# GREEN TOWNSHIP SCHOOL DISTRICT

**Content Area:** **Mathematics**

**Course/Grade Level:** **Fourth Grade**

**Curriculum Committee Members: Grade Level Staff Members**

**Principal:**
Jon Paul Bollette

**Board Approval Date:**
2/18/26

## Mission:

**A New Jersey education in Mathematics builds quantitatively and analytically literate citizens prepared to meet the demands of college and career, and to engage productively in an information-driven society. All students will have access to a high-quality mathematics education that fosters a population that:**

- **leverages data in decision-making and as a lens for discussing, analyzing, and responding to practical questions.**
- **persists to make sense of and model problems arising in everyday life, society, and the workplace.**
- **thinks critically and strategically to assess quantitative relationships and to solutions to complex problems.**
- **employs precise reasoning and constructs viable arguments to deduce conclusions, recognize false statements and assess peers' reasoning.**
- **interprets, evaluates and critiques the mathematics embedded in social, scientific and commercial systems, as well as the claims made in the private and public sectors.**
- **communicates precisely when conveying, representing, and justifying both qualitative and quantitative perspectives.**

| Key Performance and Benchmark Tasks/Assessments |
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| **Resources for help in creating assessments** |
| **Formative assessments:**<br>● Iready<br>● Exit Tickets<br>● Homework<br>● Sprints |
| **Summative Assessments:**<br><br>Examples may include:<br><br>● Quizzes<br>● Module/Unit Tests |
| **Benchmark Assessments:**<br>● Teacher-created benchmark assessments to be given periodically during the year. |
| **Alternative Assessments:**<br>● Teacher modifies assignments and activities based on student needs.<br>● Oral assessments administered in place of written when necessary.<br>● Accommodation and modification ideas may be found here:<br>○ Modifications & Accommodations Menu<br>○ *Assessments other than paper & pencil tests See link for more info:* *http://education.gmu.edu/assets/docs/forms/mirs/assessment_brochure.pdf* |

## Integrated Accommodations & Modifications

Please utilize the link below for ideas and strategies to use with ***ELL, Students with IEPS & 504s, At-Risk Students and Gifted & Talented Students***.

The attached worksheets can be printed ahead of each unit during the planning phase to help the teacher plan for the needs of particular students in each class, allowing for differentiation per unit and per year. The worksheets contain suggested accommodations and modifications for Content & Material, Student Organization, Instructional Strategies, Assessments, Attention/Focus, Written Language, and Social/Behavioral.
Modifications & Accommodations Menu

# Unit 1

| Place Value Concepts for Addition and Subtraction | Pacing: 5 Weeks |
|---|---|
| ● **Unit Summary:**<br>● Use multiplication as multiplicative comparison<br>● Use place value and comparison within 1,000,000<br>● Round multi-digit whole numbers<br>● Add and subtract whole numbers<br>● Use metric measurement conversion tables | |
| **Essential Questions:**<br>● How can multiplication help us compare quantities in different situations?<br>● How does understanding place value help us read, write, and compare large numbers?<br>● Why do we round numbers, and how do we decide which place value to round to?<br>● How can addition and subtraction be used to solve real-world problems?<br>● How does understanding metric units and conversions help us make sense of measurement in everyday life? | **Enduring Understandings:**<br>● Multiplication can be used to describe and compare relationships between quantities.<br>● Understanding place value helps us interpret and compare numbers up to one million.<br>● Rounding allows us to make reasonable estimates and simplify calculations.<br>● Accurate addition and subtraction are essential for solving everyday problems.<br>● The metric system is a base-ten measurement system, which makes conversions logical and consistent. |

| New Jersey Student Learning Standards | Student Learning Objectives | Practices |
|---|---|---|
| **4.OA.A.1** — Interpret a multiplication equation as a comparison. Represent verbal statements of multiplicative comparisons as multiplication equations.<br>**4.OA.A.2** — Multiply or divide to solve word problems involving multiplicative comparison.<br><br>**4.NBT.A.1** — Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right.<br>**4.NBT.A.2** — Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form; compare two multi-digit numbers based on the meanings of the digits in each place.<br>**4.NBT.A.3** — Use place value understanding to round multi-digit whole numbers to any place.<br>**4.NBT.B.4** — Fluently add and subtract multi-digit whole numbers using the standard algorithm.<br><br>**4.MD.A.1** — Know relative sizes of measurement units within one system of units, including metric units.<br>**4.MD.A.2** — Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple conversions within a system of measurement. | • How can you describe a multiplication relationship between numbers?<br>• How can students relate their previous experiences with place value up to 1,000 to help them name and compare numbers up to 1,000,000 in different forms?<br>• How can students use place value understanding to round numbers of up to six digits to any place value and apply estimation to real-world contexts?<br>• How can students build fluency with addition and subtraction of multi-digit numbers by using the standard algorithm, and they solve multi-step word problems?<br>• How can students express metric units of length, mass, and liquid volume in terms of smaller units and solve word problems that have measurement contexts? | MP.1 Make sense of problems and persevere in solving them<br>MP.2 Reason abstractly and quantitatively<br>MP.4 Model with mathematics<br>MP.6 Attend to precision |

**Interdisciplinary Connections**

**2020 Career Readiness, Life Literacies, and Key Skills**

**9.4.5.CT.1: Identify and gather relevant data that will aid in the problem-solving process (e.g., 2.1.5.EH.4, 4-ESS3-1, 6.3.5.CivicsPD.2).**
**9.4.5.CT.2: Identify a problem and list the types of individuals and resources (e.g., school, community agencies, governmental, online) that can aid in solving the problem (e.g., 2.1.5.CHSS.1, 4-ESS3-1).**
**9.4.5.CT.3: Describe how digital tools and technology may be used to solve problems.**
**9.4.5.CT.4: Apply critical thinking and problem-solving strategies to different types of problems such as personal, academic, community and global (e.g., 6.1.5.CivicsCM.3).**

| Unit 1: Core Unit Content | |
|---|---|
| ***Vocabulary*** | ***Key Concepts*** |
| ❑ Billion<br>❑ Convert<br>❑ Ten thousand<br>❑ Hundred thousand<br>❑ Kilometer<br>❑ Million<br>❑ Mixed units<br>❑ bundle<br>❑ centimeter<br>❑ exchange<br>❑ expanded form<br>❑ gram<br>❑ kilogram<br>❑ liter<br>❑ mass<br>❑ meter<br>❑ milliliter<br>❑ Regroup<br>❑ rename<br>❑ round | ❑ Students will use multiplication as multiplicative comparison<br>❑ Students will use place value and comparison within 1,000,000<br>❑ Students will round multi-digit whole numbers<br>❑ Students will add and subtract whole numbers<br>❑ Students will use metric measurement conversion tables |

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| ❏ standard algorithm<br>❏ standard form<br>❏ unbundle<br>❏ unit form<br>❏ word form | |

| Unit 1: Instructional Materials & Resources | |
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| Unit 1: Assessments |
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| **Formative assessments:**<br>• Iready<br>• Exit Tickets<br>• Homework<br>• Sprints |
| **Summative Assessments:**<br>• **Quizzes**<br>• **Unit Tests** |
| **Alternative Assessments:**<br>• Multiplication and division quizzes |

| Unit 1: Accommodations & Modifications |
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| Please utilize the link below for ideas and strategies to use with ELL, Students with IEPS & 504s, At-Risk Students and Gifted & Talented Students. Note possible accommodations or modifications for this unit below. |

Modifications & Accommodations Menu

# Unit 2

| Place Value Concepts for Multiplication and Division | Pacing:5-6 Weeks |
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| **Unit Summary:**<br>● Compose and decompose units of ten<br>● Multiply by Tens and Ones by One-Digit Numbers<br>● Divide of Tens and Ones by One-Digit Numbers<br>● Problem Solve with Measurement<br>● Use factors and multiples | |
| **Essential Questions:**<br>● How can understanding place value help me multiply and divide larger numbers?<br>● How are multiplication and division connected?<br>● How can factors and multiples help me make sense of number relationships?<br>● How can I use what I know about operations to solve real-world measurement problems?<br>● What strategies can I use to reason through and check my work when solving complex problems? | **Enduring Understandings:**<br>● Place value understanding supports efficient strategies for multiplying and dividing larger numbers.<br>● Multiplication and division are inverse operations that help us model and solve problems in everyday life.<br>● Recognizing and using factors and multiples helps us identify patterns, simplify problems, and make generalizations about numbers.<br>● Mathematical reasoning and problem-solving skills are essential when working with measurements and real-world contexts.<br>● There are multiple ways to represent and solve problems, and understanding the connections between methods deepens number sense and accuracy. |

| New Jersey Student Learning Standards | Student Learning Objectives | Practices |
|---|---|---|
| **4.OA – Operations and Algebraic Thinking** | ● How can students build conceptual understanding of multiplying and dividing multiples of 10 by one-digit numbers? | MP.1 Make sense of problems and persevere in solving them |

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| • **4.OA.A.1:** Interpret a multiplication equation as a comparison.<br>• **4.OA.A.2:** Multiply or divide to solve word problems involving multiplicative comparison.<br>• **4.OA.B.4:** Find all factor pairs for a whole number in the range 1–100. Determine whether a number is a multiple of a given one-digit number and whether it is prime or composite.<br>• **4.OA.C.5:** Generate a number or shape pattern that follows a given rule.<br><br>**4.NBT – Number and Operations in Base Ten**<br><br>• **4.NBT.B.5:** Multiply a whole number of up to four digits by a one-digit number, and multiply two two-digit numbers.<br>• **4.NBT.B.6:** Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors.<br><br>**4.MD – Measurement and Data**<br><br>• **4.MD.A.1:** Know relative sizes of measurement units within one system of units.<br>• **4.MD.A.2:** Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems that require expressing measurements given in a larger unit in terms of a smaller unit. | • How can students apply the distributive property to multiply a two-digit number by a one-digit number?<br>• How can students divide two- and three-digit numbers by one-digit numbers?<br>• How can students apply multiplication and division strategies and representations from previous topics to convert customary length units, investigate the perimeter and area of rectangles, and solve measurement word problems?<br>• How can students identify factors and multiples of numbers up to 100, and they examine the relationships between factors and multiples? | MP.2 Reason abstractly and quantitatively<br>MP.4 Model with mathematics<br>MP.6 Attend to precision<br>MP.8 Look for and express regularity in repeated reasoning |

**Interdisciplinary Connections**

**2020 Career Readiness, Life Literacies, and Key Skills**

**9.4.5.CT.1: Identify and gather relevant data that will aid in the problem-solving process (e.g., 2.1.5.EH.4, 4-ESS3-1, 6.3.5.CivicsPD.2).**
**9.4.5.CT.2: Identify a problem and list the types of individuals and resources (e.g., school, community agencies, governmental, online) that can aid in solving the problem (e.g., 2.1.5.CHSS.1, 4-ESS3-1).**
**9.4.5.CT.3: Describe how digital tools and technology may be used to solve problems.**
**9.4.5.CT.4: Apply critical thinking and problem-solving strategies to different types of problems such as personal, academic, community and global (e.g., 6.1.5.CivicsCM.3).**

## Unit 2: Core Unit Content

| *Vocabulary* | *Key Concepts* |
|---|---|
| ❑ associative property of multiplication<br>❑ composite number<br>❑ distributive property<br>❑ Divisible<br>❑ Divisor<br>❑ Formula<br>❑ partial product<br>❑ partial quotient<br>❑ prime number<br>❑ term (in a pattern)<br>❑ area<br>❑ area model<br>❑ commutative property of multiplication<br>❑ factor<br>❑ foot<br>❑ inch<br>❑ length<br>❑ multiple<br>❑ perimeter<br>❑ product<br>❑ quotient | ❑ Students will compose and decompose units of ten<br>❑ Students will multiply by Tens and Ones by One-Digit Numbers<br>❑ Students will divide of Tens and Ones by One-Digit Numbers<br>❑ Students will Problem Solve with Measurement<br>❑ Students will use factors and multiples |

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| ❑ total<br>❑ width<br>❑ yard | |

| Unit 2: Instructional Materials & Resources | |
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| Unit 2: Assessments |
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| **Formative assessments:**<br>• Iready<br>• Exit Tickets<br>• Homework<br>• Sprints |
| **Summative Assessments:**<br>• **Quizzes**<br>• **Unit Tests** |
| **Alternative Assessments:** |

| Unit 2: Accommodations & Modifications |
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| Please utilize the link below for ideas and strategies to use with ELL, Students with IEPS & 504s, At-Risk Students and Gifted & Talented Students. Note possible accommodations or modifications for this unit below.<br>Modifications & Accommodations Menu |

# Unit 3

| Multiplication and Division of Multi-Digit Numbers | Pacing:5 Weeks |
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**Unit Summary:**

- Multiply and Divide Multiples of Tens, Hundreds, and Thousands
- Divide Thousands, Hundreds, Tens, and Ones
- Four-Digit Numbers by One-Digit Numbers
- Multiply Two-Digit Numbers by Two-Digit Numbers
- Problem Solve with Measurement
- Use Remainders, Estimating, and Problem Solving

**Essential Questions:**

- How can understanding place value help us multiply and divide larger numbers?
- What strategies can we use to multiply and divide efficiently and accurately?
- How are multiplication and division related?
- How do factors and multiples help us solve problems?
- When solving real-world problems, how can estimation and remainders help us find reasonable answers?
- How can measurement problems be solved using multiplication and division?
- Why is it important to understand patterns in numbers, such as tens, hundreds, and thousands?

**Enduring Understandings:**

- The base-ten system helps us compose and decompose numbers to make multiplication and division easier.
- Multiplication and division are inverse operations that help us understand and solve problems involving equal groups, arrays, and comparisons.
- Efficient strategies, such as using place value and properties of operations, make it easier to multiply and divide large numbers.
- Factors and multiples reveal patterns and relationships that support problem-solving and number sense.
- Estimation and understanding remainders help check the reasonableness of answers in real-world situations.
- Measurement problems often require applying multiplication and division to find unknown quantities, totals, or conversions.
- Recognizing patterns in tens, hundreds, and thousands allows us to extend our understanding of number relationships and scale.

| New Jersey Student Learning Standards | Student Learning Objectives | Practices |
|---|---|---|
| • **4.OA.A.3** 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.<br>• **4.NBT.B.5** 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.<br>• **4.NBT.B.6** 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.<br>• **4.MD.A.1** Know relative sizes of measurement units within one system of units km, m, cm; kg, | • How can students use familiar representations, strategies, and methods to multiply and divide multiples of 10, 100, and 1000 by one-digit numbers and multiply a multiple of 10 by a multiple of 10, resulting in hundreds?<br>• How can students use area models, drawings on place value charts, equations, and familiar division facts to divide two- and three-digit numbers by one-digit numbers?<br>• How can students multiply numbers of up to four digits by one-digit numbers?<br>• How can students build on prior knowledge—multiplying two-digit numbers by one-digit numbers, multiplying with multiples of 10, and applying the associative and distributive properties—to multiply two-digit numbers by two-digit numbers? Can they use area models and equations to represent the multiplication and support their work?<br>• How can students express units of time and customary units of weight and liquid volume in terms of smaller units?<br>• How can students divide with numbers that result in whole-number | MP.1 Make sense of problems and persevere in solving them<br>MP.2 Reason abstractly and quantitatively<br>MP.4 Model with mathematics<br>MP.6 Attend to precision<br>MP.7 Look for and make use of structure |

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| 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.<br>• **4.MD.A.2** 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. | quotients and remainders, and they solve word problems and assess the reasonableness of their answers? | |

| Interdisciplinary Connections |
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| 2020 Career Readiness, Life Literacies, and Key Skills<br>**9.4.5.CT.1: Identify and gather relevant data that will aid in the problem-solving process (e.g., 2.1.5.EH.4, 4-ESS3-1, 6.3.5.CivicsPD.2).**<br>**9.4.5.CT.2: Identify a problem and list the types of individuals and resources (e.g., school, community agencies, governmental, online) that can aid in solving the problem (e.g., 2.1.5.CHSS.1, 4-ESS3-1).**<br>**9.4.5.CT.3: Describe how digital tools and technology may be used to solve problems.**<br>**9.4.5.CT.4: Apply critical thinking and problem-solving strategies to different types of problems such as personal, academic, community and global (e.g., 6.1.5.CivicsCM.3).** |

| Unit 3: Core Unit Content | |
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| ***Vocabulary*** | ***Key Concepts*** |

- ❏ Cup
- ❏ Gallon
- ❏ Long division
- ❏ Ounce
- ❏ Pint
- ❏ Pound
- ❏ Quart
- ❏ Remainder
- ❏ algorithm
- ❏ area
- ❏ area model
- ❏ array
- ❏ associative property of multiplication
- ❏ commutative property of multiplication
- ❏ compare
- ❏ customary units
- ❏ distribute
- ❏ distributive property
- ❏ divide, division
- ❏ divisor
- ❏ equation
- ❏ expression
- ❏ factor
- ❏ hours, minutes, seconds
- ❏ length
- ❏ metric units
- ❏ mixed units
- ❏ multiple
- ❏ multiply, multiplication
- ❏ partial product
- ❏ partial quotient
- ❏ perimeter
- ❏ place value
- ❏ product

- ❏ Students will Multiply and Divide Multiples of Tens, Hundreds, and Thousands
- ❏ Students will divide Thousands, Hundreds, Tens, and Ones
- ❏ Multiply up to Four-Digit Numbers by One-Digit Numbers
- ❏ Students will Multiply Two-Digit Numbers by Two-Digit Numbers
- ❏ Students will Problem Solve with Measurement
- ❏ Students will use Remainders, Estimating, and Problem Solving

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| ❏ quotient<br>❏ regroup, rename<br>❏ rows, columns<br>❏ total<br>❏ width<br>❏ yard | |

| Unit 3: Instructional Materials & Resources | |
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| Unit 3: Assessments |
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| **Formative assessments:**<br>• Iready<br>• Exit Tickets<br>• Homework<br>• Sprints |
| **Summative Assessments:**<br>• **Quizzes**<br>• **Tests** |
| **Alternative Assessments:** |

| Unit 3: Accommodations & Modifications |
|---|
| Please utilize the link below for ideas and strategies to use with ELL, Students with IEPS & 504s, At-Risk Students and Gifted & Talented Students. Note possible |

accommodations or modifications for this unit below.
Modifications & Accommodations Menu

# Unit 4

| **Foundations for Fraction Operations** | **Pacing: 7 Weeks** |
|---|---|
| **Unit Summary:**<br>● Use Fraction Decomposition and Equivalence<br>● Learn Equivalent Fractions<br>● Compare Fractions<br>● Add and Subtract Fractions<br>● Add and Subtract Mixed Numbers<br>● Use Repeated Addition of Fractions as Multiplication | |
| **Essential Questions:**<br>● How can we represent fractions in different but equivalent ways?<br>● How does understanding fraction decomposition help us solve problems?<br>● What makes two fractions equivalent or unequal?<br>● How can we compare fractions with different denominators?<br>● How can we use what we know about addition and subtraction of whole numbers to add and subtract fractions and mixed numbers?<br>● How is multiplying a fraction by a whole number related to repeated addition?<br>● Why is it important to understand fractions when solving real-world problems? | **Enduring Understandings:**<br>● Fractions can be decomposed into smaller parts or combined to form equivalent fractions, helping us understand their values and relationships.<br>● Equivalent fractions represent the same amount, even though they use different numerators and denominators.<br>● Comparing fractions requires reasoning about size, common denominators, and benchmark fractions such as ½ or 1.<br>● Adding and subtracting fractions and mixed numbers requires understanding of like and unlike denominators.<br>● Repeated addition of fractions demonstrates the concept of multiplying a fraction by a whole number.<br>● Understanding how fractions work together builds a foundation for proportional reasoning, |

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| | measurement, and problem solving in real-life contexts. |

| New Jersey Student Learning Standards | Student Learning Objectives | Practices |
|---|---|---|
| • 4.MD.A.2 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.<br>• **4.MD.B.4** Make a line plot to display a data set of measurements in fractions of a unit (2 4 8 ). Solve problems involving addition and subtraction of fractions, _ , _ by using information presented in line plots.<br>• **4.NF.A.1** Explain why a fraction _ is equivalent to a fraction 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.<br>• **4.NF.A.2** 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_. Recognize that comparisons are valid only when the two fractions refer to the same whole. | • How can students decompose whole numbers and fractions into sums of fractions? Can they also develop an understanding that a mixed number is the sum of a whole number and a fraction less than 1, which helps them as they rename fractions greater than 1 and rename mixed numbers?<br>• How can students use models, multiplication, and division to generate equivalent fractions and equivalent mixed numbers?<br>• How can students compare fractions with unlike numerators and denominators by using models and benchmarks and by renaming fractions to create common denominators or common numerators?<br>• How can students add and subtract fractions less than or equal to 1 and subtract a fraction from a whole number?<br>• How can students use familiar whole-number strategies to add and subtract mixed numbers? | MP.1 Make sense of problems and persevere in solving them<br>MP.2 Reason abstractly and quantitatively<br>MP.4 Model with mathematics<br>MP.6 Attend to precision<br>MP.7 Look for and make use of structure<br>MP.8 Look for and express regularity in repeated reasoning |

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| Record the results of comparisons with symbols >, =, or <, and justify the conclusions, e.g., by using a visual fraction model.<br>● **4.NF.B.3** Understand a fraction as a sum of fractions<br>a. Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.<br>b. 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. 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. d. 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.<br>● **4.NF.B.4** Apply and extend previous understandings of multiplication to multiply a fraction<br>● by a whole number. | ● How can students multiply fractions and mixed numbers by a whole number? | |

## Interdisciplinary Connections

2020 Career Readiness, Life Literacies, and Key Skills

**9.4.5.CT.1: Identify and gather relevant data that will aid in the problem-solving process (e.g., 2.1.5.EH.4, 4-ESS3-1, 6.3.5.CivicsPD.2).**

**9.4.5.CT.2: Identify a problem and list the types of individuals and resources (e.g., school, community agencies, governmental, online) that can aid in solving the problem (e.g., 2.1.5.CHSS.1, 4-ESS3-1).**

**9.4.5.CT.3: Describe how digital tools and technology may be used to solve problems.**
**9.4.5.CT.4: Apply critical thinking and problem-solving strategies to different types of problems such as personal, academic, community and global (e.g., 6.1.5.CivicsCM.3).**

| Unit 4: Core Unit Content | |
|---|---|
| ***Vocabulary*** | ***Key Concepts*** |
| ❏ common denominator<br>❏ common numerator<br>❏ Denominator<br>❏ mixed number<br>❏ Numerator<br>❏ associative property of addition<br>❏ associative property of multiplication<br>❏ data<br>❏ distributive property<br>❏ equivalent fraction<br>❏ fraction form<br>❏ fraction greater than 1<br>❏ fractional unit<br>❏ line plots<br>❏ multiple<br>❏ partition<br>❏ plot<br>❏ unit form<br>❏ unit fraction | ❏ Students will use Fraction Decomposition and Equivalence<br>❏ Students will learn Equivalent Fractions<br>❏ Students will Compare Fractions<br>❏ Students will Add and Subtract Fractions<br>❏ Students will Add and Subtract Mixed Numbers<br>❏ Students will use Repeated Addition of Fractions as Multiplication |

| Unit 4: Instructional Materials & Resources | |
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## Unit 4: Assessments

**Formative assessments:**

- Iready
- Exit Tickets
- Homework
- Sprints

**Summative Assessments:**

- **Quizzes**
- **Unit Tests**

**Alternative Assessments:**

## Unit 4: Accommodations & Modifications

Please utilize the link below for ideas and strategies to use with ELL, Students with IEPS & 504s, At-Risk Students and Gifted & Talented Students. Note possible accommodations or modifications for this unit below.
Modifications & Accommodations Menu

# Unit 5

| Place Value Concepts for Decimal Fractions | Pacing: 3 Weeks |
|---|---|
| • Learn Exploration of Tenths<br>• Learn Tenths and Hundredths<br>• Compare Decimal Numbers<br>• Add Tenths and Hundredths | |
| **Essential Questions:**<br>• How do decimals represent parts of a whole?<br>• What is the relationship between fractions and decimals?<br>• How do place value and the base-ten system help us understand tenths and hundredths?<br>• How can we compare and order decimal numbers?<br>• How can we use what we know about whole numbers and fractions to add decimals?<br>• Why are decimals important in real-world situations? | **Enduring Understandings:**<br>• Decimals are another way to represent fractions and parts of a whole using place value.<br>• Each place to the right of a decimal point represents a value that is ten times smaller than the place before it.<br>• Understanding tenths and hundredths helps us read, write, compare, and compute with decimals accurately.<br>• Comparing decimals involves understanding place value and the value of digits in each place.<br>• Adding decimals requires aligning place values just like with whole numbers to ensure accurate results.<br>• Decimals are used in everyday life to represent money, measurement, and data precisely. |

| New Jersey Student Learning Standards | Student Learning Objectives | Practices |
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| • **4.MD.A.2** 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.<br>• **4.NF.C.5** 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.<br>• **4.NF.C.6** Use decimal notation for fractions with denominators 10 or 100.<br>• **4.NF.C.7** 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. | • How can students use what they know about tenths as a fractional unit to develop an understanding of tenths as a place value unit?<br>• How can students build on their understanding of fractions, decimal fractions, and decimal numbers to recognize hundredths as a fractional unit and as a place value unit?<br>• How can students compare decimal numbers with tens, ones, tenths, and hundredths by making like units and by using the value of each digit in the numbers?<br>• How can students add decimal fractions with units of tenths and hundredths by expressing tenths as hundredths? | MP.1 Make sense of problems and persevere in solving them<br>MP.2 Reason abstractly and quantitatively<br>MP.4 Model with mathematics<br>MP.6 Attend to precision<br>MP.7 Look for and make use of structure<br>MP.8 Look for and express regularity in repeated reasoning |

## Interdisciplinary Connections

2020 Career Readiness, Life Literacies, and Key Skills

**9.4.5.CT.1: Identify and gather relevant data that will aid in the problem-solving process (e.g., 2.1.5.EH.4, 4-ESS3-1, 6.3.5.CivicsPD.2).**
**9.4.5.CT.2: Identify a problem and list the types of individuals and resources (e.g., school, community agencies, governmental, online) that can aid in solving the problem (e.g., 2.1.5.CHSS.1, 4-ESS3-1).**
**9.4.5.CT.3: Describe how digital tools and technology may be used to solve problems.**
**9.4.5.CT.4: Apply critical thinking and problem-solving strategies to different types of problems such as personal, academic, community and global (e.g., 6.1.5.CivicsCM.3).**

| Unit 5: Core Unit Content | |
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| ***Vocabulary*** | ***Key Concepts*** |
| ❏ decimal form<br>❏ decimal fraction<br>❏ decimal point<br>❏ Hundredths<br>❏ Tenths<br>❏ denominator<br>❏ equivalent fraction<br>❏ expanded form<br>❏ fraction form<br>❏ fraction greater than 1<br>❏ mixed number<br>❏ numerator<br>❏ sum<br>❏ total<br>❏ unit form | ❏ Students will learn Exploration of Tenths<br>❏ Students will learn Tenths and Hundredths<br>❏ Students will Compare Decimal Numbers<br>❏ Students will add Tenths and Hundredths |

| Unit 5: Instructional Materials & Resources | |
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| Unit 5: Assessments |
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| **Formative assessments:**<br>• Iready<br>• Exit Tickets<br>• Homework |

- Sprints

**Summative Assessments:**

- **Quizzes**
- **Unit Tests**

**Alternative Assessments:**

## Unit 5: Accommodations & Modifications

Please utilize the link below for ideas and strategies to use with ELL, Students with IEPS & 504s, At-Risk Students and Gifted & Talented Students. Note possible accommodations or modifications for this unit below.
Modifications & Accommodations Menu

# Unit 6

| Angle Measurement and Plane Figures | **Pacing: 4 Weeks** |
|---|---|
| • Define lines and angles<br>• Do angle measurement<br>• Determine Unknown Angle Measures<br>• Recognize, identify, and draw lines of symmetry. | |
| **Essential Questions:**<br>• How can we describe, identify, and classify different types of lines and angles?<br>• How do we measure and compare angles accurately?<br>• What strategies can we use to find unknown angle measures?<br>• How does symmetry help us understand shapes and patterns?<br>• Where do we see lines, angles, and symmetry in the real world? | **Enduring Understandings:**<br>• Lines, rays, and angles are the building blocks of geometric figures and help us describe shapes precisely.<br>• Angles can be measured using degrees, and these measurements help us compare and classify angles.<br>• Unknown angle measures can be determined using known measurements and the relationships between angles.<br>• Symmetry shows balance and regularity in shapes and can be identified by drawing lines of symmetry.<br>• Understanding geometric relationships helps us make sense of designs, structures, and patterns in everyday life. |

| **New Jersey Student Learning Standards** | **Student Learning Objectives** | **Practices** |
|---|---|---|

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|---|---|---|
| **4.G.A.1** Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.<br>**4.G.A.2** 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.<br>**4.G.A.3** 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.<br>**4.MD.C.5** Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement:<br>**4.MD.C.6** Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.<br>**4.MD.C.7** Recognize angle measure as additive. When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts. Solve addition and subtraction problems to find unknown angles on a diagram in real world and mathematical problems, e.g., by using an equation with a symbol for the unknown angle measure. | • How can students build a foundational knowledge of a variety of geometric figures and angle types?<br>• How can students formally identify and measure angles as turns, apply degree measures to angle definitions, and draw angles by using a protractor?<br>• How can students apply their understanding of angle measurement and recognize that angle measure is additive? How can they then use their new understanding to determine the unknown measures of angles?<br>• How can students apply their knowledge of angle types, parallel and perpendicular sides, and side lengths?<br>○ | MP.1 Make sense of problems and persevere in solving them<br>MP.2 Reason abstractly and quantitatively<br>MP.3 Construct viable arguments and critique the reasoning of others<br>MP.4 Model with mathematics<br>MP.5 Use appropriate tools strategically<br>MP.6 Attend to precision<br>MP.7 Look for and make use of structure<br>MP.8 Look for and express regularity in repeated reasoning |

## Interdisciplinary Connections

2020 Career Readiness, Life Literacies, and Key Skills

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| Unit 6: Core Unit Content | |
|---|---|
| ***Vocabulary*** | ***Key Concepts*** |
| ❏ acute angle<br>❏ acute triangle<br>❏ adjacent angles<br>❏ Angle<br>❏ complementary angles<br>❏ Degrees<br>❏ equilateral triangle<br>❏ Figure<br>❏ Intersect<br>❏ isosceles triangle<br>❏ Line<br>❏ line of symmetry<br>❏ Line segment<br>❏ obtuse angle<br>❏ obtuse triangle<br>❏ Parallel<br>❏ Perpendicular<br>❏ Point<br>❏ Ray<br>❏ Reflex angle<br>❏ right angle<br>❏ right triangle<br>❏ scalene triangle<br>❏ straight angle | ❏ Students will define lines and angles<br>❏ Students will do angle measurement<br>❏ Students will Determine Unknown Angle Measures<br>❏ Students will recognize, identify, and draw lines of symmetry. |

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| ❏ supplementary angles<br>❏ Vertex<br>❏ benchmark<br>❏ decompose<br>❏ sum | |

| Unit 6: Instructional Materials & Resources | |
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| Unit 6: Assessments |
|---|
| **Formative assessments:**<br>• Iready<br>• Exit Tickets<br>• Homework<br>• Sprints |
| **Summative Assessments:**<br>• **Quizzes**<br>• **Unit tests** |
| **Alternative Assessments:** |

| Unit 6: Accommodations & Modifications |
|---|
| Please utilize the link below for ideas and strategies to use with ELL, Students with IEPS & 504s, At-Risk Students and Gifted & Talented Students. Note possible accommodations or modifications for this unit below. |




[Modifications & Accommodations Menu]