Grade 3
Unit 1: Three-Digit Numbers: Place Value, Addition, and Subtraction

Skills and Standards

- **NY-3.NBT.1** Use place value understanding to round whole numbers to the nearest 10 or 100
- **NY-3.NBT.2** Fluently add and subtract within 1,000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction. Note: Students should be taught to use strategies and algorithms based on place value, properties of operations, and the relationship between addition and subtraction; however, when solving any problem, students can choose any strategy. Note: A range of algorithms may be used.
- **NY-3.NBT.4a** Understand that the digits of a four-digit number represent amounts of thousands, hundreds, tens, and ones. e.g., 3,245 equals 3 thousands, 2 hundreds, 4 tens, and 5 ones
- **NY-3.NBT.4b** Read and write four-digit numbers using base-ten numerals, number names, and expanded form. e.g., The number 3,245 in expanded form can be written as 3,245= 3,000 + 200 + 40 + 5.

Pacing Notes

- 23 days
- Included in number of days:
  - 5 days for lesson 0
  - 2-4 days for NYS Enhancement Activity 3.NBT4
  - 2 days of i-Ready Inform

Strategies and Models

Resources to review prior to instruction:
Found in Teacher Toolbox – Beginning of Unit

- Unit Flow and Progression
- Unit 1 Math Background

NYS Released Questions

Grade 3 Released Questions

Assessments

- Lesson Quizzes
- End of Unit Assessment: **Think Tech** (required)

Educator Notes

New York State Enhancement Activity (after Lesson 3) 4 Days

- Read and write 4-digit numbers.

Consider modifying the unit materials to include the following content provided in the Enhancement Activities:

- Reading and writing 4-digit numbers.

Grade 3
Unit 2: Multiplication and Division: Concepts, Relationships, and Patterns

Skills and Standards

- **NY-3.OA.1** Interpret products of whole numbers. e.g., Interpret 5 × 7 as the total number of objects in 5 groups of 7 objects each. Describe a context in which a total number of objects can be expressed as 5 × 7.
- **NY-3.OA.2** Interpret whole-number quotients of whole numbers. e.g., Interpret 56 ÷ 8 as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each. Describe a context in which a number of shares or a number of groups can be expressed as 56 ÷ 8.
- **NY-3.OA.3** Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities. e.g., using drawings and equations with a symbol for the unknown number to represent the problem.
- **NY-3.OA.4** Determine the unknown whole number in a multiplication or division equation relating three whole numbers. e.g., Determine the unknown number that makes the equation true in each of the equations 8 × ? = 48, 5 = __ ÷ 3, 6 × 6 = ?.
- **NY-3.OA.5** Apply properties of operations as strategies to multiply and divide. e.g.,
  - If 6 × 4 = 24 is known, then 4 × 6 = 24 is also known. (Commutative property of multiplication)
  - 3 × 5 × 2 can be found by 3 × 5 = 15, then 15 × 2 = 30, or by 5 × 2 = 10, then 3 × 10 = 30. (Associative property of multiplication)
  - Knowing that 8 × 5 = 40 and 8 × 2 = 16, one can find 8 × 7 as 8 × (5 + 2) = (8 × 5) + (8 × 2) = 40 + 16 = 56. (Distributive property)
- **NY-3.OA.6** Understand division as an unknown-factor problem. e.g., Find 32 ÷ 8 by finding the number that makes 32 when multiplied by 8.
- **NY-3.OA.7a** Fluently solve single-digit multiplication and related divisions, using strategies such as the relationship between multiplication and division or properties of operations. e.g., Knowing that 8 × 5 = 40, one knows 40 ÷ 5 = 8.
- **NY-3.OA.7b** Know from memory all products of two one-digit numbers.
- **NY-3.OA.9** Identify and extend arithmetic patterns (including patterns in the addition table or multiplication table).
- **NY-3.NBT.3** Multiply one-digit whole numbers by multiples of 10 in the range 10-90 using strategies based on place value and properties of operations. e.g., 9 × 80, 5 × 60

Pacing Notes	Strategies and Models
• 40 days	Resources to review prior to instruction: Found in Teacher Toolbox – Beginning of Unit • Unit Flow and Progression • Unit 2 Math Background
NYS Released Questions	**Assessments**
• Grade 3 Released Questions	• Lesson Quizzes/Digital Comprehension Check • Mid-Unit Assessment (optional) • End of Unit Assessment **Think Tech** (required)

Educator Notes

Grade 3
Unit 3: Multiplication: Finding Area, and Solving Word Problems

Skills and Standards

- **NY-3.MD.3** Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in a scaled picture graph or a scaled bar graph. e.g., Draw a bar graph in which each square in the bar graph might represent 5 pets.
- **NY-3.MD.5** Recognize area as an attribute of plane figures and understand concepts of area measurement.
- **NY-3.MD.5a** Recognize a square with side length 1 unit, called "a unit square," is said to have "one square unit" of area, and can be used to measure area.
- **NY-3.MD.5b** Recognize a plane figure which can be covered without gaps or overlaps by n unit squares is said to have an area of n
- **NY-3.MD.6** Measure areas by counting unit squares. Note: Unit squares include square cm, square m, square in., square ft., and improvised units
- **NY-3.MD.7** Relate area to the operations of multiplication and addition.
- **NY-3.MD.7a** Find the area of a rectangle with whole-number side lengths by tiling it, and show that the area is the same as would be found by multiplying the side lengths.
- **NY-3.MD.7b** Multiply side lengths to find areas of rectangles with whole-number side lengths in the context of solving real world and mathematical problem.
- **NY-3.MD.7d** Recognize area as additive. Find areas of figures composed of non-overlapping rectangles, and apply this technique to solve real world problems. Note: Problems include no more than one unknown side length.ms, and represent whole-number products as rectangular areas in mathematical reasoning.
- **NY-3.OA.3** Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities. E.g., using drawings and equations with a symbol for the unknown number to represent the problem.
- **NY-3.OA.8** Solve two-step word problems posed with whole numbers and having whole-number answers using the four operations.
- **NY-3.OA.8a** Represent these problems using equations or expressions with a letter standing for the unknown quantity.
- **NY-3.OA.8b** Assess the reasonableness of answers using mental computation and estimation strategies including rounding.
- **NY-3.NBT.2** Fluently add and subtract within 1,000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction. Note: Students should be taught to use strategies and algorithms based on place value, properties of operations, and the relationship between addition and subtraction; however, when solving any problem, students can choose any strategy. Note: A range of algorithms may be used.

Pacing Notes

- 32 Days including 2 days of i-Ready Inform
- Lesson 19 is post test standard. (Teach after NY State Math in T3 before Unit 6)

Strategies and Models

Resources to review prior to instruction:
Found in Teacher Toolbox – Beginning of Unit

- Unit Flow and Progression
- Unit 3 Math Background

NYS Released Questions

- Grade 3 Released Questions

Assessments

- Lesson Quizzes/Digital Comprehension Check
- End of Unit Assessment **Think Tech** (required)

Educator Notes

Consider modifying the unit materials to include the following content provided in the Enhancement activities:

- Having only one unknown in area problems.
- Not requiring the use of a single expression or equation to represent two-step word problems.

Grade 3
Unit 4: Fractions: Equivalence and Comparison

Skills and Standards

- **NY-3.NF.1** Understand a unit fraction, $1/b$, is the quantity formed by 1 part when a whole is partitioned into b equal parts. Understand a fraction a/b as the quantity formed by a parts of size $1/b$. Note: Fractions are limited to those with denominators 2, 3, 4, 6, and 8.
- **NY-3.NF.2** Understand a fraction as a number on the number line; represent fractions on a number line. Note: Fractions are limited to those with denominators 2, 3, 4, 6, and 8.
- **NY-3.NF.2a** Represent a fraction $1/b$ on a number line by defining the interval from 0 to 1 as the whole and partitioning it into b equal parts. Recognize that each part has size $1/b$ and that the endpoint of the part starting at 0 locates the number $1/b$ on the number line.
- **NY-3.NF.2b** Represent a fraction ab on a number line by marking off a lengths $1/b$ from 0. Recognize that the resulting interval has size a/b and that its endpoint locates the number a/b on the number line.
- **NY-3.NF.3** Explain equivalence of fractions and compare fractions by reasoning about their size. Note: Fractions are limited to those with denominators 2, 3, 4, 6, and 8.
- **NY-3.NF.3a** Understand two fractions as equivalent (equal) if they are the same size, or the same point on a number line
- **NY-3.NF.3b** Recognize and generate equivalent fractions. e.g., 1/2 = 2/4; 4/6 = 2/3. Explain why the fractions are equivalent. e.g., using a visual fraction model.
- **NY-3.NF.3c** Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers. e.g., Express 3 in the form 3 = 3/1, recognize that 6/3 = 2, and locate 4/4 and 1 at the same point on a number line.
- **NY-3.NF.3d** Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize that comparisons rely on the two fractions referring to the same whole. Record the results of comparisons with the symbols >, =, or <, and justify the conclusions. e.g. using a visual fraction model.
- **NY-3.MD.4** Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot where the horizontal scale is marked off in appropriate units—whole numbers, halves, or quarters.

Pacing Notes	Strategies and Models
• 26 Days • Lesson 33 moved to this Unit from Unit 6 (standard for the state test) • Lesson 26 moved to Unit 6 after state test- complete after lesson 19	Resources to review prior to instruction: Found in Teacher Toolbox – Beginning of Unit • Unit Flow and Progression • Unit 4 Math Background
NYS Released Questions	**Assessments**
• Grade 3 Released Questions	• Lesson Quizzes/Digital Comprehension Checks • Mid Unit Assessment (optional) • End of Unit Assessment **Think Tech** (required)

Educator Notes

Grade 3
Unit 5: Measurement: Time, Liquid Volume, and Mass

Skills and Standards

- **NY-3.MD.1** Tell and write time to the nearest minute and measure time intervals in minutes. Solve one-step word problems involving addition and subtraction of time intervals in minutes. e.g., representing the problem on a number line or other visual model. Note: This includes one-step problems that cross into a new hour.
- **NY-3.MD.2a** Measure and estimate liquid volumes and masses of objects using grams (g), kilograms (kg), and liters (l). Note: Does not include compound units such as cm3 and finding the geometric volume of a container.
- **NY-3.MD.2b** Add, subtract, multiply, or divide to solve one-step word problems involving masses or liquid volumes that are given in the same units. e.g., using drawings (such as a beaker with a measurement scale) to represent the problem.
- **NY-3.NBT.2** Fluently add and subtract within 1,000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction. Note: Students should be taught to use strategies and algorithms based on place value, properties of operations, and the relationship between addition and subtraction; however, when solving any problem, students can choose any strategy. Note: A range of algorithms may be used.

Pacing Notes	Strategies and Models
• 15 days	Resources to review prior to instruction: Found in Teacher Toolbox – Beginning of Unit • Unit Flow and Progression • Unit 5 Math Background
NYS Released Questions	**Assessments**
• Grade 3 Released Questions	• Lesson Quizzes/ Digital Comprehension Checks • End of Unit Assessment **Think Tech** (required)

Educator Notes

Consider modifying the unit materials to include the following content provided in the Enhancement Activities:

- Limiting word problems that involve time to having only one step.
- Solving one-step time problems.

Grade 3
Unit 6: Shapes: Attributes and Categories, Perimeter and Area, Data and Scaled Graphs

Skills and Standards

- **NY-3.G.1** Recognize and classify polygons based on the number of sides and vertices (triangles, quadrilaterals, pentagons, and hexagons). Identify shapes that do not belong to one of the given subcategories. Note: Include both regular and irregular polygons, however, students need not use formal terms "regular" and "irregular," e.g., students should be able to classify an irregular pentagon as "a pentagon," but do not need to classify it as an "irregular pentagon."
- **NY-3.G.2** Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. e.g., Partition a shape into 4 parts with equal area, and describe the area of each part as 1 4 of the area of the shape.
- **NY-3.MD.5** Recognize area as an attribute of plane figures and understand concepts of area measurement.
- **NY-3.MD.5a** Recognize a square with side length 1 unit, called "a unit square," is said to have "one square unit" of area, and can be used to measure area.
- **NY-3.MD.5b** Recognize a plane figure which can be covered without gaps or overlaps by n unit squares is said to have an area of n square units.
- **NY-3.MD.6** Measure areas by counting unit squares. Note: Unit squares include square cm, square m, square in., square ft., and improvised units.
- **NY-3.MD.7** Relate area to the operations of multiplication and addition.
- **NY-3.MD.7a** Find the area of a rectangle with whole-number side lengths by tiling it, and show that the area is the same as would be found by multiplying the side lengths.
- **NY-3.MD.7b** Multiply side lengths to find areas of rectangles with whole-number side lengths in the context of solving real world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning.
- **NY-3.NF.1** Understand a unit fraction, $1/b$, is the quantity formed by 1 part when a whole is partitioned into b equal parts. Understand a fraction a/b as the quantity formed by a parts of size $1/b$. Note: Fractions are limited to those with denominators 2, 3, 4, 6, and 8.

Pacing Notes

- 33 days includes State Test Prep and Review
- Includes Unit 3 Lesson 19
- Includes Unit 4 Lesson 26

Strategies and Models

Resources to review prior to instruction:
Found in Teacher Toolbox - Beginning of Unit

- Unit Flow and Progression
- Unit 6 Math Background

NYS Released Questions

- Grade 3 Released Questions

Assessments

- Lesson Quizzes/ Digital Comprehension Checks
- End Of Unit Assessment **Think Tech** (required)

Educator Notes

Consider modifying the unit materials to include the following content provided n the Enhancement Activities:

- Recognizing and classifying polygons by the number of sides and vertices.
- Recognizing and classifying both regular and irregular polygons.
- Removing references to distinguishing among types of quadrilaterals. (e.g., parallelograms and rhombuses)