



Math - Grade 3

Course Description:

The Indian Community School cultivates an enduring cultural identity and critical thinking by weaving indigenous teachings with a distinguished learning environment. The curriculum for this course is developed from the [Common Core State Standards for Mathematics](#) and the framework of the [ICS Our Ways Cultural Calendar](#). In this course, third grade students focus on four critical areas, which include developing an understanding of multiplication and division within 100, developing understanding of fractions, solving problems involving measurement, and describing and analyzing two dimensional shapes.

Enduring Understandings:

- Mathematicians can fluently add, subtract, and round within 1,000 using strategies and properties of operations based on place value to perform multi-digit arithmetic.
- Mathematicians identify the perimeter of plane figures used to solve real world problems and can be used to distinguish between linear and area measures.
- Mathematicians understand that fractions are parts of a whole and can be represented on a number line, in order to be compared to show order, and simple equivalent fractions can be used when comparing fractions.
- Mathematicians apply strategies of combining and distributing equal groups or shares that are used in order to solve multiplication and division problems.
- Mathematicians utilize properties and number relationships that can be used to apply the problem-solving strategies of multiplication and division operations.
- Mathematicians generate data that can be represented through scaling on a graph, and can be interpreted in order to solve multi-step problems.
- Mathematicians solve problems that involve elapsed time, volume, and mass can be solved using the four operations, manipulative tools, and drawings.
- Mathematicians use the four operations that can be applied while using letters as an unknown quantity and arithmetic patterns in order to solve two-step problems.
- Mathematicians understand that area can be measured in square units and relates to multiplication and addition in order to determine the area of geometric figures.
- Mathematicians categorize and sort shapes by examining their attributes to define broad categories.

OPERATIONS AND ALGEBRAIC THINKING

- I can interpret products of whole numbers. (3.OA.A.1)
- I can interpret whole-number quotients of whole numbers. (3.OA.A.2)
- I can multiply and divide within 100. (3.OA.A.3)
- I can multiply and divide to solve word problems. (3.OA.A.3)
- I can use multiplication and division to solve word problems where a variable is used to represent unknown quality. (3.OA.A.3)
- I can determine the unknown whole number in a multiplication equation relating three whole numbers.



(3.OA.A.4)

OPERATIONS AND ALGEBRAIC THINKING (continued)

- I can determine the unknown whole number in a division equation relating three whole numbers. (3.OA.A.4)
- I can apply properties of operations as strategies to multiply and divide. (3.OA.B.5)
- I can apply understanding of multiplication to solve division problems. (3.OA.B.6)
- I can fluently multiply and divide within 100. (3.OA.C.7)
- I can demonstrate from memory all products of two one-digit numbers. (3.OA.C.7)
- I can use the four operations to solve two-step word problems. (3.OA.D.8)
- I can solve word problems where a variable is used to represent an unknown quantity. (3.OA.D.8)
- I can apply strategies to assess if my answer is reasonable. (3.OA.D.8)
- I can identify and explain arithmetic patterns. (3.OA.D.9)

NUMBER AND OPERATIONS IN BASE TEN

- I can round whole numbers to the nearest 10 and 100. (3.NBT.A.1)
- I can fluently add within 1,000 by applying multiple strategies and algorithms. (3.NBT.A.2)
- I can fluently subtract within 1,000 by applying multiple strategies and algorithms. (3.NBT.A.2)
- I can multiply one digit whole numbers by multiples of 10 by using multiple strategies. (3.NBT.A.3)

NUMBER AND OPERATIONS - FRACTIONS

- I can express fractions as parts of a whole. (3.NF.A.1)
- I can apply the understanding of a part to a whole. (3.NF.A.1)
- I can represent a fraction on a number line from 0 to 1. (3.NF.A.2.A)
- I can divide and label a number line into equal parts. (3.NF.A.2.B)
- I can explain equivalent fractions and compare their sizes. (3.NF.A.3)
- I can compare two equivalent fractions if they are the same size or on the same point of a number line. (3.NF.A.3.A)
- I can identify and generate simple equivalent fractions. (3.NF.A.3.B)
- I can express whole numbers as fractions that are equivalent to whole numbers. (3.NF.A.3.C)
- I can compare two fractions with the same numerator and denominator by reasoning about their size. (3.NF.A.3.D)



MEASUREMENT AND DATA

- I can tell and write time to the nearest minute. (3.MD.A.1)
- I can measure time intervals in minutes. (3.MD.A.1)
- I can solve word problems involving addition and subtraction of time intervals in minutes. (3.MD.A.1)
- I can measure volume and mass using standard units grams(s), kilograms(kg), and liters (l). (3.MD.A.2)
- I can add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units. (3.MD.A.2)
- I can draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. (3.MD.B.3)
- I can solve one-step and two-step comparison problems using information presented in scaled bar graphs. (3.MD.B.3)
- I can generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. (3.MD.B.4)
- I can show data by making a line plot, where the horizontal scale is marked in appropriate units— whole numbers, halves, or quarters. (3.MD.B.4)
- I can identify 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.C.5.A)
- I can identify 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. (3.MD.C.5.B)
- I can measure areas by counting unit squares. (3.MD.C.6)
- I can relate area to the operations of multiplication and addition. (3.MD.C.7)
- I can find the area of a rectangle with whole-number side lengths by tiling it. (3.MD.C.7.A)
- I can show that the area is the same as would be found by multiplying the side lengths. (3.MD.C.7.A)
- I can multiply side lengths to find areas of rectangles with whole-number side lengths in the context of solving real world and mathematical problems. (3.MD.C.7.B)
- I can use area models to represent the distributive property in mathematical reasoning. (3MD.C.7.C)
- I can use tiles to show that the area of a rectangle with whole numbers side lengths $a+b+c$ is the sum of $a \times b$ and $a \times c$. (3.MD.C.7.C)
- I can express area as an additive. (3MD.C.7.D)
- I can find areas of rectilinear figures by decomposing them into non-overlapping rectangles. (3.MD.C.7.D)
- I can solve real world and mathematical problems involving perimeters of polygons. (3. MD.D.8)
- I can find 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. (3. MD.D.8)



GEOMETRY

- I can demonstrate understanding that shapes in different categories may share attributes, and that the shared attributes can define a larger category. (3.G.A.1)
- I can express rhombuses, rectangles, and squares as examples of quadrilaterals. (3.G.A.1)
- I can draw examples of quadrilaterals that do not belong to any of these subcategories. (3.G.A.1)
- I can partition shapes into parts with equal areas. (3.G.A.2)