

Mathematics Curriculum Outline Second Grade Parent Copy

The ultimate goal for mathematics learners is number literacy. A successful mathematics learner is able to use mathematical processes and procedures in order to participate in our highly technical society. Mathematics is used on a daily basis in the real world. Using money, measurements, and cooking are only a few of the ways we use mathematics in our society. Your child will become fluent in the use of mathematic processes and procedures by learning the specific Grade Level Content Expectations at each grade level.

2:1 Count, write, and order numbers

- 1:A** The student will count to 1000 by 1's, 10's and 100's starting from any number in the sequence.
- 1:B** The student will read and write numbers to 1000 in numerals and words, and relate them to the quantities they represent.
- 1:C** The student will compare and order numbers to 1000; use the symbols $>$ and $<$.
- 1:D** The student will count orally by 3's and 4's starting with 0, and by 2's, 5's and 10's starting from any number.

2:2 Understand place value

- 2:A** The student will express numbers up to 1000 using place value; use concrete materials.

2:3 Add and subtract whole numbers

- 3:A** The student will decompose 100 into additional pairs.
- 3:B** The student will find the distance between numbers on the number line.
- 3:C** The student will find missing values in open sentences; use relationship between addition and subtraction.
- 3:D** Given a contextual situation that involves addition and subtraction for numbers up to two digits; the student will model the situation using objects or pictures; explain in words; record using numbers and symbols; and solve.
- 3:E** The student will add fluently two numbers up to two digits each, using strategies including formal algorithms; subtract fluently two numbers up to two digits each.
- 3:F** The student will estimate and calculate the sum of two numbers with three digits that do not require regrouping.

2:4 Understand meaning of multiplication and division

- 4:A** The student will understand multiplication as the result of counting the total number of objects in a set of equal groups.
- 4:B** The student will represent multiplication using area and array models.
- 4:C** The student will understand division as another way of expressing multiplication using fact families within the 5 x 5 multiplication table; emphasize that division “undoes” multiplication.
- 4:D** Given a simple situation involving groups of equal size or of sharing equally, the student will represent the situation with objects, words, and symbols; solve.
- 4:E** The student will develop strategies for fluently multiplying numbers up to 5 x 5.

2:5 Work with unit fractions

- 5:A** The student will recognize, name, and represent commonly used unit fractions with denominators of 12 or less; model $\frac{1}{2}$, $\frac{1}{3}$, and $\frac{1}{4}$ by folding strips.
- 5:B** The student will recognize, name and write commonly used fractions: $\frac{1}{2}$, $\frac{1}{3}$, $\frac{2}{3}$, $\frac{1}{4}$, $\frac{2}{4}$, $\frac{3}{4}$.
- 5:C** The student will place 0 and halves on the number line; relate to a ruler.
- 5:D** For unit fractions from $\frac{1}{12}$ to $\frac{1}{2}$, the student will understand the inverse relationship between the size of the denominator; compare unit fractions from $\frac{1}{12}$ to $\frac{1}{2}$.
- 5:E** The student will recognize that fractions such as $\frac{2}{2}$, $\frac{3}{3}$ and $\frac{4}{4}$ are equal to the whole (one).

2:6 Measure, add, and subtract length

- 6:A** The student will measure lengths in meters, centimeters, inches, feet, and yards approximating to the nearest whole unit.
- 6:B** The student will compare lengths; add and subtract lengths with no conversion of units.

2:7 Understand the concept of area

- 7:A** The student will measure area using non-standard units to the nearest whole unit.
- 7:B** The student will find the area of a rectangle with whole number side lengths by covering with unit squares and counting, or by using a grid of unit squares; write the area as a product.

2:8 Tell time and solve time problems

- 8:A** Using both A.M. and P.M., the student will tell and write time from the clock face in 5 minute intervals and from digital clocks to the minute; include reading time: 9:15 as nine-fifteen and 9:50 as nine-fifty. Interpret time both as minutes after the hour and minutes before the next hour. Show times by drawing hands on clock face.
- 8:B** The student will use the concept of duration of time.

2:9 Record, add and subtract money

- 9:A** The student will read and write amounts of money using decimal notations.
- 9:B** The student will add and subtract money in mixed units.

2:10 Read thermometers

- 10:A** The student will read temperature using the scale on a thermometer in degrees Fahrenheit.

2:11 Solve measurement problems

- 11:A** The student will solve simple word problems involving length and money.

2:12 Identify and describe shapes

- 12:A** The student will identify, describe and compare familiar two-dimensional and three-dimensional shapes such as triangles, rectangles, squares, circles, semi-circles, spheres and rectangular prisms.
- 12:B** The student will explore and predict the results of putting together and taking apart two-dimensional and three-dimensional shapes.
- 12:C** The student will draw rectangles and triangles, and compute perimeters by adding lengths of sides, recognizing the meaning of perimeter.
- 12:D** The student will distinguish between curves and straight lines and between curved surfaces and flat surfaces.
- 12:E** The student will classify familiar plane and solid objects by common attributes such as shape, size, color, roundness, or number of corners and explain which attributes are being used for classification.
- 12:F** The student will recognize that shapes that have been slid, turned or flipped are the same shape

12:G The student will find and name locations using simple coordinate systems such as maps and first quadrant grids.

2:13 Create, interpret, and solve problems involving pictographs

13:A The student will make pictographs using a scale representation, using scales where symbols equal more than one.

13:B The student will read and interpret pictographs with scales, using scale factors of 2 and 3.

13:C The student will solve problems using information in pictographs; include scales such as each  represents 2 apples; avoid  cases.