

Scope and Sequence

Unit	Objectives
Unit 1 Review	<ul style="list-style-type: none"> • Find answers for the multiplication and division facts (up to 10×10 and $100 \div 10$) • Solve multiplication and division word problems • Use long division to solve simple division problems with a remainder • Find multiples of a given number • Tell whether numbers are divisible by 2, 5, or 10 • Find all factors of a given number • Tell whether a given number is prime or composite
Unit 2 Place Value and Large Numbers	<ul style="list-style-type: none"> • Read, write, and compare numbers to one million • Understand place value to the millions-place and write large numbers in expanded form • Round three- and four-digit numbers to any place • Round large numbers to the nearest thousand • Use place-value thinking to mentally add and subtract thousands • Use the addition and subtraction algorithms to add and subtract five- and six-digit numbers • Solve multi-step addition and subtraction word problems with large numbers
Unit 3 Mental Multiplication	<ul style="list-style-type: none"> • Mentally multiply one-digit numbers by a multiple of 10, 100, or 1,000 (e.g., 4×500 or $3,000 \times 6$) • Mentally multiply a multiple of 10 by a multiple of 10 (e.g., 40×80) • Write and solve expressions with parentheses • Understand the distributive property and use it to solve problems • Find answers for the $\times 11$ and $\times 12$ facts • Use the area model and box method to multiply two-digit numbers by one-digit numbers • Solve multiplication word problems, including multiplicative comparison problems and multi-step problems
Unit 4 Fractions and Mixed Numbers	<ul style="list-style-type: none"> • Identify and compare fractions and mixed numbers on the number line • Convert whole numbers and mixed numbers to fractions • Convert fractions to mixed numbers or whole numbers • Multiply fractions by whole numbers • Add and subtract fractions and mixed numbers with the same denominator
Unit 5 Mental Division	<ul style="list-style-type: none"> • Solve division word problems and interpret remainders depending on the context • Use multiplication (and addition) to check answers to division problems • Find answers for the $\div 11$ and $\div 12$ facts • Mentally divide multiples of 10, 100, or 1,000 (for example, $60 \div 3$ or $3,000 \div 5$)

Unit	Objectives
Unit 6 Area and Perimeter	<ul style="list-style-type: none">• Use correct units to calculate perimeter and area• Find the perimeter of shapes with straight sides and understand how to use multiplication to add sides with equal lengths more efficiently• Understand how to split shapes composed of rectangles into parts and add or subtract to find total area• Write equations with parentheses to find perimeter or area• Solve multi-step perimeter and area word problems
Unit 7 Written Multiplication, Part 1	<ul style="list-style-type: none">• Understand the steps in the written multiplication algorithm and model them with base-ten blocks or play money• Multiply a two-, three-, or four-digit number by a one-digit number• Use multi-digit multiplication to solve word problems• Use multi-digit multiplication to find area or perimeter
Unit 8 Angles	<ul style="list-style-type: none">• Estimate angle measures in degrees• Identify acute, right, obtuse, and straight angles• Measure angles with a protractor• Draw angles with a given measure• Add or subtract to find the measure of an unknown angle
Unit 9 Length	<ul style="list-style-type: none">• Convert length measurements within the U.S. customary system (inches, feet, yards, and miles)• Add and subtract feet and inches• Convert length measurements within the metric system (millimeters, centimeters, meters, and kilometers)• Measure with a ruler in centimeters and millimeters• Add and subtract compound units in the metric system• Solve two-step word problems that involve converting units
Unit 10 Long Division	<ul style="list-style-type: none">• Use long division to solve division problems (up to four digits divided by one digit)• Use multiplication (and addition) to check answers to division problems• Use long division to solve word problems
Unit 11 Geometry	<ul style="list-style-type: none">• Identify and label points, rays, lines, and line segments• Identify parallel, perpendicular, and intersecting lines• Identify, construct, and draw trapezoids, parallelograms, squares, rectangles, and rhombuses• Identify and draw right triangles, obtuse triangles, and acute triangles• Find lines of symmetry in triangles and quadrilaterals

Unit	Objectives
Unit 12 Equivalent Fractions	<ul style="list-style-type: none">• Multiply the numerator and denominator of a fraction by the same number to create an equivalent fraction• Find missing numerators or denominators in pairs of equivalent fractions• Use equivalent fractions to identify and compare fractions of an inch or fractions of a meter• Use common denominators to compare fractions with different denominators
Unit 13 Written Multiplication, Part 2	<ul style="list-style-type: none">• Multiply two-digit numbers by two-digit numbers with the box method• Multiply two-digit numbers by two-digit numbers with the traditional written algorithm• Multiply two-digit numbers to solve word problems
Unit 14 Decimals	<ul style="list-style-type: none">• Read, write, and compare decimal numbers to the hundredths-place• Understand place value in decimals and write decimals in expanded form• Express decimals as fractions or mixed numbers• Identify decimals on the number line and round decimals to the nearest whole number• Express money amounts and metric lengths with decimals• Name decimal equivalents for common fractions
Unit 15 Time, Weight, and Capacity	<ul style="list-style-type: none">• Convert units of time (days, hours, minutes, seconds)• Convert weight and capacity measurements within the metric system (kilograms, grams, liters, milliliters)• Convert weight and capacity measurements within the U.S. customary system (pounds, ounces, gallons, quarts, pints, cups, fluid ounces)• Add and subtract compound units for time, weight, and capacity• Solve two-step word problems that involve converting time, weight, and capacity units
Unit 16 Line Plots and Averages	<ul style="list-style-type: none">• Create line plots with whole number or fractional increments• Interpret line plots• Find the average for a small data set

Materials List

What You'll Need in Your Math Kit

You'll use the following materials regularly in *Fourth Grade Math with Confidence*. Stash them in a box or basket and always keep them ready for your next lesson. (See pages 8-9 in the Introduction for more detailed descriptions of each item.)

- 40 small counters (20 each of 2 different colors)
- Play money (20 one-dollar bills, 20 ten-dollar bills, 10 hundred-dollar bills)
- Pattern blocks
- Base-ten blocks (20 unit blocks, 20 rods, and 10 flats)
- 1-foot (or 30-centimeter) ruler
- Protractor
- 2 packs of playing cards and 2 dice
- Blank paper
- Pencils

Other Supplies

Besides your Math Kit, you'll also need the following household items. You'll only need most of them once or twice, so you don't need to gather them ahead of time or store them separately. Check the unit overviews for the specific household items you'll need for each unit.

Items marked with an asterisk are needed for the optional enrichment lessons at the end of each unit.

- Colored pencils or markers
- Slips of paper (approximately 100 over the course of the year)
- Tape
- 2 paper clips
- Scissors
- *Pan of brownies or sheet cake, optional
- 6 dice
- *Almanac or internet access
- *Large piece of posterboard (or 9 sheets of paper and tape)
- *Recipe with mixed numbers and fractions
- *4 pieces of yarn of different colors, each 36 inches long
- *Wooden stick, about 1 foot long
- 8 toothpicks, craft sticks, or straws
- Large piece of paper (at least 12 inches by 12 inches)
- Yardstick, optional
- Meterstick, optional
- *2 pieces of centimeter graph paper
- *Calculator or calculator app
- Tape measure marked in feet and inches (at least 10 feet long)
- Tape measure marked in meters and centimeters, or knowledge of your child's height (in either meters and centimeters or feet and inches)
- *Cardboard strip, about 1 in. wide and 3 ft. long (or 3 cm wide and 1 m long)
- *Nutrition labels for several different types of cookies or crackers
- 4 craft sticks or narrow strips of paper
- *Paper square, approximately 6 inches by 6 inches
- *Pushpin
- *5 different colors of paper

- *Small bowl or cup (for tracing)
- *Glue, optional
- Body temperature thermometer, either digital or analog
- Digital stopwatch or stopwatch app
- *Online access to your local library's catalog
- Object that weighs about 1 kilogram, such as a pair of adult shoes, a pineapple, or this (printed) Instructor Guide, optional
- Object that weighs about 1 gram, such as a paper clip or thumbtack
- 1-liter container (such as a large water bottle or measuring cup), optional
- Eyedropper, optional
- Object that weighs about 1 pound, such as a loaf of bread, can of vegetables, or box of pasta, optional
- Object that weighs about 1 ounce, such as a slice of bread, AA battery, or a stack of 5 quarters, optional
- Container that holds 1 fluid ounce, such as a bottle of vanilla or other flavor extract, optional
- 1-cup measuring cup, optional
- *Your child's usual drinking glass
- *Water
- *If you use *U.S. customary units*: measuring cup marked in fluid ounces
- *If you use *metric units*: measuring cup marked in milliliters