In Grade 4, instructional time should focus on three critical areas: (1) developing understanding and fluency with multi-digit multiplication, and developing understanding of dividing to find quotients involving multi-digit dividends; (2) developing an understanding of fraction equivalence, addition and subtraction of fractions with like denominators, and multiplication of fractions by whole numbers; (3) understanding that geometric figures can be analyzed and classified based on their properties, such as having parallel sides, perpendicular sides, particular angle measures, and symmetry.

New Jersey Student Learning Standards for Mathematics

Unit 1	20 days	In Unit 1 students explore place value concepts for multi-digit whole numbers. Students will recognize the relationships between place values that are ten times as large as another place for numbers up to 1,000. Students will round numbers through the hundred-thousands to the two largest places in the number. Students will apply the standard addition and subtraction algorithms to 3-digit plus 3-digit and 3-digit minus 3-digit problems. Students will make sense of addition and subtraction multi-step number stories and estimate to generate a reasonable answer to a problem. Students will explain the relationships and convert between yards, feet, and inches. Students will find the perimeter using a strategy.
Unit 2	20 days	In Unit 2, students explore various applications for multiplication. Students will identify a number story as additive or multiplicative and explain how they know. Students will identify more than one factor pair for composite numbers less than 40, write multiples of a 1-digit number, and identify prime and composite numbers less than 40. Students will use standard algorithms for addition and subtraction to solve 4-digit plus 4-digit and 4-digit minus 4-digit problems. Students will use fact extensions to multiply by a multiple of 10. Students will identify properties of line segments and angles within quadrilaterals and identify right angles within triangles.
Unit 3	20 days	In Unit 3, students explore fraction equivalence and compare and order fractions using different representations. Expect students to recognize two equivalent fractions though 12ths using a model. Students will compare fractions using a model. They then extend their understanding of fractions to decimals, comparing and ordering decimals using the same method as for comparing fractions. Students will represent decimals to the hundredths and translate between decimal notation and fractions with denominators 10 or 100 using a model.
Unit 4	20 days	In Unit 4, students are introduced to the basic principles of multi-digit multiplication by focusing on extending multiplication skills and exploring the partial-products method. Students will solve multiplicative number comparison stories using multiplication. Students will make sense of and articulate a plan for solving multi-step number stories involving addition, subtraction and multiplication and assess the reasonableness of their answers by comparing them to an estimate. Students will accurately multiply 2-digit by 1-digit whole numbers. Students will use a formula to find the perimeters and areas of rectangles.
Unit 5	20 days	In Unit 5, students explore the whole in fractions as well as adding and subtracting fractions and mixed numbers. Students will decompose fractions, represent decompositions with an equation, and explain decompositions using a fraction model. Students use these computation skills to answer questions about line plots, and organize and represent data in ½ and ¼ units on line plots. They are also introduced to adding tenths and hundredths. Students build on their knowledge of rays to explore unit iteration for angles.
Unit 6	20 days	In Unit 6, students explore the relationship between multiplication and division by developing a method for dividing whole numbers and solving division number stories. Students will accurately multiply a 3-digit number by a 1-digit number and 2-digit numbers by a multiple of 10. Students will accurately divide a 2-digit number by a 1-digit number. Students will add and subtract mixed numbers using manipulatives and visual fraction models. They are introduced to protractors and explore using them to measure and construct angles. Students will correctly identify types of angles and obtain measurements within the correct range: less than 90 degrees for an acute angle and greater than 90 degrees for an obtuse angle.
Unit 7	20 days	In Unit 7, students will accurately divide a 3-digit number by a 1-digit number. Students formalize their understanding of multiplying a fraction by a whole number and use this knowledge to solve problems in real-world scenarios. Students will use multiple strategies (number lines, manipulatives, drawings) to multiply a fraction by a whole number. Students will write a multiplication equation with a letter standing for the unknown to represent a number story involving multiplication of a fraction by a whole number. Student will express conversions of units of capacity in a 2-column table. Students will organize and represent data in ⅛ units on line plots and solve addition and subtraction problems about the line plot data in ⅛ units.
Unit 8	20 days	In Unit 8, students apply their knowledge of fractions, number concepts, patterns and geometry to different real-world scenarios. Students will add and subtract fractions. Students will add and subtract mixed numbers. Students will multiply a fraction by a whole number. Student will add two fractions with denominators 10 and 100. Students will use decimal notation for fractions with denominators 10 or 100. Students will use the four operations to solve number stories involving whole numbers of measured quantities. Students will solve addition and subtraction problems to find unknown angle measures on a diagram in real world and mathematical problems.

Content Continuum

Grade 4 Mathematics

Students generalize their understanding of place value to 1,000,000, understanding the relative sizes of numbers in each place. They apply their understanding of models for multiplication, place value, and properties of operations, in particular the distributive property, as they develop, discuss, and use efficient, accurate, and generalizable methods to compute products of multi-digit whole numbers. Depending on the numbers and the context, they select and accurately apply appropriate methods to estimate or mentally calculate products. They develop fluency with efficient procedures for multiplying whole numbers; understand and explain why the procedures work based on place value and properties of operations; and use them to solve problems. Students apply their understanding of models for division, place value, properties of operations, and the relationship of division to multiplication as they develop, discuss, and use efficient, accurate, and generalizable procedures to find quotients involving multi-digit dividends. They select and accurately apply appropriate methods to estimate and mentally calculate quotients, and interpret remainders based upon the context.
New Jersey Student Learning Standards

Students develop understanding of fraction equivalence and operations with fractions. They recognize that two different fractions can be equal (e.g., 15/9 = 5/3), and they develop methods for generating and recognizing equivalent fractions. Students extend previous understandings about how fractions are built from unit fractions, composing fractions from unit fractions, decomposing fractions into unit fractions, and using the meaning of fractions and the meaning of multiplication to multiply a fraction by a whole number.

Students describe, analyze, compare, and classify two-dimensional shapes. Through building, drawing, and analyzing two-dimensional shapes, students deepen their understanding of properties of two-dimensional objects and the use of them to solve problems involving symmetry.
New Jersey Student Learning Standards

INSTRUCTIONAL / SUPPLEMENTAL MATERIALS

- **Text- Everyday Mathematics 4**

- **Engageny.org**
- **Illustrative Mathematics**
- **New Jersey Model Curriculum**

KEY FEATURES OF REVISION

➢ Aligned to New Jersey Student Learning Standards
➢ Aligned to Understanding By Design Framework
➢ Aligned to Webb's Depth of Knowledge
➢ Problem Based Assessments & Rubrics
➢ Additional on-line support and resources

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