

Mathematics Power Standards Grade 4

 Corvallis School District 509j

4.1 <u>Number and Operations</u>: Develop an understanding of decimals, including the connections between fractions and decimals.
<ul style="list-style-type: none">• 4.1.1 Extend the base-ten system to read, write, and represent decimal numbers (to the hundredths) between 0 and 1, between 1 and 2, etc.
<ul style="list-style-type: none">• 4.1.2 Use models to connect and compare equivalent fractions and decimals.
<ul style="list-style-type: none">• 4.1.3 Determine decimal equivalents or approximations of common fractions.
<ul style="list-style-type: none">• 4.1.4 Compare and order fractions and decimals.
<ul style="list-style-type: none">• 4.1.5 Estimate decimal or fractional amounts in problem solving.
<ul style="list-style-type: none">• 4.1.6 Represent money amounts to \$10.00 in dollars and cents, and apply to situations involving purchasing ability and making change.
4.2 <u>Number and Operations</u> and <u>Algebra</u>: Develop fluency with multiplication facts and related division facts, and with multi-digit whole number multiplication.
<ul style="list-style-type: none">• 4.2.1 Apply with fluency multiplication facts to 10 times 10 and related division facts.
<ul style="list-style-type: none">• 4.2.2 Apply understanding of models for multiplication (e.g., equal-sized groups, arrays, area models, equal intervals on the number line), place value, and properties of operations (commutative, associative, and distributive).
<ul style="list-style-type: none">• 4.2.3 Select and use appropriate estimation strategies for multiplication (e.g., use benchmarks, overestimate, underestimate, round) to calculate mentally based on the problem situation when computing with whole numbers.
<ul style="list-style-type: none">• 4.2.4 Develop and use accurate, efficient, and generalizable methods to multiply multi-digit whole numbers.
<ul style="list-style-type: none">• 4.2.5 Develop fluency with efficient procedures for multiplying multi-digit whole numbers and justify why the procedures work on the basis of place value and number properties.
4.3 <u>Measurement</u>: Develop an understanding of area and determine the areas of two-dimensional shapes .
<ul style="list-style-type: none">• 4.3.1 Recognize area as an attribute of two-dimensional regions.
<ul style="list-style-type: none">• 4.3.2 Determine area by finding the total number of same-sized units of area that cover a shape without gaps or overlaps.
<ul style="list-style-type: none">• 4.3.3 Recognize a square that is one unit on a side as the standard unit for measuring area.
<ul style="list-style-type: none">• 4.3.4 Determine the appropriate units, strategies, and tools to solving problems that involve estimating or measuring area.
<ul style="list-style-type: none">• 4.3.5 Connect area measure to the area model used to represent multiplication and use this to justify the formula for area of a rectangle.
<ul style="list-style-type: none">• 4.3.6 Find the areas of complex shapes that can be subdivided into rectangles.
<ul style="list-style-type: none">• 4.3.7 Solve problems involving perimeters and areas of rectangles and squares.
<ul style="list-style-type: none">• 4.3.8 Recognize that rectangles with the same area can have different perimeters and that rectangles with the same perimeter can have different areas.