



# IRVINE UNIFIED SCHOOL DISTRICT

## Year at a Glance - Fourth Grade Mathematics

[Link to Grade 4 Mathematics Standards](#)

### What Students Learn

In fourth grade, students begin the year with a focus on place value, extending their work in the base-ten number system with numbers to 1,000,000. Students focus on fluently adding and subtracting whole numbers with a standard algorithm. Students develop an understanding of the fundamental relationship between place value and multiplication or division by 10. They explore multiplicative vs. additive growth, solve multiplicative comparison problems, understand factors, multiples, prime & composite numbers.

Students use area models and generic rectangles to multiply whole numbers (up to a 2-digit by 2-digit). Students solve word problems involving distance, time, or money as well as convert units of measurement. Students also relate multiplication and division as they divide up to a 4-digit number by a single-digit divisor and explore the concept of remainders. Fractions and decimal fractions are also major standards for fourth grade. Students define fractions, find equivalent fractions, and compare fractions and decimal fractions (tenths and hundredths). Students build the concept of a “whole” with fractions and decimal fractions and learn to rename fractions and mixed numbers fluently. Additionally, they interpret line plots with fractional amounts. Students focus on adding and subtracting fractions with like denominators, decomposing fractions, and multiplying fractions by a whole number.

The year ends with a focus on additional/supporting standards in geometry with angles and polygons. Students understand the concept of angles, benchmark angles, and angle measurement through fractions of a circle comprising 360°. They measure angles with protractors, sketch angles, identify and name angles, and find missing measurements. Students also classify polygons by angles and identify and draw lines of symmetry in polygons.

<b>Concepts (Time Frame*)</b> <i>*All time frames are approximations based on student progress and understanding.</i>	<b>Fourth Grade Students Work Towards Mastery of...</b>
0. Introductory Week (2 week)	<p><b><u>Essential (High Priority) Standards:</u></b></p> <ul style="list-style-type: none"> <li>Using the four operations with whole numbers to solve problems, find factors, and analyze patterns (OA.1-5)</li> <li>Understanding place value of whole numbers, including to round multi-digit numbers (NBT.1-3)</li> <li>Fluently adding and subtracting multi-digit whole numbers (NBT.4)</li> <li>Find and interpret equivalent fractions-renaming fractions as fractions and as fractions greater than one (NF.1)</li> <li>Comparing fractions (NF.2)</li> </ul> <p><b><u>Regular Priority Standards:</u></b></p> <ul style="list-style-type: none"> <li>Multiplication of 2-digit numbers with generic rectangles and other strategies (NBT.5)</li> <li>Division of whole numbers by a single digit divisor using strategies based on place value. (NBT.6)</li> <li>Addition and subtraction of fractions with like denominators, including mixed numbers (NF.3)</li> <li>Multiplication of fractions by whole numbers (NF.4)</li> <li>Unit conversions within a system and applying area and perimeter formulas for rectangles (MD.1-3)</li> <li>Line plots with fractions (MD.4)</li> </ul> <p><b><u>Low Priority Standards:</u></b></p> <ul style="list-style-type: none"> <li>Using decimals for fractions with denominators of 10 and 100 (NF.5-6)</li> <li>Comparing two decimals to the hundredths place (NF.7)</li> <li>Measuring &amp; sketching angles (MD.5-6)</li> <li>Solving for missing angle measures (MD.7)</li> <li>Drawing &amp; identifying lines, angles and shapes (G.1-3)</li> </ul>
1. Place Value and Fluency with Addition and Subtraction (4 weeks)	
2. Multiplication Concepts (4 weeks)	
3. Multiplication of Whole Numbers and its Application (4 weeks)	
4. Whole Number Division (5 weeks)	
5. Fractions and Decimal Fractions (6 weeks)	
6. Fraction Addition, Subtraction and Multiplication (7 weeks)	
7. Angles and Polygons (4 weeks)	

