

## FOURTH GRADE MATHEMATICS

June 2021

**Mathematical Practice Standards: Make sense of, communicate, connect, and justify mathematical ideas to support understanding and learning across all mathematical concepts**

- Make sense of problems and persevere in solving them
- Reason abstractly and quantitatively
- Construct viable arguments and critique the reasoning of others
- Model with mathematics
- Use appropriate tools strategically
- Attend to precision
- Look for and make use of structure
- Look for and express regularity in repeated reasoning

### **Represent and Understand Multiplication and Division**

- Understand multiplication as comparison (4.OA.1-2).
- Use strategies based on place value and the properties of operations to multiply a whole number of up to four digits by a one-digit whole number, and multiply two, two-digit numbers (4.NBT.5).
- Use strategies based on place value, the properties of operations, and the relationship between multiplication and division to divide up to four-digit dividends and one-digit divisors (4.NBT.6).

### **Develop Understanding of Fractions**

*In fourth grade, denominators extend to include 5, 10, 12, and 100.*


- Students continue to work with equivalence by reasoning about the number and size of the parts (4.NF.1).
- Compare two fractions with different numerators and different denominators (4.NF.2).
- Understand fractions as sums of unit fractions. Add and subtract fractions and mixed numbers with like denominators (4.NF.3).
- Multiply a fraction by a whole number (4.NF.4).
- Understand decimal notation to the hundredths and compare decimal fractions with denominators of 10 and 100 (4.NF.5-7).

### **Generalize and Use Place Value Understanding**

- Students extend understanding of place value to 1,000,000 understanding the relative sizes of numbers in each place (4.NBT.1-2).
- Fluently add and subtract multi-digit whole numbers using the standard algorithm (4.NBT.4).

### **Supporting Standards: Operations and Algebraic Thinking, Measurement and Data, Geometry**

- Solve multi-step word problems. (4.OA.3) Gain familiarity with multiples and factors (4.OA.4) Generate and analyze numeric and shape patterns (4.OA.5).



## DISPOSITIONS, ESSENTIAL SKILLS, AND KNOWLEDGE

### Priority Standards

- Solve problems involving measurements and conversion of measurements from a larger unit to a smaller unit. (4.MD.1-2).
- Apply knowledge of area and perimeter to solve real-world problems (4.MD.3).
- Represent and interpret data through the use of a line plot (4.MD.4).
- Understand various concepts of angles and angle measurement (4.MD.5-7).
- Draw and identify lines and angles, as well as classify shapes by properties of their lines and angles (4.G.1-3).