplying their side lengths and compares their sizes. The Highly Proficient student can create a word problem using the distributive property to find the area of rectangles.
		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.
		d. Recognize area as additive. Find areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the areas of the nonoverlapping parts, applying this technique to solve real world problems.
6.	M.BIES.3.MD.D.08	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.

7.	M.BIES.3.NF.A.01	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 $1/b$ .
8.	M.BIES.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
9.	M.BIES.3.NF.A.03	The Highly Proficient student can create models to compare fractions and explain why two fractions are equivalent.
		a. Understand two fractions as equivalent (equal) if they are the same size, or the same point on a number line.
		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.
		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.
		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 $>$ , $=$ ,
<b>Suggested Standards</b>		
10.	M.BIES.3.MD.C.08	The Highly Proficient student can construct rectangles that have the same perimeter but different areas.
9.	M.BIES.3.NF.A.02c	Understand a fraction as a number on the number line; represent fractions on a number line diagram. c. Understand a fraction $1/b$ as a special type of fraction can be referred to as a unit fraction (e.g. $1/2$ , $1/4$ ).
10.	M.BIES.3.MD.A.02a	The Highly Proficient student can estimate and measure mass and capacity to solve two-step real world problems with any operation.
11.	M.BIES.3.MD.A.02b	The Highly Proficient student can solve two-step measurement word problems with any operation.
12.	M.BIES.3.MD.A.01a	The Highly Proficient student can solve two-step real world time interval problems using addition and subtraction to the minute.
13.	M.BIES.3.MD.A.01b	The Highly Proficient Student can a two-step word problem involving money through \$20.00.
14.	M.BIES.3.MD.B.03	The Highly Proficient student can solve multi-step "how many more" and "how many less" problems using scaled bar graphs and line plots.
15.	M.BIES.3.G.A.01	The Highly Proficient student can recognize and sort examples of quadrilaterals that have shared attributes and draws examples and non-examples of quadrilaterals that are not rhombuses, rectangles, or squares.