



Mathematics

Course: Grade 3

In Grade 3, instructional time should focus on four critical areas: (1) developing understanding of multiplication and division and strategies for multiplication and division within 100; (2) developing understanding of fractions, especially unit fractions (fractions with numerator 1); (3) developing understanding of the structure of rectangular arrays and of area; and (4) describing and analyzing two-dimensional shapes.

New Jersey Student Learning Standards for Mathematics

Unit 1	20 days	In Unit 1, an active and collaborative learning environment is established. Students recall how to use a variety of math tools to solve problems, tell time to the nearest minute, and use mathematical models to calculate elapsed time. This unit also lays the foundation for developing multiplication and division strategies.
Unit 2	20 days	In Unit 2, the students make sense of one- and two-step number stories involving all four arithmetic operations. They represent situations with diagrams, arrays, pictures, words, and number models. Through creating, sharing, comparing, and interpreting representations, students improve their problem solving strategies and further their understanding that problems can be solved in more than one way.
Unit 3	20 days	In Unit 3, the students use place value to develop and practice strategies for addition and subtraction of 2- and 3- digit numbers. They represent multiplication using arrays, and use these representations to develop strategies for solving multiplication facts.
Unit 4	20 days	In Unit 4, students measure to the nearest half inch. Students generate measurement data and represent it on a scales-line plot. Students explore geometric attributes of polygons and classify quadrilaterals into categories based on their attributes, identify and measure the perimeters of polygons, and distinguish between perimeter and area. Students develop multiple strategies to determine the areas of rectangles and extend those ideas to determine the areas of rectilinear shapes.
Unit 5	20 days	In Unit 5, students will develop their multiplication fact strategies while using their understanding of multiplication and known facts to help them to solve for the unknown in problems. Students will also be introduced to part-whole understanding of fractions with visual representations.
Unit 6	20 days	In Unit 6, the students compare different approaches to solving the same problem and reflect on which strategies are more efficient and appropriate. Students continue to take inventory of know multiplication facts, which can then be used to derive remaining unknown facts. They model multistep number stories with one or more equations and represent the unknown quantities with letters. Students are introduced to the order of operations and learn how parentheses function as grouping symbols that affect the order of operations.
Unit 7	20 days	In Unit 7, the students work with a variety of fraction tools and models to continue to build their understanding of fractions as numbers. They continue to develop an understanding of fractions by exploring a new area-fraction model and fractions as representations of distances on a number line. Students compare, estimate and measure liquid volumes in liters and milliliters.
Unit 8	20 days	In Unit 8, the students apply their understanding; of multiplication and division within 100, measurement, and attributes of shapes. Students multiply by multiples of 10, investigate whole-number factor pairs for given products, divide with larger numbers, and solve equal sharing stories in the context of money. Students apply their knowledge of 2-D and 3-D shapes to investigate faces and bases of prisms. Students connect their work with fractions to linear measurement.
Unit 9	20 days	In Unit 9, the students will further develop their understanding of multiplication and division as they apply basic fact knowledge to mentally solve number stories and multiply larger factors. Students look for patterns between the sizes of whole-number factors and products. Students interpret length-of-day graphs with data from cities in different parts of the world.

Content Continuum

Grade 3 Mathematics

Students develop an understanding of fractions, beginning with unit fractions. Students view fractions in general as being built out of unit fractions, and they use fractions along with visual fraction models to represent parts of a whole.

Students describe, analyze, and compare properties of two-dimensional shapes. They compare and classify shapes by their sides and angles, and connect these with definitions of shapes. Students also relate their fraction work to geometry by expressing the area of part of a shape as a unit fraction of the whole. *NJSLS*

Students develop an understanding of the meanings of multiplication and division of whole numbers through activities and problems involving equal-sized groups, arrays, and area models; multiplication is finding an unknown product, and division is finding an unknown factor in these situations.

Students recognize area as an attribute of two-dimensional regions. They measure the area of a shape by finding the total number of same size units of area required to cover the shape without gaps or overlaps, a square with sides of unit length being the standard unit for measuring area. *NJSLS*

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

Mathematics Department Grades K-5
West Orange Public Schools
Darlene Berg, M.Ed, Supervisor

