



## Clinton Township Public School District 4th Grade Mathematics Curriculum

Unit 1  
Unit 2  
Unit 3  
Unit 4  
Unit 5

### Unit 1

<b>Subject:</b> Mathematics	<b>Grade:</b> 4	<b>Unit Name:</b> Unit 1: Whole Numbers: Place Value, Comparison, Addition, and Subtraction
<b>Total Number of Lessons:</b> 6 (including Lesson 0)	<b>Unit Time Frame (days):</b> 29	
<b>NJSLS</b> 4.NBT.A.1; 4.NBT.A.2; 4.NBT.A.3; 4.NBT.B.4		
<b>Students will be able to independently use their learning to:</b> <ul style="list-style-type: none"><li>• Read and write numbers using number names, for example: 495 is <i>four hundred ninety-five</i>.</li><li>• Read and write numbers using expanded form, for example: <math>352 = 300 + 50 + 2</math>.</li><li>• Compare two multi-digit whole numbers, for example: <math>6,131 &gt; 6,113</math>.</li><li>• Round multi-digit whole numbers, for example: 3,528 rounded to the nearest hundred is 3,500.</li><li>• Add multi-digit whole numbers, for example: <math>3,966 + 7,550 = 11,516</math>.</li><li>• Subtract multi-digit whole numbers, for example: <math>25,082 - 11,919 = 13,163</math>.</li></ul>		
<b>Understandings:</b> <ul style="list-style-type: none"><li>• You can use what you know about place value to read, write, and compare multi-digit numbers.</li><li>• Knowing that each place in a number is ten times greater than the place to its right can help you determine the value of numbers.</li><li>• You can also use what you know about place value to round numbers and to add and subtract multi-digit numbers.</li></ul>		

Developed by: Jill Jordan  
Admin Approval: Carl Blanchard  
Board Approved 9/11/23

<p><b>Performance Tasks:</b></p> <ul style="list-style-type: none"> <li>• Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.</li> <li>• Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place, using <math>&gt;</math>, <math>=</math>, and <math>&lt;</math> symbols to record the results of comparisons.</li> <li>• Use place value understanding to round multi-digit numbers to any place.</li> <li>• Fluently add and subtract multi-digit whole numbers using the standard algorithm.</li> </ul>
<p><b>Core Instructional and Supplemental Materials, Assessments, Pacing Guide</b></p> <p>Materials and assessments are provided by i-Ready.</p> <p><a href="#">Unit 1: 4th Grade Math Curriculum CTSD 2023 - 24</a></p>
<p><b>Interdisciplinary Connections:</b></p>
<p><a href="#">Computer Science &amp; Design Thinking</a> (8.1 or 8.2)</p>
<p><a href="#">Career Readiness, Life Literacies &amp; Key Skills</a> (9.1, 9.2 or 9.4)</p>
<p><b>Accommodations:</b></p> <p><a href="#">CTSD Accommodations</a></p>

## Unit 2

<p><b>Subject:</b> Mathematics</p>	<p><b>Grade:</b> 4</p>	<p><b>Unit Name:</b> Unit 2: Operations: Multiplication, Division, and Algebraic Thinking</p>
<p><b>Total Number of Lessons:</b> 5</p>	<p><b>Unit Time Frame (days):</b> 29</p>	
<p><b>NJSLS</b> 4.OA.A.1 ; 4.OA.A.2 ; 4.OA.B.4 ; 4.OA.C.5 ; 4.OA.A.3</p>		
<p><b>Students will be able to independently use their learning to:</b></p> <ul style="list-style-type: none"> <li>• Multiply and divide to solve comparison problems, for example: 28 is 4 times as many as 7.</li> <li>• Identify factor pairs for a number, for example: 4 and 5 are a factor pair for 20.</li> <li>• Identify multiples of a number, for example: 42 is a multiple of 6.</li> <li>• Identify prime or composite numbers, for example: 16 is composite.</li> </ul>		

- Describe rules in number and shape patterns, for example: the pattern “3,10,17,24,…” has the rule “add 7” and the numbers go back and forth between odd and even.
- Model and solve multi-step word problems using equations, for example:  $(6 \times 3) - 11 + 2 = 9$ .

**Understandings:**

- You can solve problems involving multiplicative comparisons by using multiplication or division.
- Knowing your basic multiplication facts will help you find the factors of a number.
- You can use rules to generate or extend a number or shape pattern.

**Performance Tasks:**

- Interpret a multiplication equation as a comparison, e.g., interpret  $35 = 5 \times 7$  as a statement that 35 is 5 times as many as 7 and 7 times as many as 5. Represent verbal statements of multiplicative comparisons as multiplication equations.
- Multiply or divide to solve word problems involving multiplicative comparison, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison.
- Find all factor pairs for a whole number in the range 1–100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1–100 is a multiple of a given one-digit number. Determine whether a given whole number in the range 1–100 is prime or composite.
- Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself. For example, given the rule “Add 3” and the starting number 1, generate terms in the resulting sequence and observe that the terms appear to alternate between odd and even numbers. Explain informally why the numbers will continue to alternate in this way.
- Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.

**Core Instructional and Supplemental Materials, Assessments, Pacing Guide**

Materials and assessments are provided by i-Ready

[Grade 4 Unit 2](#)

**Interdisciplinary Connections:**

[Computer Science & Design Thinking](#) (8.1 or 8.2)

[Career Readiness, Life Literacies & Key Skills](#) (9.1, 9.2 or 9.4)

**Accommodations:**  
[CTSD Accommodations](#)

## Unit 3

<b>Subject:</b> Mathematics	<b>Grade:</b> 4	<b>Unit Name:</b> Unit 3
<b>Total Number of Lessons:</b> 6	<b>Unit Time Frame (days):</b> 32	
<b>NJSLS</b> 4.NBT.B.5 ; 4.MD.A.1; 4.NBT.B.6 ; 4.MD.A.3		
<b>Students will be able to independently use their learning to:</b> <ul style="list-style-type: none"><li>• Multiply a four-digit number by a one-digit number, for example: <math>2,810 \times 3 = 8,430</math>.</li><li>• Multiply a two-digit number by a two-digit number, for example: <math>62 \times 33 = 2,046</math>.</li><li>• Use multiplication to convert measurements.</li><li>• Divide a three-digit number by a one-digit number, for example: <math>348/6=58</math>.</li><li>• Divide a four-digit number by a one-digit number, for example: <math>6,328/4=1,582</math>.</li><li>• Use the perimeter formulas for rectangles, for example: <math>P= (2 \times 12) + (2 \times 5)</math> for a rectangle with length of 12 feet and width of 5 feet.</li><li>• Use the area formula for rectangles, for example: <math>A= 9 \times 3</math> for a rectangle with length of 9 feet and width of 3 feet.</li></ul>		
<b>Understandings:</b> <ul style="list-style-type: none"><li>• You can use what you know about place value to multiply multi-digit numbers.</li><li>• You can use what you know about place value to help you divide.</li><li>• Units of measurement can be divided into smaller units. Knowing how these units relate to one another will help you convert measurements from the larger unit to the smaller unit.</li><li>• You can use formulas to find the area and perimeter of rectangles.</li></ul>		
<b>Performance Tasks:</b> <ul style="list-style-type: none"><li>• Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.</li></ul>		

- Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz.; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two column table. For example, know that 1 ft is 12 times as long as 1 in. Express the length of a 4 ft snake as 48 in. Generate a conversion table for feet and inches listing the number pairs (1, 12), (2, 24), (3, 36), ...
- Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.
- Apply the area and perimeter formulas for rectangles in real world and mathematical problems. For example, find the width of a rectangular room given the area of the flooring and the length, by viewing the area formula as a multiplication equation with an unknown factor.

**Core Instructional and Supplemental Materials, Assessments, Pacing Guide**

[Grade 4 Unit 3](#)

**Interdisciplinary Connections:**

[Computer Science & Design Thinking](#) (8.1 or 8.2)

[Career Readiness, Life Literacies & Key Skills](#) (9.1, 9.2 or 9.4)

**Accommodations:**

[CTSD Accommodations](#)

## Unit 4

<b>Subject:</b> Mathematics	<b>Grade:</b> 4	<b>Unit Name:</b> Unit 4
<b>Total Number of Lessons:</b> 13	<b>Unit Time Frame (days):</b> 70	
<b>NJSLS</b> 4.NF.A.1 ; 4.NF.A.2 ; 4.NF.B.3 ; 4.NF.B.3a ; 4.NF.B.3b ; 4.NF.B.3c ; 4.NF.B.3d ; 4.MD.B.4 ; 4.NF.B.4 ; 4.NF.B.4a ; 4.NF.B.4b ; 4.NF.B.4c ; 4.NF.C.5 ; 4.NF.C.6 ; 4.NF.C.7 ; 4.MD.A.2.		

**Students will be able to independently use their learning to:**

- Compare fractions with unlike denominators, for example  $\frac{2}{3} > \frac{3}{10}$ .
- Add and subtract fractions and mixed numbers.
- Add and subtract fractions in line plots.
- Multiply a fraction by a whole number, for example:  $3 \times \frac{1}{2} = \frac{3}{2}$ .
- Write decimals as fractions and write fractions as decimals, for example:  $0.75 = \frac{75}{100}$ .
- Compare decimals, for example:  $0.65 < 0.7$ .
- Solve problems about time and money.
- Solve problems about length, liquid volume, mass, and weight.

**Understandings:**

- Fractions are numbers that work like whole numbers. Knowing about whole numbers will help you add, subtract, multiply, and compare fractions.
- You can use what you know about whole numbers to show, build, and take apart fractions to solve problems.
- You can also use what you know about fractions to write and compare decimals.

**Performance Tasks:**

- Explain why a fraction  $\frac{a}{b}$  is equivalent to a fraction  $\frac{n \times a}{n \times b}$  by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions.
- Compare two fractions with different numerators and different denominators, e.g., by creating common denominators or numerators, or by comparing to a benchmark fraction such as  $\frac{1}{2}$ . Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols  $>$ ,  $=$ , or  $<$ , and justify the conclusions, e.g., by using a visual fraction model.
- Understand a fraction  $\frac{a}{b}$  with  $a > 1$  as a sum of fractions  $\frac{1}{b}$ .
- Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.
- Decompose a fraction into a sum of fractions with the same denominator in more than one way, recording each decomposition by an equation. Justify decompositions, e.g., by using a visual fraction model. Examples:  $\frac{3}{8} = \frac{1}{8} + \frac{1}{8} + \frac{1}{8}$ ;  $\frac{3}{8} = \frac{1}{8} + \frac{2}{8}$ ;  $2 \frac{1}{8} = 1 + 1 + \frac{1}{8} = \frac{8}{8} + \frac{8}{8} + \frac{1}{8}$ .
- Solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators, e.g., by using visual fraction models and equations to represent the problem.
- Add and subtract mixed numbers with like denominators, e.g., by replacing each mixed number with an equivalent fraction, and/or by using properties of operations and the relationship between addition and subtraction.
- Make a line plot to display a data set of measurements in fractions of a unit ( $\frac{1}{2}$ ,  $\frac{1}{4}$ ,  $\frac{1}{8}$ ). Solve problems involving addition and subtraction of fractions by using information presented in line plots. For example, from a line plot find and interpret the difference in length between the longest and shortest specimens in an insect collection.
- Apply and extend previous understandings of multiplication to multiply a fraction by a whole number. Understand a fraction  $\frac{a}{b}$  as a multiple of  $\frac{1}{b}$ . For example, use a visual fraction model to represent  $\frac{5}{4}$  as the product  $5 \times (\frac{1}{4})$ , recording the conclusion by the equation  $\frac{5}{4} = 5 \times (\frac{1}{4})$ . Understand a multiple of  $\frac{a}{b}$  as a multiple of  $\frac{1}{b}$ , and use this understanding to multiply a fraction by a whole number. For example, use a visual fraction model to express  $3 \times (\frac{2}{5})$  as  $6 \times (\frac{1}{5})$ , recognizing this product as  $\frac{6}{5}$ . (In general,  $n \times (\frac{a}{b}) = (\frac{n \times a}{b})$ .)

- Apply and extend previous understandings of multiplication to multiply a fraction by a whole number. Solve word problems involving multiplication of a fraction by a whole number, e.g., by using visual fraction models and equations to represent the problem. For example, if each person at a party will eat  $\frac{3}{8}$  of a pound of roast beef, and there will be 5 people at the party, how many pounds of roast beef will be needed? Between what two whole numbers does your answer lie?
- Express a fraction with denominator 10 as an equivalent fraction with denominator 100, and use this technique to add two fractions with respective denominators 10 and 100. For example, express  $\frac{3}{10}$  as  $\frac{30}{100}$ , and add  $\frac{3}{10} + \frac{4}{100} = \frac{34}{100}$ .
- Use decimal notation for fractions with denominators 10 or 100. For example, rewrite 0.62 as  $\frac{62}{100}$ ; describe a length as 0.62 meters; locate 0.62 on a number line diagram.
- Compare two decimals to hundredths by reasoning about their size. Recognize that comparisons are valid only when the two decimals refer to the same whole. Record the results of comparisons with the symbols  $>$ ,  $=$ , or  $<$ , and justify the conclusions, e.g., by using a visual model.
- Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.

**Core Instructional and Supplemental Materials, Assessments, Pacing Guide**

[Grade 4 Unit 4](#)

**Interdisciplinary Connections:**

[Computer Science & Design Thinking](#) (8.1 or 8.2)

[Career Readiness, Life Literacies & Key Skills](#) (9.1, 9.2 or 9.4)

**Accommodations:**

CTSD accommodations

## Unit 5

<b>Subject:</b> Mathematics	<b>Grade:</b> 4	<b>Unit Name:</b> Unit 5
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<b>Total Number of Lessons:</b> 5	<b>Unit Time Frame (days):</b> 28
<b>NJSLS</b> 4.MD.C.5 ; 4.G.A.1 ; 4.MD.C.5 ; 4.MD.C.5a ; 4.MD.C.5b ; 4.MD.C.6 ; 4.MD.C.7 ; 4.G.A.2 ; 4.G.A.3	
<b>Students will be able to independently use their learning to:</b> <ul style="list-style-type: none"> <li>● Identify points, lines, line segments, rays, and perpendicular and parallel lines, for example: a plus sign has perpendicular lines.</li> <li>● Measure angles using a protractor, for example: an angle on a stop sign is 135 degrees.</li> <li>● Add and subtract angle measurements to solve problems.</li> <li>● Classify two-dimensional figures based on sides and angles, for example: squares and rectangles have parallel sides.</li> <li>● Draw and identify lines of symmetry in shapes, for example: a square has 4 lines of symmetry.</li> </ul>	
<b>Understandings:</b> <ul style="list-style-type: none"> <li>● Points, lines, line segments, rays, and angles are geometric figures. Knowing about these figures will help you classify shapes based on their attributes.</li> <li>● You can use what you know about benchmark angles to estimate the size of an angle or you can measure it accurately with a protractor.</li> <li>● You can use what you know about angles and parallel and perpendicular lines to classify figures.</li> </ul>	
<b>Performance Tasks:</b> <ul style="list-style-type: none"> <li>● Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement.</li> <li>● Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.</li> <li>● An angle is measured with reference to a circle with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the circle.</li> <li>● An angle that turns through <math>\frac{1}{360}</math> of a circle is called a “one-degree angle,” and can be used to measure angles. An angle that turns through <math>n</math> one-degree angles is said to have an angle measure of <math>n</math> degrees.</li> <li>● Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.</li> <li>● Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize right triangles as a category, and identify right triangles.</li> <li>● Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry.</li> </ul>	
<b>Core Instructional and Supplemental Materials, Assessments, Pacing Guide</b> <a href="#">Grade 4 Unit 5</a>	



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