

**Haddon Township Mathematics
Grade One**

The First Grade Mathematics Curriculum provides students with developmentally appropriate experiences and activities that reflect the Common Core Content Standards. As students in first grade experience mathematics through the Everyday Math Program, they develop skills in operations and algebraic thinking, numbers and operations in base ten, measurement and data, and geometry. The standards and these topics provide students with mathematical experiences and concrete problems, and they create college and career readiness for all students.

ESSENTIAL LEARNINGS: All first grade students will demonstrate an understanding of the following Common Core Content Standards:

Operations and Algebraic Thinking (CCSS.1.OA)

- Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.
- Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.
- Apply properties of operations as strategies to add and subtract.² *Examples: If $8 + 3 = 11$ is known, then $3 + 8 = 11$ is also known. (Commutative property of addition.) To add $2 + 6 + 4$, the second two numbers can be added to make a ten, so $2 + 6 + 4 = 2 + 10 = 12$. (Associative property of addition).*
- Understand subtraction as an unknown-addend problem. *For example, subtract $10 - 8$ by finding the number that makes 10 when added to 8. Add and subtract within 20.*
- Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).
- Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$); decomposing a number leading to a ten (e.g., $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$); using the relationship between addition and subtraction (e.g., knowing that $8 + 4 = 12$, one knows $12 - 8 = 4$); and creating equivalent but easier or known sums (e.g., adding $6 + 7$ by creating the known equivalent $6 + 6 + 1 = 12 + 1 = 13$).
- Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. For example, which of the following equations are true and which are false? $6 = 6$, $7 = 8 - 1$, $5 + 2 = 2 + 5$, $4 + 1 = 5 + 2$.
- Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. *For example, determine the unknown number that makes the equation true in each of the equations $8 + ? = 11$, $5 = _ - 3$, $6 + 6 = _$.*

Number & Operations in Base Ten (CCSS.1.NBT)

- Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.
- Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols $>$, $=$, and $<$.
- Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten.
- Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.
- Understand that the two digits of a two-digit number represent amounts of tens and ones.
- Subtract multiples of 10 in the range 10-90 from multiples of 10 in the range 10-90 (positive or zero differences), using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.

Measurement and Data (CCSS.1.MD)

- Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.
- Tell and write time in hours and half-hours using analog and digital clocks.
- Order three objects by length; compare the lengths of two objects indirectly by using a third object.
- Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. *Limit to contexts where the*

number of length units with no gaps or overlaps.

Geometry (CCSS.1.G)

- Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape.
- Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size) ; build and draw shapes to possess defining attributes.
- Partition circles and rectangles into two and four equal shares, describe the shares using the words *halves*, *fourths*, and *quarters*, and use the phrases *half of*, *fourth of*, and *quarter of*. Describe the whole as two of, or four of the shares. Understand for these examples that decomposing into more equal shares creates smaller shares.

Standards in Mathematical Practices (SMP)

- SMP 1-Make sense of problems and persevere in solving them.
- SMP 2- Reason abstractly and quantitatively.
- SMP 3- Construct viable arguments and critique the reasoning of others.
- SMP 4- Model with mathematics
- SMP 5- Use appropriate tools strategically.
- SMP 6- Attend to precision.
- SMP 7- Look for and make use of structure.
- SMP 8- Look for and express regularity in repeated reasoning.

object being measured is spanned by a whole