

OR 2007 Mathematics Standards for Gr 4. Compared to Teacher to Teacher Publications' Making Sense of Problem Solving

OR Grade 4 "fills the gaps"	Making Sense of Problem Solving
4.1 Number and Operations: Develop an understanding of decimals, including the connections between fractions and decimals.	
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.	E.4 Divvy It Up p. 4-8, 15-20; E.6 School Store p. 2-9, 15-20
4.1.2 Use models to connect and compare equivalent fractions and decimals.	E.4 Divvy It Up p. 2-8, 15-20; E.5 Which Group Is Taller p. 2-10, 16-21; E.6 School Store p. 2-9, 15-20
4.1.3 Determine decimal equivalents or approximations of common fractions.	E.5 Which Group is Taller p. 2-4, 6-10, 16-21
4.1.4 Compare and order fractions and decimals.	E.4 Divvy it Up p. 4-8, 15-20; E.5 Which Group is Taller p. 6-10, 16-21
4.1.5 Estimate decimal or fractional amounts in problem solving.	E.5 Which Group is Taller p. 4-8, 16-21
4.1.6 Represent money amounts to \$10.00 in dollars and cents, and apply to situations involving purchasing ability and making change.	E.5 Which Group is Taller p. 2-5; E.6 School Store p. 2-9, 15-20
4.2 Number and Operations and Algebra: Develop fluency with multiplication facts and related division facts, and with multi-digit whole number multiplication.	
4.2.1 Apply with fluency multiplication facts to 10 times 10 and related division facts.	
4.2.2 Apply understanding of models for multiplication (e.g., equal-sized groups,	Level E: Section 1 p. 22-23, 30-32, 45-52; E.1 Carnival Capers p. 2-6,
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.	Level E: Section 1 p. 45; E.3 Patterns pp. 6,18, 19, 20
4.2.4 Develop and use accurate, efficient, and generalizable methods to multiply multi-digit whole numbers.	E.1 Carnival Capers p. 2-6, 12-18; E.2 Places, Everyone p. 2-8, 14-19
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.	E.1 Carnival Capers p. 2-6, 12-18; E.2 Places, Everyone p. 2-8, 14-19

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4.3 Measurement: Develop an understanding of area and determine the areas of two-dimensional shapes.

4.3.1 Recognize area as an attribute of two-dimensional regions.	E.2 Places, Everyone p. 2-8, 14-19; E.7 Bulletin Board p. 2-7, 13-18; E.8 Ta Da! A Formula p. 2-7, 17-25; E.9 Can You Figure This p. 2-12, 21-26
4.3.2 Determine area by finding the total number of same-sized units of area that cover a shape without gaps or overlaps.	E.8 Ta Da! A Formula p. 4-7, 17-25; E.9 Can You Figure This p. 2-12, 21-26; E.10 Playground Problem p. 2-3
4.3.3 Recognize a square that is one unit on a side as the standard unit for measuring area.	E.8 Ta Da! A Formula p. 4-7, 17-25; E.9 Can You Figure This p. 2-12, 21-26
4.3.4 Determine the appropriate units, strategies, and tools to solving problems that involve estimating or measuring area.	E.8 Ta!Da! A Formula p. 4-7, 17-25
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.	E.8 Ta!Da! A Formula p. 2-7, 17-25
4.3.6 Find the areas of complex shapes that can be subdivided into rectangles.	E.9 Can You Figure This p. 7-12, 21-26; E.10 Playground Problem, p. 4-7, 15-20
4.3.7 Solve problems involving perimeters and areas of rectangles and squares.	E.7 Bulletin Board p. 2-7, 13-18; E.10 Playground Problem p. 2-7, 15-20
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.	