In Grade 1, instructional time should focus on four critical areas: (1) developing understanding of addition, subtraction, and strategies for addition and subtraction within 20; (2) developing understanding of whole number relationships and place value, including grouping in tens and ones; (3) developing understanding of linear measurement and measuring lengths as iterating length units; and (4) reasoning about attributes of, and composing and decomposing geometric shapes.

New Jersey Student Learning Standards for Mathematics

Unit 1	20 days	In Unit 1 students will work collaboratively to learn both mathematics content and mathematical practices. Learning will focus on adding and subtracting within 20, extending the counting sequence and representing and interpreting data. Rote counting will be practiced to develop a sense of how different numbers relate to one another. Tools introduced for such counting will include number lines and number grids. Both tools will also serve to assist students in comparing numbers. Tally marks will act as a way for students to track objects they have counted. The instruction and practice in this unit builds fluency with basic facts through subitizing, counting, and creating and solving number stories.
Unit 2	20 days	In Unit 2, students work mostly with addition and use it to model and solve number stories. They will work toward fluency with addition and subtraction facts within 10. To do so they will be introduced to various strategies including counting on, recognizing pairs that add to 10 and the turn-around rule (the Commutative Property of Addition). The routine use of ten frames to determine will build mental arithmetic strategies and number sense flexibility. Rational counting will be reinforced as students include labels for counting and measuring. The introduction of diagrams will assist students in making sense of number stories and the more abstract mathematical language of symbols used in number models.
Unit 3	20 days	In Unit 3 students will continue to use addition and subtraction to model and solve number stories. They will add to previous knowledge by exploring 'putting together' and 'taking apart' situations. Students will also connect counting to addition and subtraction. Explorations will allow students to accurately and efficiently count larger sets of objects. They will order objects by length and work with matching pairs of numbers to lay doubles groundwork. To relate counting to addition and subtraction, students will use the abstract tools of number lines or number grids. Skip counting will introduce patterns that will then be furthered when students have to complete sequences with missing numbers and follow or determine a rule for the sequences.
Unit 4	20 days	In Unit 4,students will measure lengths using nonstandard units. They will also begin working on addition-fact fluency using strategies including counting on, making ten, doubles, decomposing a number leading to a ten, using the relationship between addition and subtraction and creating equivalent but easier known sums. Students represent data on a tally chart and bar graph and then compare the data.
Unit 5	20 days	In Unit 5,students will investigate place-value concepts for tens and ones. They use place value to compare and add 2-digit numbers. Students will begin working with larger numbers and will develop a firm grasp of the notation that we use to write numbers in everyday life. Students will also compare numbers. They will encounter comparisons in numbers stories as well when given two quantities to compare and are asked to find "How many more" or "How many fewer". Students will be introduced to the <,>, and = symbols to record the results of comparisons. They will also practice measuring lengths with nonstandard units and further explore the concept of length as the distance along a path, even if the path is not straight. Using their understanding of place value, as well as, a variety of tools and representations, students will solve 2-digit addition problems.
Unit 6	20 days	In Unit 6,students work towards fluency with addition facts. They also explore telling time and solving number stories. Students will examine the hour hand of an analog clock and how it moves as an hour passes. Students will work on solving different types of number stories; Change, Parts-and-Total, and Comparisons. These types provide additional opportunities to compare strategies for making sense of and solving those problems. Students will use "Helper" facts to add in this unit as well. Students will work to develop Fact fluency in different ways using near-doubles, and making-ten strategies to emphasize number relationships.
Unit 7	20 days	In Unit 7,students explore the relationship between addition and subtraction, compare different subtraction strategies, and continue to work on fact fluency. They will also explore the defining and non defining attributes of 2-dimensional shapes and continue their work telling time to the nearest hour, using analog and digital clocks. When understanding how addition and subtraction are related students will deepen their understanding and foster their development of fact fluency. Students will use their knowledge of addition facts to find the unknown when solving subtraction problems. They will also use counting up as opposed to counting back to subtract. Attributes of shapes will also be addressed in this unit. Students will extend their knowledge to include a more formal emphasis on defining and non defining attributes of shapes.
Unit 8	20 days	In Unit 8,students will learn about attributes of shapes, compose and decompose composite shapes, and divide shapes into halves and fourths. They will also continue to practice telling time and writing time, work with bar graphs, and use their understanding of place value and properties of operations to add and subtract larger numbers. Students are provided with the opportunity to use both 2- and 3- dimensional shapes to make, or compose, new shapes. This will help students to develop a better sense of 2- and 3- dimensional space, as well as a foundation for more complicated mathematics. Students will also work with fractional parts of shapes allowing them to understand equal partitions as well as recomposed wholes.
Unit 9	20 days	In Unit 9,students will focus on adding and subtracting with 2-digit numbers. Learning will focus on adding and subtracting within 100 using strategies such as counting up and counting back, as well as, base-10 blocks to add and subtract larger numbers. Students will also revisit measurement and geometry in this unit. They will be reviewing number grid puzzles while creating their own. Students will also create their own 3-D shapes after revisiting them in this unit.

Content Continuum

Grade 1 Mathematics

Students develop, discuss, and use efficient, accurate, and generalizable methods to add within 100 and subtract multiples of 10. They compare whole numbers (at least to 100) to develop understanding of and solve problems involving their relative sizes. They think of whole numbers between 10 and 100 in terms of tens and ones (especially recognizing the numbers 11 to 19 as composed of a ten and some ones). Through activities that build number sense, they understand the order of the counting numbers and their relative magnitudes.

Students compose and decompose plane or solid figures and build understanding of part-whole relationships as well as the properties of the original and composite shapes. They develop the background for measurement and for initial understandings of properties such as congruence and symmetry.
New Jersey Student Learning Standards

Students develop strategies for adding and subtracting whole numbers based on their prior work with small numbers. They use a variety of models,(e.g., cubes connected to form lengths), to model add-to, takefrom, put-together, take-apart, and compare situations to develop meaning for the operations of addition and subtraction, and to develop strategies to solve arithmetic problems with these operations. Students understand connections between counting and addition and subtraction. They use properties of addition to add whole numbers and to create and use increasingly sophisticated strategies based on these properties to solve addition and subtraction problems within 20. By comparing a variety of solution strategies, children build their understanding of the relationship between addition and subtraction.

Students develop an understanding of the meaning and processes of measurement, including underlying concepts such as iterating (the mental activity of building up the length of an object with equal-sized units) and the transitivity principle for indirect measurement. *New Jersey Student Learning Standards*

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

INSTRUCTIONAL / SUPPLEMENTAL MATERIALS

- **Text- Everyday Mathematics 4**
- **Engageny.org**
- **Illustrative Mathematics**
- **New Jersey Model Curriculum**

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WEST ORANGE PUBLIC SCHOOLS