North Caldwell
Grade 3
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Curriculum

NJ Student Learning Standards
(NJSLS)

2024-25 Excel Calendar

2024-25 Monthly Calendar

Supplements

North Caldwell Mathematics

Grade Level: 3

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Instructional Materials

Everyday Mathematics 4th Edition
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www.everydaymath.com

Supplemental Resources

- Illustrative Mathematics https://www.illustrativemathematics.org/
- National Council of Teachers of Mathematics http://www.nctm.org/
- NCTM Illuminations Resources for Teaching Math http://illuminations.nctm.org/

Interdisciplinary Connections

Mathematics is a unified body of knowledge whose concepts build upon each other. Connecting mathematical concepts includes linking ideas to related ideas learned previously.

Major emphasis should be given to ideas and concepts across mathematical content areas that help students see that mathematics is a web of closely connected ideas. Students need to connect their mathematical learning to appropriate real-world contexts. They need to create interest and maintain the interest after the novelty of the work has worn off.

Mathematics is the language of science and is greatly utilized in industry and business. It gives us the power to solve difficult real-world problems, but also helps us to understand how the universe operates.

Every mathematics teacher needs to make students unafraid of the subject by convincing the students of the usefulness of learning mathematics in their daily lives and for higher studies. The world today, which leans more and more heavily on Science and Technology, demands more from mathematics. Tomorrow's world will, no doubt, make still greater demands from mathematics.

Interdisciplinary Connections for Grade 3

Weather Observers (Connections: Math, Weather/Climate (3-ESS2-1), ELA (NJSLSA.W2), Digital Media) SWBAT:

- use internet resources to track and record weather conditions in five self-selected towns and their own town
- observe, collect and compare temperature, precipitation, humidity, wind speed
- represent data in graphs tables or charts
- analyze findings and communicate/express findings in writing

New Jersey Student Learning Standards (NJSLS)

In Grade 3, instructional time should focus on four critical areas: (1) developing understanding of multiplication and division and strategies for multiplication and division within 100; (2) developing understanding of fractions, especially unit fractions (fractions with numerator 1); (3) developing understanding of the structure of rectangular arrays and of area; and (4) describing and analyzing two-dimensional shapes.

(1) Students develop an understanding of the meanings of multiplication and division of whole numbers through activities and problems involving equal-sized groups, arrays, and area models; multiplication is finding an unknown product, and division is finding an unknown factor in these situations. For equal-sized group situations, division can require finding the unknown number of groups or the unknown group size. Students use properties of operations to calculate products of whole numbers, using increasingly sophisticated strategies based on these properties to solve multiplication and division problems involving single-digit factors. By comparing a variety of solution strategies, students learn the relationship between multiplication and division.

(2) Students develop an understanding of fractions, beginning with unit fractions. Students view fractions in general as being built out of unit fractions, and they use fractions along with visual fraction models to represent parts of a whole. Students understand that the size of a fractional part is relative to the size of the whole. For example, 1/2 of the paint in a small bucket could be less paint than 1/3 of the paint in a larger bucket, but 1/3 of a ribbon is longer than 1/5 of the same ribbon because when the ribbon is divided into 3 equal parts, the parts are longer than when the ribbon is divided into 5 equal parts. Students are able to use fractions to represent numbers equal to, less than, and greater than one. They solve problems that involve comparing fractions by using visual fraction models and strategies based on noticing equal numerators or denominators.

(3) Students recognize area as an attribute of two-dimensional regions. They measure the area of a shape by finding the total number of same size units of area required to cover the shape without gaps or overlaps, a square with sides of unit length being the standard unit for measuring area. Students understand that rectangular arrays can be decomposed into identical rows or into identical columns. By decomposing rectangles into rectangular arrays of squares, students connect area to multiplication, and justify using multiplication to determine the area of a rectangle.

(4) Students describe, analyze, and compare properties of two-dimensional shapes. They compare and classify shapes by their sides and angles and connect these with definitions of shapes. Students also relate their fraction work to geometry by expressing the area of part of a shape as a unit fraction of the whole.

Connecting the Standards for Mathematical Content to the Standards for Mathematical Practice

The Standards for Mathematical Practice describe ways in which developing student practitioners of the discipline of mathematics increasingly ought to engage with the subject matter as they grow in mathematical maturity and expertise throughout the elementary, middle and high school years. Designers of curricula, assessments, and professional development should all attend to the need to connect the mathematical practices to mathematical content in mathematics instruction.

The Standards for Mathematical Content are a balanced combination of procedure and understanding. Expectations that begin with the word "understand" are often especially good opportunities to connect the practices to the content. Students who lack understanding of a topic may rely on procedures too heavily. Without a flexible base from which to work, they may be less likely to consider analogous problems, represent problems coherently, justify conclusions, apply the mathematics to practical situations, use technology mindfully to work with the mathematics, explain the mathematics accurately to other students, step back for an overview, or deviate from a known procedure to find a shortcut. In short, a lack of understanding effectively prevents a student from engaging in the mathematical practices.

In this respect, those content standards, which set an expectation of understanding, are potential "points of intersection" between the Standards for Mathematical Content and the Standards for Mathematical Practice. These points of intersection are intended to be weighted toward central and generative concepts in the school mathematics curriculum that most merit the time, resources, innovative energies, and focus necessary to qualitatively improve the curriculum, instruction, assessment, professional development, and student achievement in mathematics.

Standards for Mathematical Practice

The Standards for Mathematical Practice describe varieties of expertise that mathematics educators at all levels should seek to develop in their students. These practices rest on important "processes and proficiencies" with longstanding importance in mathematics education. The first of these are the NCTM process standards of problem solving, reasoning and proof, communication, representation, and connections. The second are the strands of mathematical proficiency specified in the National Research Council's report *Adding It Up*: adaptive reasoning, strategic competence, conceptual understanding (comprehension of mathematical concepts, operations and relations), procedural fluency (skill in carrying out procedures flexibly, accurately, efficiently and appropriately), and productive disposition (habitual inclination to see mathematics as sensible, useful, and worthwhile, coupled with a belief in diligence and one's own efficacy).

1. Make sense of problems and persevere in solving them.

Mathematically proficient students start by explaining to themselves the meaning of a problem and looking for entry points to its solution. They analyze givens, constraints, relationships, and goals. They make conjectures about the form and meaning of the solution and plan a solution pathway rather than simply jumping into a solution attempt. They consider analogous problems and try special cases and simpler forms of the original problem in order to gain insight into its solution. They monitor and evaluate their progress and change course if necessary. Older students might, depending on the context of the problem, transform algebraic expressions or change the viewing window on their graphing calculator to get the information they need. Mathematically proficient students can explain correspondences between equations, verbal descriptions, tables, and graphs or draw diagrams of important features and relationships, graph data, and search for regularity or trends. Younger students might rely on using concrete objects or pictures to help conceptualize and solve a problem. Mathematically proficient students check their answers to problems using a different method, and they continually ask themselves, "Does this make sense?" They can understand the approaches of others to solving complex problems and identify correspondences between different approaches.

2. Reason abstractly and quantitatively.
Mathematically proficient students make sense of quantities and their relationships in problem situations. They bring two complementary abilities to bear on problems involving quantitative relationships: the ability to *decontextualize*—to abstract a given situation and represent it symbolically and manipulate the representing symbols as if they have a life of their own, without necessarily attending to their referents—and the ability to *contextualize*, to pause as needed during the manipulation process in order to probe into the referents for the symbols involved. Quantitative reasoning entails habits of creating a coherent representation of the problem at hand; considering the units involved; attending to the meaning of quantities, not just how to compute them; and knowing and flexibly using different properties of operations and objects.

3. Construct viable arguments and critique the reasoning of others.
Mathematically proficient students understand and use stated assumptions, definitions, and previously established results in constructing arguments. They make conjectures and build a logical progression of statements to explore the truth of their conjectures. They are able to analyze situations by breaking them into cases and can recognize and use counterexamples. They justify their conclusions, communicate them to others, and respond to the arguments of others. They reason inductively about data, making plausible arguments that take into account the context from which the data arose. Mathematically proficient students are also able to compare the effectiveness of two plausible arguments, distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in an argument—explain what it is. Elementary students can construct arguments using concrete referents such as objects, drawings, diagrams, and actions. Such arguments can make sense and be correct, even though they are not generalized or made formal until later grades. Later, students learn to determine domains to which an argument applies. Students at all grades can listen or read the arguments of others, decide whether they make sense, and ask useful questions to clarify or improve the arguments.

4. Model with mathematics.
Mathematically proficient students can apply the mathematics they know to solve problems arising in everyday life, society, and the workplace. In early grades, this might be as simple as writing an addition equation to describe a situation. In middle grades, a student might apply proportional reasoning to plan a school event or analyze a problem in the community. By high school, a student might use geometry to solve a design problem or use a function to describe how one quantity of interest depends on another. Mathematically proficient students who can apply what they know are comfortable making assumptions and approximations to simplify a complicated situation, realizing that these may need revision later. They are able to identify important quantities in a practical situation and map their relationships using such tools as diagrams, two-way tables, graphs, flowcharts and formulas. They can analyze those relationships mathematically to draw conclusions. They routinely interpret their mathematical results in the context of the situation and reflect on whether the results make sense, possibly improving the model if it has not served its purpose.

5. Use appropriate tools strategically.
Mathematically proficient students consider the available tools when solving a mathematical problem. These tools might include pencil and paper, concrete models, a ruler, a protractor, a calculator, a spreadsheet, a computer algebra system, a statistical package, or dynamic geometry software. Proficient students are sufficiently familiar with tools appropriate for their grade or course to make sound decisions about when each of these tools might be helpful, recognizing both the insight to be gained and their limitations. For example, mathematically proficient high school students analyze graphs of functions and solutions generated using a graphing calculator. They detect possible errors by strategically using estimation and other mathematical knowledge. When making mathematical models, they know that technology can enable them to visualize the results of varying assumptions, explore consequences, and compare predictions with data. Mathematically proficient students at various grade levels are able to identify relevant external mathematical resources, such as digital content located on a website, and use them to pose or solve problems. They are able to use technological tools to explore and deepen their understanding of concepts.

6. Attend to precision.
Mathematically proficient students try to communicate precisely to others. They try to use clear definitions in discussion with others and in their own reasoning. They state the meaning of the symbols they choose, including using the equal sign consistently and appropriately. They are careful about specifying units of measure, and labeling axes to clarify the correspondence with quantities in a problem. They calculate accurately and efficiently, express numerical answers with a degree of precision appropriate for the problem context. In the elementary grades, students give carefully formulated explanations to each other. By the time they reach high school they have learned to examine claims and make explicit use of definitions.

7. Look for and make use of structure.
Mathematically proficient students look closely to discern a pattern or structure. Young students, for example, might notice that three and seven more is the same amount as seven and three more, or they may sort a collection of shapes according to how many sides the shapes have. Later, students will see 7×8 equals the well-remembered $7 \times 5 + 7 \times 3$, in preparation for learning about the distributive property. In the expression $x^2 + 9x + 14$, older students can see the 14 as 2×7 and the 9 as $2 + 7$. They recognize the significance of an existing line in a geometric figure and can use the strategy of drawing an auxiliary line for solving problems. They also can step back for an overview and shift perspective. They can see complicated things, such as some algebraic expressions, as single objects or as being composed of several objects. For example, they can see $5 - 3(x - y)^2$ as 5 minus a positive number times a square and use that to realize that its value cannot be more than 5 for any real numbers x and y.

8. Look for and express regularity in repeated reasoning.
Mathematically proficient students notice if calculations are repeated and look both for general methods and for shortcuts. Upper elementary students might notice when dividing 25 by 11 that they are repeating the same calculations over and over again, and conclude they have a repeating decimal. By paying attention to the calculation of slope as they repeatedly check whether points are on the line through (1, 2) with slope 3, middle school students might abstract the equation $(y - 2)/(x - 1) = 3$. Noticing the regularity in the way terms cancel when expanding $(x - 1)(x + 1)$, $(x - 1)(x^2 + x + 1)$, and $(x - 1)(x^3 + x^2 + x + 1)$ might lead them to the general formula for the sum of a geometric series. As they work to solve a problem, mathematically proficient students maintain oversight of the process, while attending to the details. They continually evaluate the reasonableness of their intermediate results.

Operations & Algebraic Thinking

A. Represent and solve problems involving multiplication and division.

3.OA.A.1. Interpret products of whole numbers, e.g., interpret 5 × 7 as the total number of objects in 5 groups of 7 objects each. *For example, describe and/or represent a context in which a total number of objects can be expressed as 5 × 7.*

3.OA.A.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. *For example, describe and/or represent a context in which a number of shares or a number of groups can be expressed as 56 ÷ 8.*

3.OA.A.3. Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.[1]

3.OA.A.4. Determine the unknown whole number in a multiplication or division equation relating three whole numbers. *For example, determine the unknown number that makes the equation true in each of the equations 8 × ? = 48, 5 = _ ÷ 3, 6 × 6 = ?*

Understandings	Essential Questions
Students will understand… • the total number of objects, when grouped, can be found most efficiently by multiplication. • there are two different interpretations to a division problem. • when two out of three numbers are known in an equation, there is exactly one number, represented by the unknown, which will make the statement true.	• How are multiplication and division related?

Knowledge	Skills
Students will know . . . • the product of a x b is "a" groups of "b" things. • the quotient of c ÷ d can be interpreted as the number of objects when "c" things are partitioned equally into "d" shares or it can be interpreted as the number of groups when "c" things are partitioned into equal shares of "d" things.	Students will be able to . . . • interpret products of whole numbers. • interpret whole-number quotients of whole numbers. • by using multiplication and division in drawings and equations, solve word problems within 100. The word problems will involve equal groups, arrays, and measurement quantities. • determine the unknown whole number in a multiplication or division equation relating three whole numbers.

Standards for Mathematical Practice

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

Resources
• **Everyday Mathematics 4 Lessons** 1-2, 1-8, 1-9, 1-10, 1-12, 1-13, 2-5, 2-6, 2-7, 2-8, 2-9, 2-10, 2-11, 2-12, 3-1, 3-8, 3-9, 3-10, 3-11, 3-12, 4-1, 4-2, 4-3, 4-5, 4-8, 4-9, 4-10, 4-12, 5-4, 5-6, 5-8, 5-9, 5-10, 5-11, 6-1, 6-2, 6-4, 6-6, 6-7, 6-9, 7-2, 7-3, 7-12, 8-2, 8-3, 8-4, 8-5, 8-6, 8-7, 9-1, 9-2, 9-3, 9-4, 9-5, 9-6 (1-11, 1-13, 1-14, 2-1, 2-2, 2-3, 2-4, 2-9, 2-12, 3-1, 3-2, 3-3, 3-4, 3-5, 3-6, 3-7, 3-8, 3-9, 3-13, 4-1, 4-2, 4-3, 4-4, 4-6, 4-7, 4-8, 4-11, 4-13, 5-1, 5-3, 5-5, 5-7, 5-8, 5-12, 6-2, 6-3, 6-5, 6-7, 6-9, 6-10, 6-11, 6-12, 7-1, 7-2, 7-4, 7-5, 7-7, 7-9, 7-10, 7-12, 7-13, 8-1, 8-2, 8-3, 8-6, 9-1, 9-3, 9-5, 9-6) • **Supplemental Lessons:** Binder pages 51-59, 65-73, 248-253

Assessment	
Formative Assessment • Exit tickets • Math boxes	Summative Assessment • Unit assessment

Operations & Algebraic Thinking

B. Understand properties of multiplication and the relationship between multiplication and division.

3.OA.B.5. Apply properties of operations as strategies to multiply and divide.[2] *Examples: 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.)*

3.OA.B.6. Understand division as an unknown-factor problem. *For example, find 32 ÷ 8 by finding the number that makes 32 when multiplied by 8.*

Understandings	Essential Questions
Students will understand… • multiplication and division are inverse operations. • using properties can make problems easier.	• How can one use properties as strategies to solve problems? • How can one use multiplication to help solve division problems?

Knowledge	Skills
Students will know . . . • a x b = b x a • (a x b) x c = a x (b x c) • a x (b + c) = (a x b) + (a x c) • how to solve unknown-factor problems.	Students will be able to . . . • apply properties (commutative, associative, and distributive) of operations as strategies to multiply and divide. • find the answer to a division problem by solving the related unknown-factor problem.

Standards for Mathematical Practice

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

Resources

- **Everyday Mathematics 4** Lessons 1-9, 1-10, 2-6, 3-10, 3-11, 3-12, 4-5, 5-4, 5-5, 5-6, 5-8, 5-9, 5-11, 6-1, 6-2, 6-3, 6-6, 6-7, 6-9, 7-3, 8-2, 8-3, 8-5, 8-7, 9-1, 9-2, 9-3, 9-4, 9-5, 9-6 (2-1, 2-3, 3-5, 3-6, 3-7, 3-8, 4-1, 4-2, 4-3, 4-4, 4-5, 4-7, 4-9, 4-13, 5-7, 5-12, 6-2, 6-4, 6-9, 6-10, 6-11, 7-1, 7-2, 7-3, 7-4, 7-5, 7-7, 7-12, 8-1, 8-3, 8-4, 8-6, 8-7, 8-8, 8-9, 9-5)
- **Supplemental Lessons:** Binder pages 103-107

Assessment

Formative Assessment	Summative Assessment
• Exit tickets • Math boxes	• Unit assessment

Operations & Algebraic Thinking
C. Multiply and divide within 100.

3.OA.C.7. With accuracy and efficiency, multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g. knowing that 8 x 5 = 40, one knows 40 ÷ 5 = 8) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.

By the end of Grade 3, know from memory all products of two one-digit numbers.

[2] Students need not use formal terms for these properties.

Understandings	Essential Questions
Students will understand… • there is an inverse relationship between multiplication and division.	• How can one use the relationship between multiplication and division to find products and quotients?
Knowledge	**Skills**
Students will know . . . • strategies to multiply and divide.	Students will be able to . . . • fluently multiply within 100, using properties of operations or the relationship between multiplication and division. • fluently divide within 100, using properties of operations or the relationship between multiplication and division.

Standards for Mathematical Practice

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

Resources

- **Everyday Mathematics 4 Lesson** 1-1, 1-5, 1-8, 1-9, 1-10, 1-11, 1-12, 1-13, 2-2, 2-3, 2-4, 2-5, 2-6, 2-7, 2-8, 2-9, 2-10, 2-11, 2-12, 3-1, 3-5, 3-8, 3-9, 3-10, 3-11, 3-12, 3-13, 4-1, 4-3, 4-4, 4-5, 4-7, 4-9, 4-10, 4-11, 4-12, 5-1, 5-2, 5-3, 5-4, 5-5, 5-6, 5-7, 5-8, 5-9, 5-10, 5-11, 6-1, 6-2, 6-3, 6-4, 6-5, 6-6, 6-7, 6-8, 6-9, 6-10, 6-11, 7-1, 7-2, 7-3, 7-4, 7-6, 7-12, 8-2, 8-3, 8-4, 8-5, 8-6, 8-7, 9-1, 9-2, 9-3, 9-4, 9-5, 9-6, 9-7 (1-14, 2-1, 2-13, 3-3, 3-6, 3-7, 4-2, 4-6, 4-8, 4-13, 5-12, 7-5, 7-7, 7-8, 7-9, 7-10, 7-11, 7-13, 8-1, 8-8, 8-9, 9-8)
- **Supplemental Lessons:** Binder pages 54-59, 72-73, 165-170, 241-253

Assessment

Formative Assessment	Summative Assessment
• Exit tickets • Math boxes	• Unit assessment

Operations & Algebraic Thinking

D. Solve problems involving the four operations and identify and explain patterns in arithmetic.

3.OA.D.8. Solve two-step word problems, including problems involving money, using the four operations. 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.[3]

3.OA.D.9. Identify arithmetic patterns (including patterns in the addition table or multiplication table) and explain them using properties of operations. *For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends.*

[3] This standard is limited to problems posed with whole numbers and having whole-number answers; students should know how to perform operations in the conventional order when there are no parentheses to specify a particular order.

Understandings	Essential Questions
Students will understand… • there are strategies to find patterns in a sequence of numbers. • equations can model real-world problems.	• How can patterns be used to solve problems?

Knowledge	Skills
Students will know . . . • how to round a number. • how to estimate. • properties of operations.	Students will be able to . . . • represent word problems using equations with a letter standing for the unknown quantity. • solve two-step word problems using the four operations. • assess the reasonableness of answers using mental computation and estimation strategies including rounding. • identify arithmetic patterns (including patterns in the addition or multiplication tables) and explain them using properties of operations. *For example, observe that four times a number is always even and explain why four times a number can be decomposed into two equal addends.*

Standards for Mathematical Practice

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

Resources

- **Everyday Mathematics 4 Lessons** 2-2, 2-3, 2-4, 2-5, 2-6, 2-10, 3-2, 3-3, 3-4, 3-5, 3-6, 3-8, 3-10, 4-1, 4-12, 5-4, 5-5, 5-6, 5-7, 5-9, 5-10, 6-1, 6-7, 6-8, 6-9, 6-10, 6-11, 7-1, 7-2, 9-1, 9-3, 9-5, 9-7 (2-12, 3-1, 3-5, 3-7, 3-9, 3-10, 3-12, 3-13, 4-2, 4-4, 4-5, 4-6, 4-8, 4-11, 5-7, 5-8, 5-12, 6-3, 6-5, 7-4, 7-5, 7-6, 7-7, 7-8, 7-11, 8-1, 8-2, 8-4, 8-6, 9-3, 9-6, 9-8)
- **Supplemental Lessons:** Binder pages 80-102, 165-169, 241-247

Assessment

Formative Assessment	Summative Assessment
• Exit tickets • Math boxes	• Unit assessment

Numbers and Operations in Base Ten

A. Use place value understanding and properties of operations to perform multi-digit arithmetic.[1]

3.NBT.A.1. Use place value understanding to round whole numbers to the nearest 10 or 100.

3.NBT.A.2. Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.

3.NBT.A.3. Multiply one-digit whole numbers by multiples of 10 in the range 10–90 (e.g., 9 × 80, 5 × 60) using strategies based on place value and properties of operations.

[1] A range of algorithms may be used.

Understandings	Essential Questions
Students will understand… • the place where a digit is located assigns a value to that digit. • products that involve multiples of 10 can be found by multiplying the non-zero digits of the two numbers and then multiplying by 10.	• Why is place value important?
Knowledge	**Skills**
Students will know . . . • the procedure needed to round a whole number. • properties of operations. • strategies involving place-value, properties of operations, and inverse operations. • multiples of 10 in the range 10 – 90.	Students will be able to . . . • use place-value understanding to round whole numbers to the nearest ten or hundred. • fluently add and subtract within 1000, using strategies and algorithms based on place-value, properties of operations, and/or the relationship between addition and subtraction. • multiply one-digit whole numbers by multiples of 10 in the range 10 – 90, using strategies based on place-value and properties of operations.

Standards for Mathematical Practice

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

Resources

- **Everyday Mathematics 4 Lessons** 1-1, 1-2, 1-3, 1-4, 1-7, 1-8, 1-9, 1-10, 1-13, 2-1, 2-2, 2-3, 2-4, 2-5, 2-10, 2-11, 2-12, 3-1, 3-2, 3-3, 3-4, 3-5, 3-6, 3-7, 3-8, 3-13, 4-1, 4-3, 4-6, 4-7, 4-9, 5-4, 5-5, 5-6, 5-7, 5-9, 6-1, 6-8, 6-10, 6-11, 7-1, 7-2, 7-3, 7-4, 8-2, 8-3, 8-5, 9-2, 9-3, 9-5, 9-6, 9-7 (1-5, 1-6, 1-8, 1-9, 1-10, 1-11, 1-12, 1-13, 1-14, 2-2, 2-6, 2-7, 2-8, 2-9, 2-13, 3-7, 3-9, 3-10, 3-12, 3-13, 4-2, 4-4, 4-5, 4-6, 4-8, 4-10, 4-11, 4-12, 5-1, 5-8, 5-12, 6-5, 6-6, 6-7, 6-9, 7-4, 7-5, 7-6, 7-7, 7-8, 7-9, 7-10, 7-11, 7-12, 7-13, 8-6, 8-7, 8-8, 8-9, 9-3, 9-4, 9-6, 9-7, 9-8)
- **Supplemental Lessons:** Binder pages 9-19, 60-64, 80-102, 171-194, 241-247

Assessment

Formative Assessment	Summative Assessment
• Exit tickets • Math boxes	• Unit assessment

Numbers and Operations[5] – Fractions

A. Develop an understanding of fractions as numbers.

[5]Grade 3 expectations in this domain are limited to fractions with denominators 2, 3, 4, 6, and 8.

3.NF.A.1. Understand a fraction $1/b$ as 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 $1/b$. For example: If a rectangle (i.e. the whole) is partitioned into 3 equal parts, each part is 1/3. Two of those parts would be 2/3.

3.NF.A.2. Understand a fraction as a number on the number line; represent fractions on a number line diagram.

a. Represent a fraction $1/b$ on a number line diagram 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 based at 0 locates the number $1/b$ on the number line. For example, partition the number line from 0 to 1 into 3 equal parts, represent 1/3 on the number line and show that each part has a size of 1/3
b. Represent a fraction a/b on a number line diagram 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.

3.NF.A.3. Explain equivalence of fractions in special cases and compare fractions by reasoning about their size.

a. Understand two fractions as equivalent (equal) if they are the same size. Understand two fractions as equivalent if they are located at the same point on a number line.
b. Recognize and generate simple equivalent fractions, e.g., 1/2 = 2/4, 4/6 = 2/3). Explain why the fractions are equivalent with the support of visual models.
c. Express whole numbers as fractions and recognize fractions that are equivalent to whole numbers. *Examples: Express 3 in the form 3 = 3/1; recognize that 6/1 = 6; locate 4/4 and 1 at the same point on a number line diagram.*
d. Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with the symbols >, =, or <, and justify the conclusions with the support of a visual fraction model.

[1] Grade 3 expectations in this domain are limited to fractions with denominators 2, 3, 4, 6, 8.

Understandings	Essential Questions
Students will understand… • other numbers exist in addition to whole numbers. • the number one can be broken down into fractional parts that are also numbers.	• Why do we need fractions?
Knowledge	**Skills**
Students will know . . . • a fraction 1/b is the quantity formed by 1 part when a whole is partitioned into b equal parts; when b gets larger, more parts are formed and each part gets smaller. • a fraction a/b is the quantity formed by a parts of size $1/b$. • a fraction is a number on the number line. • two fractions are equivalent (equal) if they represent the same amount of the whole. • two fractions are equivalent (equal) if they represent the same point on the number line. • comparing fractions is valid only when the two fractions refer to the same whole.	Students will be able to . . . • represent fractions on a number line diagram. • represent a fraction $1/b$ on a number line diagram 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 based at 0 locates the number $1/b$ on the number line. • represent a fraction a/b on a number line diagram by defining the interval from 0 to 1 as the whole, partition it into b equal parts and mark 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. • explain equivalence of fractions in special cases. • compare fractions by reasoning about their size. • recognize simple equivalent fractions.

	• generate simple equivalent fractions. • explain why fractions are equivalent, e.g., using a visual fraction model. • express whole numbers as fractions. • recognize fractions that are equivalent to whole numbers. • compare two fractions with the same numerator or the same denominator by reasoning about their size. • compare fractions using <, =, or > . • justify fraction comparisons, e.g., using a visual fraction model.

Standards for Mathematical Practice

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

Resources

- **Everyday Mathematics 4 Lessons** 1-12, 2-9, 2-12, 4-3, 5-1, 5-2, 5-3, 5-7, 6-4, 6-6, 7-2, 7-4, 7-5, 7-6, 7-7, 7-8, 7-9, 7-10, 7-11, 7-12, 8-1, 8-5, 8-7, 8-8, 9-5 (2-5, 2-7, 2-10, 3-2, 4-9, 4-13, 5-1, 5-5, 5-6, 5-7, 5-10, 6-2, 6-5, 6-7, 6-8, 6-12, 7-1, 7-3, 7-7, 7-8, 7-10, 7-12, 7-13, 8-1, 8-2, 8-3, 8-4, 8-5, 8-6, 8-7, 8-8, 9-1, 9-2, 9-3, 9-4, 9-5, 9-6, 9-7, 9-8)
- **Supplemental Lessons:** Binder pages 114-164, 149-164

Assessment

Formative Assessment	Summative Assessment
• Exit tickets • Math boxes	• Unit assessment

Measurement

A. Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects.

3.M.A.1. Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram.

3.M.A.2. Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem.

Clarification: "Measure and estimate liquid volumes and masses" excludes compound units such as cm^3 and finding the geometric volume of a container. "Multiplying to solve one-step word problems" excludes multiplicative comparison problems (problems involving "times as much"; See Glossary, Tables 2a-2d)).

Understandings	Essential Questions
Students will understand… • measurement involves units that must match in order to add or subtract them.	• Why does one need to measure? • How does one measure liquids? • How does one measure mass?
Knowledge	**Skills**
Students will know . . . • time intervals involve a start time and an end time. • how to add or subtract on a number line.	Students will be able to . . . • tell and write time to the nearest minute. • measure time intervals in minutes. • solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram. • measure liquid volumes . • estimate liquid volumes. • measure masses of objects using standard units of grams (g), kilograms (kg), and liters (l). • estimate masses of objects using standard units of grams (g), kilograms (kg), and liters (l). • add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem.

Standards for Mathematical Practice

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

Resources
• **Everyday Mathematics 4 Lessons** 1-3, 1-5, 1-6, 1-11, 1-12, 1-13, 2-1, 2-6, 2-9, 2-12, 4-3, 5-4, 6-7, 7-1, 7-2, 7-3, 7-7, 8-7, 8-8, 9-2, 9-3, 9-4, 9-7 (1-7, 1-8, 1-9, 1-10, 1-12, 1-13, 2-2, 2-3, 2-4, 2-5, 2-6, 2-7, 2-8, 2-11, 3-6, 3-8, 3-9, 3-12, 4-1, 4-3, 5-6, 5-10, 6-1, 6-3, 6-8, 6-9, 6-11, 6-12, 7-2, 7-4, 7-5, 7-6, 7-8, 7-10, 7-11, 7-12, 8-1, 8-4, 8-7, 8-9, 9-1, 9-2, 9-3, 9-5, 9-7) • **Supplemental Lessons:** Binder pages 27-50

Assessment	
Formative Assessment • Exit tickets • Math boxes	Summative Assessment • Unit assessment

Measurement

B. Geometric measurement: Understand concepts of area and relate area to multiplication and to addition.

3.M.B.3. Recognize area as an attribute of plane figures and understand concepts of area measurement.

a. 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.
b. 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.

3.M.B.4. Measure areas by counting unit squares (square cm, square m, square in, square ft, and non-standard units).

3.M.B.5 Relate area to the operations of multiplication and addition.

a. 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.
b. 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.
c. Use tiling to show in a concrete case that the area of a rectangle with whole-number side lengths a and $b + c$ is the sum of $a \times b$ and $a \times c$. Use area models to represent the distributive property in mathematical reasoning.
d. Recognize area as additive. Find areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts, applying this technique to solve real world problems.

Understandings:	Essential Questions
Students will understand… • area measurement involves covering a surface. • area is measured in square units. • that area is related to the operations of multiplication and division.	• Why do we need to measure the area of a surface? • How do we find areas of irregular shapes?
Knowledge	**Skills**
Students will know . . . • area is an attribute of plane figures. • a square with side length 1 unit, called "a unit square" is said to have "one square unit" of area. • a unit square can be used to measure area. • 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. • area is additive.	Students will be able to . . . • measure areas by counting unit squares (square cm, square m, square in, square ft., and improvised units). • find the area of a rectangle with whole-number side lengths by tiling it • show that the area of a rectangle found by tiling is the same as would be found by multiplying the side lengths. • multiply side lengths to find areas of rectangles with whole number side lengths in the context of solving real-world and mathematical problems. • represent whole-number products as rectangular areas in mathematical reasoning. • use tiling in a concrete case that the area of a rectangle with whole-number side lengths a and $b+c$ is the sum of a x b and a x c. • use area models to represent the distributive property in mathematical reasoning. • find areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts. • apply this technique to solve real-world problems.

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

Resources
• **Everyday Mathematics 4 Lessons** 2-12, 3-7, 4-7, 4-8, 4-9, 4-10, 4-11, 4-12, 5-1, 5-3, 5-4, 5-5, 5-6, 5-11, 6-5, 7-10, 8-3, 8-7, 9-1, 9-5 (3-11, 3-14, 4-9, 4-13, 4-14, 5-1, 5-2, 5-3, 5-4, 5-6, 5-9, 5-10, 6-1, 6-2, 6-3, 6-4, 6-6, 6-10, 7-1, 7-2, 7-3, 7-4) • **Supplemental Lessons:** Binder pages 74-79, 215-218, 229-240

Assessment	
Formative Assessment • Exit tickets • Math boxes	Summative Assessment • Unit assessment

Measurement

C. Geometric measurement: Recognize perimeter as an attribute of plane figures and distinguish between area measurements.

3.M.C.6 Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.

Understandings	Essential Questions
Students will understand… • perimeter is a linear measure and area is a square measure.	• What types of problems involve perimeter? • What types of problems involve area?
Knowledge	**Skills**
Students will know . . . • the difference between area and perimeter. • rectangles with the same area do not necessarily have the same perimeter and vice versa.	Students will be able to . . . • find the perimeter of a polygon given the side lengths. • find an unknown side length of a polygon. • exhibit rectangles with the same perimeter but different areas. • exhibit rectangles with the same area but different perimeters. • solve real-world and mathematical problems involving perimeters of polygons.

Standards for Mathematical Practice

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

Resources

- **Everyday Mathematics 4 Lessons** 4-3, 4-6, 4-7, 4-8, 4-10, 4-11, 5-1, 5-11, 6-5, 7-10, 9-1 (4-12, 5-3, 5-5, 5-6, 5-7, 5-10, 6-1, 6-3, 6-6, 6-10, 8-2, 8-6)
- **Supplemental Lessons:** Binder pages 207-228

Assessment

Formative Assessment	Summative Assessment
• Exit tickets • Math boxes	• Unit assessment

Data Literacy

A. Understand data-based questions and data collections

3.DL.A.1 Develop data-based questions and decide what data will answer the question. (e.g. "What size show does a 3rd grader wear?", "How many books does a 3rd grader read?")

3.DL.A.2 Collect student-centered data (e.g. collect data on students' favorite ice cream flavor) or use existing data to answer the data-based questions.

Understandings	Essential Questions
Students will understand… • that data-based questions require multiple pieces of data to be collected in order to analyze the data. • once data is collected and analyzed, one can answer many questions about the topic of study. • student-centered data represents data that is of interest to the students. •	• What are the advantages of student-centered data? • When we want information from real-life situations, how does one determine the question to ask in order to collect data?

Knowledge	Skills
Students will know . . . • what will count as data (e.g., visuals, sounds, numbers). • that data can vary. • that people collect data to answer questions.	Students will be able to . . . • develop data-based questions. • determine the numbers and categories that will suit the data investigated. • determine how to collect student-centered data, e.g., distribute a survey. • answer data-based questions when provided with existing data. •

Standards for Mathematical Practice

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

Resources

- **Everyday Mathematics 4 Lessons** 2-12, 3-7, 4-7, 4-8, 4-9, 4-10, 4-11, 4-12, 5-1, 5-3, 5-4, 5-5, 5-6, 5-11, 6-5, 7-10, 8-3, 8-7, 9-1, 9-5 (3-11, 3-14, 4-9, 4-13, 4-14, 5-1, 5-2, 5-3, 5-4, 5-6, 5-9, 5-10, 6-1, 6-2, 6-3, 6-4, 6-6, 6-10, 7-1, 7-2, 7-3, 7-4)

Assessment

Formative Assessment	Summative Assessment
• Exit tickets • Math boxes	• Unit assessment

Data Literacy

B. Represent and interpret data

3.DL.B.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 scaled bar graphs. *For example, draw a bar graph in which each square in a bar graph might represent 5 pets.*

3.DL.B.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.

Understandings	Essential Questions
Students will understand… • different scales are needed to represent various data.	• How can representing data help us to interpret it and draw conclusions? • How can one determine the best representation to display data?
Knowledge	**Skills**
Students will know . . . • the characteristics of picture graphs. • the characteristics of bar graphs. • the characteristics of a line plot.	Students will be able to . . . • draw a scaled picture graph to represent a data set with several categories. • draw 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 scaled bar graphs (*e.g., one square = 5 pets*). • generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. • use a line plot to show measurement data found with a ruler, where the horizontal scale is marked off in appropriate units – whole numbers, halves, or quarters.

Standards for Mathematical Practice

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

Resources

- **Everyday Mathematics 4 Lessons** 1-3, 1-6, 1-7, 1-11, 3-6, 3-7, 3-8, 4-1, 4-2, 4-3, 4-6, 4-7, 4-8, 5-1, 5-5, 5-6, 6-5, 8-1, 8-2, 8-7, 9-4, 9-7 (1-9, 1-12, 2-2, 2-4, 2-9, 2-13, 3-2, 3-4, 3-10, 3-11, 3-13, 3-14, 4-4, 4-5, 4-11, 5-2, 5-4, 5-6, 5-10, 6-1, 6-3, 7-9, 8-3, 8-5, 8-7, 8-8, 8-9, 9-6, 9-8)
- **Supplemental Lessons:** Binder pages 108-113

Assessment

Formative Assessment	Summative Assessment
• Exit tickets • Math boxes	• Unit assessment

Geometry
A. Reason with shapes and attributes.

3.G.A.1. Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.

3.G.A.2. Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. *For example, 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.*

Understandings	Essential Questions
Students will understand… • shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals).	• What characteristics define a polygon?

Knowledge	Skills
Students will know . . . • shapes in different categories may share attributes (e.g., rhombuses and rectangles both have four sides). • shared attributes can define a larger category (e.g., rhombuses and rectangles are part of the category called quadrilaterals.	Students will be able to . . . • recognize that rhombuses, rectangles, and squares are examples of quadrilaterals. • draw examples of quadrilaterals that do not belong to any of these subcategories. • partition shapes into parts with equal areas. • express area of a part of a shape as a unit fraction of the whole. (*For example, partition a shape into 4 parts with equal area, and describe the area of each part as 1/4 of the area of the whole shape.*)

Standards for Mathematical Practice

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

Resources

- **Everyday Mathematics 4 Lessons** 1-3, 1-12, 2-9, 3-7, 4-4, 4-5, 4-6, 5-1, 6-5, 6-8, 7-4, 7-10, 7-11, 8-7, 8-8, 9-4 (1-6, 2-5, 2-7, 2-10, 2-12, 3-2, 3-4, 3-11, 3-14, 4-8, 4-9, 4-10, 4-11, 4-12, 4-13, 5-1, 5-2, 5-3, 5-4, 5-5, 5-7, 5-9, 5-11, 6-1, 6-5, 6-6, 6-7, 6-8, 6-10, 6-12, 7-6, 7-9, 7-13, 8-3, 8-5, 9-2, 9-4, 9-6)
- **Supplemental Lessons:** Binder pages 149-164, 195-206

Assessment

Formative Assessment	Summative Assessment
• Exit tickets • Math boxes	• Unit assessment

Career Readiness, Life Literacies, and Key Skills

Career Readiness, Life Literacies, and Key Skills

Rapid advancements in technology and subsequent changes in the economy have created opportunities for individuals to compete and connect on a global scale. In this increasingly diverse and complex world, the successful entrepreneur or employee must not only possess the requisite education for specific industry pathways but also employability skills necessary to collaborate with others and manage resources effectively in order to establish and maintain stability and independence. This document outlines concepts and skills necessary for New Jersey's students to thrive in an ever-changing world. Intended for integration throughout all K–12 academic and technical content areas, the New Jersey Student Learning Standards- Career Readiness, Life Literacies, and Key Skills (NJSLS-CLKS) provides the framework for students to learn the concepts, skills, and practices essential to the successful navigation of career exploration and preparation, personal finances and digital literacy.

Mission

Career readiness, life literacies, and key skills education provides students with the necessary skills to make informed career and financial decisions, engage as responsible community members in a digital society, and to successfully meet the challenges and opportunities in an interconnected global economy.

Vision

An education in career readiness, life literacies, and key skills fosters a population that:

•Continually self-reflects and seeks to improve the essential life and career practices that lead to success;

•Uses effective communication and collaboration skills and resources to interact with a global society;

•Possesses financial literacy and responsibility at home and in the broader community;

•Plans, executes, and alters career goals in response to changing societal and economic conditions; and

•Seeks to attain skill and content mastery to achieve success in a chosen career path.

Career Readiness, Life Literacies, and Key Skills Standards

- 9.4.5.CI.3: Participate in a brainstorming session with individuals with diverse perspectives to expand one's thinking about a topic of curiosity.
- 9.4.5.CT.1: Identify and gather relevant data that will aid in the problem-solving process.
- 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.
- 9.4.5.IML.3: Represent the same data in multiple visual formats in order to tell a story about the data.

Computer Science and Design Thinking

Computer Science and Design Thinking

New approaches necessary for solving the critical challenges that we face as a society will require harnessing the power of technology and computing. Rapidly changing technologies and the proliferation of digital information have permeated and radically transformed learning, working, and everyday life. To be well-educated, global-minded individuals in a computing-intensive world, students must have a clear understanding of the concepts and practices of computer science. As education systems adapt to a vision of students who are not just computer users but also computationally literate creators who are proficient in the concepts and practices of computer science and design thinking, engaging students in computational thinking and human-centered approaches to design through the study of computer science and technology serves to prepare students to ethically produce and critically consume technology.

Mission

Computer science and design thinking education prepares students to succeed in today's knowledge-based economy by providing equitable and expanded access to high-quality, standards-based computer science and technological design education.

Vision

All students have equitable access to a rigorous computer science and design thinking education. Students will benefit from opportunities to engage in high-quality technology programs that foster their ability to:

• develop and apply computational and design thinking to address real-world problems and design creative solutions;

• engage as collaborators, innovators, and entrepreneurs on a clear pathway to success through postsecondary education and careers;

• navigate the dynamic digital landscape to become healthy, productive, 21st century global-minded individuals; and

• participate in an inclusive and diverse computing culture that appreciates and incorporates perspectives from people of different genders, ethnicities, and abilities.

Computer Science and Design Thinking Standards

- **8.1.5.IC.1:** Identify computing technologies that have impacted how individuals live and work and describe the factors that influenced the changes.
- **8.1.5.IC.2:** Identify possible ways to improve the accessibility and usability of computing technologies to address the diverse needs and wants of users.
- **8.1.5.DA.1:** Collect, organize, and display data in order to highlight relationships or support a claim.
- **8.1.5.DA.3:** Organize and present collected data visually to communicate insights gained from different views of the data.
- **8.1.5.AP.1:** Compare and refine multiple algorithms for the same task and determine which is the most appropriate.
- **8.1.5.AP.4:** Break down problems into smaller, manageable sub-problems to facilitate program development.
- **8.1.5.AP.5:** Modify, remix, or incorporate pieces of existing programs into one's own work to add additional features or create a new program.
- **8.2.5.ED.2:** Collaborate with peers to collect information, brainstorm to solve a problem, and evaluate all possible solutions to provide the best results with supporting sketches or models.
- **8.2.5.ITH.4:** Describe a technology/tool that has made the way people live easier or has led to a new business or career.

Differentiation Strategies

Students with Disabilities/ Students at Risk of School Failure

(For students with disabilities, appropriate accommodations, instructional adaptations, and/or modifications should be determined by the IEP or 504 team)

Modifications for Classroom

- Pair visual prompts with verbal presentations
- Ask students to restate information, directions, and assignments.
- Give repetition and practice exercises
- Model skills/techniques to be mastered
- Give extended time to complete class work
- Provide copy of class notes
- Determine if preferential seating would be beneficial
- Provide access to a computer
- Provide copies of textbooks for home
- Provide access to books on tape/CD/digital media, as available and appropriate
- Assign a peer helper in the class setting
- Provide oral reminders and check student work during independent work time
- Assist student with long and short term planning of assignments
- Encourage student to proofread assignments and tests
- Provide regular parent/school communication

Modifications for Homework and Assignments

- Provide extended time to complete assignments
- Break down assignments
- Provide the student with clearly stated (written) expectations and grading criteria for assignments
- Implement RAFT activities as they pertain to the types/modes of communication (role, audience, format, topic)

Modifications for Assessments

- Provide extended time on classroom tests and quizzes
- Provide alternate setting as needed
- Restate, reread, and clarify directions/questions
- Distribute study guide for classroom tests
- Establish procedures for accommodations /modifications for assessments

Differentiation Strategies

Gifted and Talented

(content, process, product and learning environment)

- Allow students to pursue independent projects based on their individual interests
- Provide enrichment activities that include more advanced material
- Allow team-teaching opportunities and collaboration
- Set individual goals
- Conduct research and provide presentation of appropriate topics
- Design surveys to generate and analyze data to be used in discussion.
- Use Higher-Level Questioning Techniques
- Provide assessments at a higher level of thinking

English Language Learners

Modifications for Classroom

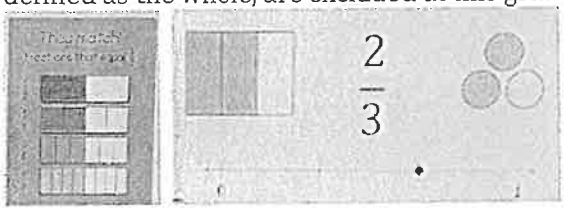
- Pair visual prompts with verbal presentations
- Provide repetition and practice
- Model skills/techniques to be mastered

Modifications for Homework/Assignments

- Provide Native Language Translation (peer, online assistive technology, translation device, bilingual dictionary)
- Provide extended time for assignment completion as needed
- Highlight key vocabulary
- Use graphic organizers

Grade 3

2016 (Old) Standard	*Revised 2023 Standard*
3.OA.3 Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.	3.OA.3 Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.
3.OA.B.5 Apply properties of operations as strategies to multiply and divide.[2] *Examples: 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.)*	3.OA.B.5 Apply properties of operations as strategies to multiply and divide.[2] *Examples: 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.) {Clarification: Students need not use formal terms for these properties.}*
3.OA.C.7 Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that 8 × 5 = 40, one knows 40 ÷ 5 = 8) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.	3.OA.C.7 With accuracy and efficiency, multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that 8 × 5 = 40, one knows 40 ÷ 5 = 8) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.
3.OA.D.8 Solve two-step word problems using the four operations. 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.	3.OA.D.8 Solve two-step word problems using the four operations. 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. (Clarification: This standard is limited to problems posed with whole numbers and having whole number answers; students should know how to perform operations in the conventional order when there are not parentheses to specify a particular order) (Order of Operations)
3.NBT.A Use place value understanding and properties of operations to perform multi-digit arithmetic	3.NBT.A Use place value understanding and properties of operations to perform multi-digit arithmetic Clarification: A range of algorithms may be used.
3.NF.A.1 Understand a fraction $1/b$ as 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 $1/b$.	3.NF.A.1 Understand a fraction $1/b$ as 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 $1/b$. For example: If a rectangle (i.e. the whole) is partitioned into 3 equal parts, each part is ⅓. Two of those parts would be ⅔.

3.NF.A.2a Represent a fraction $1/b$ on a number line diagram 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 based at 0 locates the number $1/b$ on the number line.	3.NF.A.2a Represent a fraction $1/b$ on a number line diagram 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 based at 0 locates the number $1/b$ on the number line. For example, partition the number line from 0 to 1 into 3 equal parts, represent ⅓ on the number line and show that each part has a size of ⅓.
3.NF.A.3b Recognize and generate simple equivalent fractions, e.g., 1/2 = 2/4, 4/6 = 2/3). Explain why the fractions are equivalent, e.g., by using a visual fraction model.	3.NF.A.3b Recognize and generate simple equivalent fractions by reasoning about their size, e.g., 1/2 = 2/4, 4/6 = 2/3). Explain why the fractions are equivalent with the support of a visual fraction model. **Visual fraction models** include tape diagrams, number lines, and area models. Clarification: Set models, including those defined as the whole, are excluded at this grade.  ***Clarification statement, visual fraction models definition, and graphics are from the NJDOE webinar; I do not see them in the 2023 standards
3.NF.A.3d Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with the symbols >, =, or <, and justify the conclusions, e.g., by using a visual fraction model.	3.NF.A.3d Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with the symbols >, =, or <, and justify the conclusions with the support of a visual fraction model.
3.MD Measurement and Data	3.M Measurement
3.MD.A.1 Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram.	3.M.A.1 Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram.

3.MD.A.2 Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l).[6] Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem.	3.M.A.2 Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l).[6] Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem. (Clarification: "Measure and estimate liquid volumes and masses" excludes compound units such as cm^3 and finding the geometric volume of a container. "Multiplying to solve one-step word problems" excludes multiplicative comparison models (problems involving "times as much"; See Glossary, Tables 2a-2d)).
3.MD.C Geometric measurement: understand concepts of area and relate area to multiplication and to addition.	3.M.B Geometric measurement: understand concepts of area and relate area to multiplication and to addition.
3.MD.C.5a Recognize area as an attribute of plane figures and understand concepts of area measurement. a. 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.	3.M.B.3a Recognize area as an attribute of plane figures and understand concepts of area measurement. a. 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.
3.MD.C.5b Recognize area as an attribute of plane figures and understand concepts of area measurement. b. 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.	3.M.B.3b Recognize area as an attribute of plane figures and understand concepts of area measurement. b. 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.
3.MD.C.6 Measure areas by counting unit squares (square cm, square m, square in, square ft, and non-standard units).	3.M.B.4 Measure areas by counting unit squares (square cm, square m, square in, square ft, and non-standard units).
3.MD.C.7a Relate area to the operations of multiplication and addition. a. 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.	3.M.B.5a Relate area to the operations of multiplication and addition. a. 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.
3.MD.C.7b Relate area to the operations of multiplication and addition. b. 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.	3.M.B.5b Relate area to the operations of multiplication and addition. b. 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.
3.MD.C.7c Relate area to the operations of multiplication and addition. c. Use tiling to show in a concrete case that the area of a rectangle with whole-number side lengths a and $b + c$ is the sum of $a \times b$ and $a \times c$. Use area models to represent the distributive property in mathematical reasoning.	3.M.B.5c Relate area to the operations of multiplication and addition. c. Use tiling to show in a concrete case that the area of a rectangle with whole-number side lengths a and $b + c$ is the sum of $a \times b$ and $a \times c$. Use area models to represent the distributive property in mathematical reasoning.

3.MD.C.7d Relate area to the operations of multiplication and addition. d. Recognize area as additive. Find areas of rectilinear figures by decomposing them into non- overlapping rectangles and adding the areas of the non-overlapping parts, applying this technique to solve real world problems.	3.M.B.5d Relate area to the operations of multiplication and addition. d. Recognize area as additive. Find areas of rectilinear figures by decomposing them into non- overlapping rectangles and adding the areas of the non-overlapping parts, applying this technique to solve real world problems.
3.MD.D.8 Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.	3.M.C.6 Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.
	3.DL Data Literacy Domain
	3.DL.A Understand data-based questions and data collection.
	3.DL.A.1 Develop data-based questions and decide what data will answer the question. (e.g. "What size shoe does a 3rd grader wear?", "How many books does a 3rd grader read?")
	3.DL.A.2 Collect student-centered data (e.g. collect data on students' favorite ice cream flavor) or use existing data to answer data-based questions.
3.MD.B Represent and Interpret Data	3.DL.B Represent and Interpret Data
3.MD.B.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 scaled bar graphs. *For example, draw a bar graph in which each square in the bar graph might represent 5 pets.*	3.DL.B.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 scaled bar graphs. *For example, draw a bar graph in which each square in the bar graph might represent 5 pets.*
3.MD.B.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.	3.DL.B.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.

In Grade 3, instruction focuses broadly on four critical areas:

(1) developing understanding of multiplication and division and strategies for multiplication and division within 100;

(2) developing understanding of fractions, especially unit fractions (fractions with numerator 1);

(3) developing understanding of the structure of rectangular arrays and of area; and

(4) describing and analyzing two-dimensional shapes.

Critical Areas

(1) Students develop an understanding of the meanings of multiplication and division of whole numbers through activities and problems involving equal-sized groups, arrays, and area models; multiplication is finding an unknown product, and division is finding an unknown factor in these situations. For equal-sized group situations, division can require finding the unknown number of groups or the unknown group size. Students use properties of operations to calculate products of whole numbers, using increasingly sophisticated strategies based on these properties to solve multiplication and division problems involving single-digit factors. By comparing a variety of solution strategies, students learn the relationship between multiplication and division.

(2) Students develop an understanding of fractions, beginning with unit fractions. Students view fractions in general as being built out of unit fractions, and they use fractions along with visual fraction models to represent parts of a whole. Students understand that the size of a fractional part is relative to the size of the whole. For example, $\frac{1}{2}$ of the paint in a small bucket could be less paint than $\frac{1}{3}$ of the paint in a larger bucket, but $\frac{1}{3}$ of a ribbon is longer than $\frac{1}{5}$ of the same ribbon because when the ribbon is divided into 3 equal parts, the parts are longer than when the ribbon is divided into 5 equal parts. Students are able to use fractions to represent numbers equal to, less than, and greater than one. They solve problems that involve comparing fractions by using visual fraction models and strategies based on noticing equal numerators or denominators.

(3) Students recognize area as an attribute of two-dimensional regions. They measure the area of a shape by finding the total number of same size units of area required to cover the shape without gaps or overlaps, a square with sides of unit length being the standard unit for measuring area. Students understand that rectangular arrays can be decomposed into identical rows or into identical columns. By decomposing rectangles into rectangular arrays

of squares, students connect area to multiplication, and justify using multiplication to determine the area of a rectangle.

(4) Students describe, analyze, and compare properties of two-dimensional shapes. They compare and classify shapes by their sides and angles, and connect these with definitions of shapes. Students also relate their fraction work to geometry by expressing the area of part of a shape as a unit fraction of the whole.

Grade 3 Overview

Domain	Cluster Headings
Operations and Algebraic Thinking	• Represent and solve problems involving multiplication and division. • Understand properties of multiplication and the relationship between multiplication and division. • Multiply and divide within 100. • Solve problems involving the four operations and identify and explain patterns in arithmetic.
Number and Operations in Base Ten	Use place value understanding and properties of operations to perform multi-digit arithmetic.
Number and Operations - Fractions	Develop understanding of fractions as numbers.
Measurement	• Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects. • Geometric measurement: understand concepts of area and relate area to multiplication and to addition. • Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures.
Data Literacy	• Understand data-based questions and data collection. • Represent and interpret data.
Geometry	Reason with shapes and their attributes.

Operations and Algebraic Thinking 3.OA

A. Represent and solve problems involving multiplication and division

1. Interpret products of whole numbers, e.g., interpret 5×7 as the total number of objects in 5 groups of 7 objects each. For example, describe and/or represent a context in which a total number of objects can be expressed as 5×7.

2. Interpret whole-number quotients of whole numbers, e.g., interpret $56 \div 8$ 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. For example, describe and/or represent a context in which a number of shares or a number of groups can be expressed as $56 \div 8$.

3. Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.[1]

4. Determine the unknown whole number in a multiplication or division equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations $8 \times ? = 48$, $5 = ? \div 3$, $6 \times 6 = ?$.

B. Understand properties of multiplication and the relationship between multiplication and division

3. Apply properties of operations as strategies to multiply and divide. Examples: If $6 \times 4 = 24$ is known, then $4 \times 6 = 24$ is also known. (Commutative property of multiplication.) $3 \times 5 \times 2$ can be found by $3 \times 5 = 15$, then $15 \times 2 = 30$, or by $5 \times 2 = 10$, then $3 \times 10 = 30$. (Associative property of multiplication.) Knowing that $8 \times 5 = 40$ and $8 \times 2 = 16$, one can find 8×7 as $8 \times (5 + 2) = (8 \times 5) + (8 \times 2) = 40 \div 16 = 56$. (Distributive property.) {Clarification: Students need not use formal terms for these properties).

4. Understand division as an unknown-factor problem. For example, find $32 \div 8$ by finding the number that makes 32 when multiplied by 8.

[1] See Glossary, Tables 2a–2c

C. Multiply and divide within 100

5. With accuracy and efficiency, multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$, one knows $40 \div 5 = 8$) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.

D. Solve problems involving the four operations, and identify and explain patterns in arithmetic

6. Solve two-step word problems, including problems involving money, using the four operations. 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. (Clarification: This standard is limited to problems posed with whole numbers and having whole number answers; students should know how to perform operations in the conventional order when there are no parentheses to specify a particular order) (Order of Operations)

7. Identify arithmetic patterns (including patterns in the addition table or multiplication table) and explain them using properties of operations. For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends.

Number and Operations in Base Ten — 3.NBT

A. Use place value understanding and properties of operations to perform multi-digit arithmetic

Clarification: A range of algorithms may be used

1. Use place value understanding to round whole numbers to the nearest 10 or 100.
2. With accuracy and efficiency, add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.
3. Multiply one-digit whole numbers by multiples of 10 in the range 10–90 (e.g., $9 \times 80, 5 \times 60$) using strategies based on place value and properties of operations.

Number and Operations - Fractions[1] 3.NF

A. Develop understanding of fractions as numbers

1. Understand a fraction $\frac{1}{b}$ as the quantity formed by 1 part when a whole is partitioned into b equal parts; understand a fraction $\frac{a}{b}$ as the quantity formed by a parts of size $\frac{1}{b}$. For example: If a rectangle (i.e. the whole) is partitioned into 3 equal parts, each part is $\frac{1}{3}$. Two of those parts would be $\frac{2}{3}$.

2. Understand a fraction as a number on the number line; represent fractions on a number line diagram.

   a. Represent a fraction $\frac{1}{b}$ on a number line diagram by defining the interval from 0 to 1 as the whole and partitioning it into b equal parts. Recognize that each part has size $\frac{1}{b}$ and that the endpoint of the part based at 0 locates the number $\frac{1}{b}$ on the number line. For example, partition the number line from 0 to 1 into 3 equal parts, represent $\frac{1}{3}$ on the number line and show that each part has a size $\frac{1}{3}$.

[1] Grade 3 expectations in this domain are limited to fractions with denominators 2, 3, 4, 6, and 8. Visual fraction models include tape diagrams, number lines, and area models (See Glossary). Set models, including those defined as the whole, are excluded at this grade.

b. Represent a fraction $\frac{a}{b}$ on a number line diagram by marking off a lengths $\frac{1}{b}$ from 0. Recognize that the resulting interval has size $\frac{a}{b}$ and that its endpoint locates the number $\frac{a}{b}$ on the number line.

3. Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size.

   a. Understand two fractions as equivalent (equal) if they are the same size. Understand two fractions as equivalent if they are located at the same point on a number line.

   b. Recognize and generate simple equivalent fractions by reasoning about their size, (e.g., $\frac{1}{2}=\frac{2}{4}, \frac{4}{6}=\frac{2}{3}$). Explain why the fractions are equivalent with the support of a visual fraction model.

   c. Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers. Examples: Express 3 in the form $3=\frac{3}{1}$; recognize that $\frac{6}{1}=6$; locate $\frac{4}{4}$ and 1 at the same point on a number line diagram.

   d. Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with the symbols >, =, or <, and justify the conclusions with the support of a visual fraction model.

Measurement 3.M

A. Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects

1. Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram.

2. Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem. (Clarification: "Measure and estimate liquid volumes and masses" excludes compound units such as cm^3 and finding the geometric volume of a container. "Multiplying to solve one-step word problems" excludes multiplicative comparison problems (problems involving "times as much"; See Glossary, Tables 2a-2d))

B. Geometric measurement: understand concepts of area and relate area to multiplication and to addition

3. Recognize area as an attribute of plane figures and understand concepts of area measurement.

   a. 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.

   b. 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.

4. Measure areas by counting unit squares (square cm, square m, square in, square ft, and non-standard units).

5. Relate area to the operations of multiplication and addition.

   a. 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.

   b. 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.

   c. Use tiling to show in a concrete case that the area of a rectangle with whole-number side lengths a and $b + c$ is the sum of $a \times b$ and $a \times c$. Use area models to represent the distributive property in mathematical reasoning.

d. Recognize area as additive. Find areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts, applying this technique to solve real world problems.

C. Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures

6. Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.

Data Literacy 3.DL

A. Understand data-based questions and data collection.

1. Develop data-based questions and decide what data will answer the question. (e.g. "What size shoe does a 3rd grader wear?", "How many books does a 3rd grader read?")

2. Collect student-centered data (e.g. collect data on students' favorite ice cream flavor) or use existing data to answer data-based questions.

B. Represent and interpret data

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 scaled bar graphs. For example, draw a bar graph in which each square in the bar graph might represent 5 pets.

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.

Geometry 3.G

A. Reason with shapes and their attributes

1. Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.

2. Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. For example, partition a shape into 4 parts with equal area, and describe the area of each part as $\frac{1}{4}$ of the area of the shape.

Day #	2024-25 Date	Days Off	Text	North Caldwell Grade 3 Lessons	Supplemental Resources/Notes	Binder Page #s	NJ Student Learning Standards
				Word Problem Notes- ALL word problems should be done this way. Do not try to categorize problems such as "change to more" or "comparison".		pp. 1-5	
				Diagnostic Days		pp. 6-8	
	3-Sep						
1	4-Sep	First Day for Students		Practice centers and math routines			
2	5-Sep			Practice centers and math routines			
3	6-Sep		1-1	Number Grids	Children use number grid poster, counters		3.NBT.A.2
	7-Sep	Sat					
	8-Sep	Sun					
4	9-Sep		1-1	Number Grids			3.NBT.A.2
5	10-Sep		1-2	Find differences using a number grid			3.NBT.A.2
6	11-Sep		1-2	Find differences using a number grid	base ten blocks, 2 cm cubes for hands on subtraction		
7	12-Sep			Rounding Whole Numbers		pp. 9-19	
8	13-Sep		1-4	Number Lines and Rounding			3.NBT.A.1, 3.NBT.A.2
	14-Sep	Sat					
	15-Sep	Sun					
9	16-Sep			Time: Hour Hand Only	Clock Masters pp, 20-26	pp. 27-30	
10	17-Sep			Time: Minute Hand Only		pp. 31-34	
11	18-Sep			Time: Both Hands/5 minutes/am-pm		pp. 35-40	
12	19-Sep		1-5	Time/Elapsed Time		pp. 41-50	3.M.A.1
13	20-Sep			Buffer			
	21-Sep	Sat					
	22-Sep	Sun					
14	23-Sep		1-6	Accurately calculate elapsed time			3.DL.B.3
15	24-Sep		1-7	Scaled Bar Graphs	Represent data in a tally chart and then graph.		
16	25-Sep			Intro to Multiplication through Repeated Addition/ Things that Come in Arrays		pp. 51-53	
17	26-Sep			Intro to Multiplication/Rectangular Arrays		pp. 54-59	3.OA.A.1, 3.OA.A.3, 3.OA.C.7
18	27-Sep		1-8	Multiplication Strategies	72 counters		3.OA.A.2, 3.OA.A.3, 3.OA.B.6
	28-Sep	Sat					
	29-Sep	Sun					
19	30-Sep		1-9	Use drawings to represent and solve division number stories	counters or pennies		3.OA.A.1, 3.NF.A.1, 3.M.A.2, 3.G.2
20	1-Oct		1-10	Use skip counting or repeated addition to solve multiplication problems	quick look cards, counters, dice		
21	2-Oct		1-12	Exploring Mass, Equal Shares, and Equal Groups	Every Day Math Deck 1-10, 6 sided dice, pan balance, standard masses		3.M.A.2
	3-Oct	Rosh Hashanah - Closed					
22	4-Oct			Buffer			
	5-Oct	Sat					
	6-Oct	Sun					
23	7-Oct		1-13	Estimate and Measure Mass	Find classroom objects of varying weights and sizes-1 liter bottle of water		3.M.A.2
24	8-Oct			Review Day 1	Assign study guide in class.		3.OA.A.1, 3.OA.A.3, 3.OA.C.7, 3.NBT.A.1, 3.NBT.A.2, 3.M.A.1, 3.M.A.2, 3.DL.B.3
25	9-Oct			Review Day 2	Review study guide with class.		
26	10-Oct		1-14	Unit 1 Assessment			3.NBT.A.2
27	11-Oct			Buffer			
	12-Oct	Sat					
	13-Oct	Sun					
28	14-Oct		2-1	Extend Facts: Addition and Subtraction	base-10 blocks, toolkit-clock		3.OA.D.8, 3.NBT.A.2
29	15-Oct			Adding on a Number Line		pp. 60-64	
30	16-Oct		2-2	Number Stories			3.OA.D.8, 3.NBT.A.2
31	17-Oct		2-3	More Number Stories	Fact Triangles		3.OA.C.7, 3.OA.D.8, 3.NBT.A.2

32	18-Oct		2-4	Multistep Number Stories, Part 1			3.OA.A.3, 3.OA.C.7, 3.OA.D.8
	19-Oct	Sat					
	20-Oct	Sun					
33	21-Oct		2-5	Multistep Number Stories, Part 2			3.OA.A.1, 3.OA.A.3, 3.OA.C.7, 3.OA.D.9
34	22-Oct	Conf. Dismiss 12:45pm	2-6	Equal Groups	counters		3.OA.A.1, 3.OA.A.2, 3.OA.A.3, 3.OA.A.4, 3.OA.C.7
35	23-Oct	PD Dismiss 12:45pm	2-7	Multiplication Arrays			
36	24-Oct	Conf. Dismiss 12:45pm		Buffer			
37	25-Oct			Visual Division/Two Interpretations of Division		pp. 65-71	3.OA.A.2, 3.OA.A.3, 3.OA.A.4
	26-Oct	Sat					
	27-Oct	Sun					
38	28-Oct		2-8	Picturing Division			3.OA.A.2, 3.OA.A.3, 3.NF.A.1
39	29-Oct		2-9	Modeling Division/"The Remainder of One" Interdisciplinary			3.OA.A.2, 3.OA.A.3, 3.NF.A.1
40	30-Oct			Dividing with a Number Line		pp. 72-73	3.OA.A.2, 3.OA.A.3, 3.OA.C.7
41	31-Oct	Halloween		Buffer			
	1-Nov	Diwali - Closed					
	2-Nov	Sat					
	3-Nov	Sun					
42	4-Nov		2-10	Playing Division Arrays			3.OA.C.7, 3.NBT.A.2
43	5-Nov	Election Day		Buffer			
44	6-Nov		2-11	Frames and Arrows			
	7-Nov	NJEA					
	8-Nov	NJEA					
	9-Nov	Sat					
	10-Nov	Sun					
45	11-Nov			Area of Rectangles -Connect to the product of any 2 factors = area of rectangle with the factors as the dimensions./Determining Area		pp. 74-79	3.M.B.3, 3.M.B.4, 3.M.B.5
46	12-Nov			Area Day 2			
47	13-Nov			Review			3.OA.A.1, 3.OA.A.2, 3.OA.A.3, 3.OA.C.7, 3.OA.D.8, 3.NBT.A.2
48	14-Nov		2-13	Unit 2 Assessment- Add Area Problems to the test			
49	15-Nov			Unit 2 Assessment (Cumulative)			
	16-Nov	Sat					
	17-Nov	Sun					
50	18-Nov		3-1	"What's My Rule?"			3.OA.D.8, 3.NBT.A.1, 3.NBT.A.2
51	19-Nov		3-2	Estimating Costs			3.OA.D.8, 3.NBT.A.1, 3.NBT.A.2
52	20-Nov		3-4	Column Addition	Do lesson pages first. Column Addition is excellent to do before Traditional. Traditional should be left to grade 4	pp. 80-84	3.OA.D.8, 3.NBT.A.1, 3.NBT.A.2
53	21-Nov			Addition with Regrouping		pp. 85-87	3.OA.D.8, 3.NBT.A.1, 3.NBT.A.2
54	22-Nov						
	23-Nov	Sat					
	24-Nov	Sun					
55	25-Nov		3-3	Partial-Sums Addition (Do not replace)	Partial sums also helps to understand traditional. Please do not do traditional in grade 3	pp. 88-89	3.OA.D.8, 3.NBT.A.1, 3.NBT.A.2
56	26-Nov			Subtraction without Regrouping then with Regrouping	Only have students draw blocks - traditional is too abstract! When regrouping is necessary students should use a number line.	pp. 90-96	3.OA.D.8, 3.NBT.A.1, 3.NBT.A.2
57	27-Nov	Dismiss 12:45		Buffer			
	28-Nov	Thanksgiving					
	29-Nov	Closed					
	30-Nov	Sat					
	1-Dec	Sun					
58	2-Dec			Modeling Subtraction on a Number Line	Always use a number line when the problem would need regrouping.	pp. 97-102	3.OA.D.8, 3.NBT.A.2
59	3-Dec		3-5	Counting-Up Subtraction			3.OA.D.8, 3.NBT.A.1, 3.NBT.A.2
60	4-Dec		3-6	Subtraction			3.OA.D.8, 3.NBT.A.1, 3.NBT.A.2

61	5-Dec		3-7	Exploring Bar Graphs, Area, and Partitioning Rectangles/SS will do bar graph on classmate nationalities, *Interdisciplinary*	In Social Studies, students will develop bar graph on classmate nationalities, *Interdisciplinary*		3.DL.B.3, 3.M.B.3, 3.M.B.3a, 3.M.B.3b, 3.M.B.4, 3.M.B.5, 3.M.B.5a, 3.G.2
62	6-Dec		3-8	Scaled Picture Graphs			3.NBT.A.2, 3.DL.B.3
	7-Dec	Sat					
	8-Dec	Sun					
63	9-Dec		3-9	Exploring Multiplication Squares			3.OA.A.1, 3.OA.C.7
64	10-Dec		3-10	The Commutative Property of Multiplication	Students do not need to know the properties by name. Just have them understand what they are allowed to do.		3.OA.A.1, 3.OA.A.3, 3.OA.B.5, 3.OA.C.7, 3.OA.D.9
65	11-Dec			The Distributive Property		pp. 103-107	3.OA.B.5
66	12-Dec		3-11	Adding a Group			3.OA.A.1, 3.OA.A.3, 3.OA.B.5, 3.OA.C.7
67	13-Dec			Buffer			
	14-Dec	Sat					
	15-Dec	Sun					
68	16-Dec		3-12	Subtracting a Group			3.OA.A.1, 3.OA.A.3, 3.OA.B.5, 3.OA.C.7
69	17-Dec		3-13	Equivalent Names			3.OA.C.7, 3.NBT.A.2
70	18-Dec			Review			
71	19-Dec		3-14	Unit 3 Assessment			3.OA.A.1, 3.OA.A.4, 3.OA.B.5, 3.OA.C.7, 3.OA.D.8, 3.NBT.A.1, 3.NBT.A.2, 3.DL.B.3
72	20-Dec			Buffer			
	21-Dec	Sat					
	22-Dec	Sun					
	23-Dec	Recess					
	24-Dec	Recess					
	25-Dec	Recess					
	26-Dec	Recess					
	27-Dec	Recess					
	28-Dec	Sat					
	29-Dec	Sun					
	30-Dec	Recess					
	31-Dec	Recess					
	1-Jan	New Year's Day					
73	2-Jan			Understand a Ruler/Measuring Inches		pp. 108-111	3.DL.B.4
74	3-Jan		4-1	Practice sheets, HW 4.1; "How Big is a Foot?" *Interdisciplinary*	It is too early to do 8-1. Students have not done fractions on a number line yet.	pp. 112-113	3.DL.B.4
	4-Jan	Sat					
	5-Jan	Sun					
75	6-Jan			Making a drawing using pattern blocks/What the Hex? Game/Block Exchange/Sub Trade/ *Interdisciplinary - Visual Arts*		pp. 114-118	3.NF.A.1, 3.NF.A.3
76	7-Jan			Intro to Fractions with Pattern Blocks/Sub Trade		pp. 119-142	3.NF.A.1, 3.NF.A.3
77	8-Jan			Intro to Fractions with Pattern Blocks/Sub Trade		pp. 119-142	3.NF.A.1, 3.NF.A.3
78	9-Jan		5-1	Exploring Equal Parts, Fractions of Different Wholes, and Area	*need a set for each student		3.NF.A.1, 3.M.B.4, 3.MD.B, 3.G.2
79	10-Jan			Buffer			
	11-Jan	Sat					
	12-Jan	Sun					
80	13-Jan			Identifying Partitioned Shapes/Naming & Identifying Fractions		pp. 143-148	3.NF.A.1, 3.NF.A.3
81	14-Jan		5-2	Representing Fractions- do not use fraction circles; use tiles and pattern blocks			3.NF.A.1, 3.NF.A.3
82	15-Jan			Equivalent Fractions (Area)		pp. 149-154	3.NF.A.1, 3.NF.A.3, 3.G.2
83	16-Jan			Finding Equivalent Fractions		pp. 155-164	3.NF.A.1, 3.NF.A.3, 3.G.2
84	17-Jan		5-3	Equivalent Fractions			3.NF.A.1, 3.NF.A.3, 3.G.2
	18-Jan	Sat					
	19-Jan	Sun					
85	20-Jan	MLK Day - Dismiss 12:45pm		Buffer			
86	21-Jan		5-5	Multiplication Facts Strategies: Doubling, Part 1			3.OA.A.3, 3.OA.B.5, 3.OA.C.7, 3.M.B.5, 3.M.B.5b, 3.M.B.5c, 3.M.B.5d

87	22-Jan		5-6	Multiplication Facts Strategies: Doubling, Part 2			3.OA.B.5, 3.OA.C.7, 3.OA.D.9, 3.M.B.5, 3.M.B.5b, 3.M.B.5c, 3.M.B.5d
88	23-Jan		5-7	Patterns in Products		pp. 165-169	3.OA.C.7, 3.OA.D.9, 3.NBT.A.2
89	24-Jan		5-8	Finding Missing Factors			3.OA.A.4, 3.OA.B.6, 3.OA.C.7
	25-Jan	Sat					
	26-Jan	Sun					
90	27-Jan			Skip Count Multiples		p. 170	3.OA.C.7
91	28-Jan		5-10	Button Dolls: Solving a Number Story			3.OA.A.2, 3.OA.A.3, 3.OA.D.8
92	29-Jan		5-11	Multiplication Facts Strategies: Break-Apart Strategy			3.OA.B.5, 3.OA.C.7, 3.M.B.5, 3.M.B.5b, 3.M.B.5c, 3.M.B.5d
93	30-Jan		8-2	Extended Facts: Multiplication and Division/Extended facts --	Instead of using Journal 2, print out sheets from EM website.		3.OA.A.3, 3.OA.B.6, 3.OA.C.7, 3.NBT.A.2, 3.NBT.A.3
94	31-Jan		9-5	Multi-digit Multiplication/Decomposing	Instead of using Journal 2, print out sheets from EM website.		3.OA.B.5, 3.NBT.A.3, 3.M.B.5, 3.M.B.5b, 3.M.B.5c, 3.M.B.5d
	1-Feb	Sat					
	2-Feb	Sun					
95	3-Feb			Review Day 1			
96	4-Feb			Review Day 2			
97	5-Feb		5-12	Unit 5 Assessment	Include additional problems covering 8.2, 9.5		3.OA.A.1, 3.OA.A.4, 3.OA.B.5, 3.OA.B.6, 3.OA.C.7, 3.OA.D.9, 3.NF.A.1, 3.NF.A.3, 3.NF.A.3a, 3.NF.A.3b, 3.NF.A.3d, 3.M.B.5, 3.M.B.5b, 3.M.B.5c, 3.M.B.5d, 3.G.2
98	6-Feb		7-1	Liquid Volumes			
99	7-Feb			Buffer			
	8-Feb	Sat					
	9-Feb	Sun					
100	10-Feb		7-2	Exploring Arrays, Volume, and Equal Shares			3.OA.A.1, 3.OA.A.3, 3.NF.A.3, 3.NF.A.3a
101	11-Feb			7.3 Number Stories with Measures			3.OA.A.1, 3.OA.A.3, 3.NF.A.3, 3.NF.A.3a
102	12-Feb			7.4 Fraction Strips			3.NF.A.2, 3.NF.A.2a, 3.NF.A.2b, 3.NF.A.3, 3.NF.3a, 3.NF.A.3b, 3.NF.A.3c
103	13-Feb			Fractions on a Number Line	Connect the area model to the number line.	pp. 171-182	3.NF.A.2, 3.NF.A.2a, 3.NF.A.2b, 3.NF.A.3, 3.NF.3a, 3.NF.A.3b, 3.NF.A.3c
104	14-Feb	12:45 Dismissal		Buffer			
	15-Feb	Sat					
	16-Feb	Sun					
	17-Feb	Presidents' Day					
	18-Feb	Winter Break					
105	19-Feb		7-5	Fractions on a Number Line, Part 1			3.NF.A.2, 3.NF.A.2a, 3.NF.A.2b, 3.NF.A.3, 3.NF.3a, 3.NF.A.3b, 3.NF.A.3c
106	20-Feb		7-6	Fractions on a Number Line, Part 2			3.NF.A.1, 3.NF.A.2, 3.NF.A.2a, 3.NF.A.2b, 3.NF.A.3, 3.NF.A.3b, 3.NF.A.3c
107	21-Feb		7-6	Improper Fractions/Mixed Numbers			3.NF.A.2, 3.NF.A.2a, 3.NF.A.2b, 3.NF.A.3, 3.NF.A.3a, 3.NF.A.3b, 3.NF.A.3d
	22-Feb	Sat					
	23-Feb	Sun					
108	24-Feb			Comparing Fractions with the Same Denominator		pp. 183-184	3.NF.A.2, 3.NF.A.2a, 3.NF.A.2b, 3.NF.A.3, 3.NF.A.3a, 3.NF.A.3b, 3.NF.A.3d
109	25-Feb			Comparing Fractions with the Same Numerator/IM Comparing Fraction		pp. 185-192	3.NF.A.2, 3.NF.A.2a, 3.NF.A.2b, 3.NF.A.3, 3.NF.A.3a, 3.NF.A.3b, 3.NF.A.3d
110	26-Feb		7-7	Comparing Fractions			3.NF.A.2, 3.NF.A.2a, 3.NF.A.2b, 3.NF.A.3, 3.NF.A.3a, 3.NF.A.3b, 3.NF.A.3d
111	27-Feb		7-8	Finding Rules of Comparing Fractions			3.NF.A.3, 3.NF.A.3d
112	28-Feb			Buffer			
	1-Mar	Sat					
	2-Mar	Sun					
113	3-Mar		7-9	Locating Fractions on Number Lines			3.NF.A.2, 3.NF.A.2a, 3.NF.A.2b, 3.NF.A.3, 3.NF.3a, 3.NF.A.3c
114	4-Mar			Finding Equivalent Fractions on a Number Line		pp. 193-194	3.NF.A.2, 3.NF.A.2a, 3.NF.A.2b, 3.NF.A.3, 3.NF.A.3a, 3.NF.A.3b, 3.NF.A.3d

115	5-Mar		7-10	Justifying Fraction Comparisons			3.NF.A.2, 3.NF.A.2a, 3.NF.A.2b, 3.NF.A.3, 3.NF.A.3a, 3.NF.A.3b, 3.NF.A.3d
116	6-Mar		7-11	Fractions in Number Stories	7.12 Fractions of Collections is not grade 3 - skip		3.NF.A.1, 3.NF.A.2, 3.NF.A.2b, 3.NF.A.3, 3.NF.A.3c, 3.NF.A.3d, 3.G.2
117	7-Mar			Buffer			
	8-Mar	Sat					
	9-Mar	Sun					
118	10-Mar			Review Day 1			
119	11-Mar			Review Day 2			
120	12-Mar		7-13	Unit 7 Assessment			3.OA.A.3, 3.NBT.A.2, 3.NF.A.1, 3.NF.A.2, 3.NF.A.2a, 3.NF.A.2b, 3.NF.A.3, 3.NF.A.3a, 3.NF.A.3b, 3.NF.A.3c, 3.NF.A.3d, 3.M.A.2, 3.G.2
121	13-Mar		4-2	Application: Line Plots			3.DL.B.3
122	14-Mar		4-3	Exploring Measures of Distance and Comparison of Mass			3.NF.A.2, 3.NF.A.2a, 3.M.A.2, 3.M.B.4, 3.M.C.8
	15-Mar	Sat					
	16-Mar	Sun					
123	17-Mar		4-4	Polygon Review			3.G.A.1
124	18-Mar			Quadrilateral Hierarchy	Identify using linguine	pp. 195-199	3.G.A.1
125	19-Mar			Assorted Quadrilateral Sheets		pp. 200-206	3.G.A.1
126	20-Mar		4-5	Special Quadrilaterals			3.G.A.1
127	21-Mar			Buffer			
	22-Mar	Sat					
	23-Mar	Sun					
128	24-Mar			Perimeter Investigation		pp. 207-214	3.M.C.8
129	25-Mar	Conf. Dismiss 12:45 pm	4-10	Playing The Area and Perimeter Game		pp. 215-218	3.M.B.3, 3.M.B.4, 3.M.B.5, 3.M.C.8
130	26-Mar	PD Dismiss 12:45 pm	4-11	Building a Rabbit Pen			3.M.B.7, 3.M.B.7b, 3.M.C.8
131	27-Mar	Conf. Dismiss 12:45 pm		Buffer			
132	28-Mar			Same Area, Different Perimeter		pp. 219-223	3.M.C.6
	29-Mar	Sat					
	30-Mar	Sun					
133	31-Mar			Same Perimeter, Different Area		pp. 224-228	3.M.C.6
134	1-Apr			Area of Rectilinear Figures		pp. 229-233	3.M.B.5d
135	2-Apr			Three Hidden Figures Applications/Square Counting Shortcut		pp. 234-240	3.M.B.5d
136	3-Apr		4-9	Number Sentences for Area of Rectangles			3.M.B.3, 3.M.B.4, 3.M.B.5
137	4-Apr			Buffer			
	5-Apr	Sat					
	6-Apr	Sun					
138	7-Apr		4-12	Rectilinear Figures (if still needed)/Review			3.M.B.5d
139	8-Apr			Review			
140	9-Apr		4-13	Unit 4 Assessment - adjust for sections moved			3.M.B.3, 3.M.B.4, 3.M.B.5, 3.G.A.1
141	10-Apr		6-1	Trade-First Subtraction			3.OA.D.8
142	11-Apr			Buffer			
	12-Apr	Sat					
	13-Apr	Sun					
143	14-Apr		6-2	Playing Baseball Multiplication			3.OA.C.7
144	15-Apr		6-4	Fact Power and Beat the Calculator			3.OA.A.4, 3.OA.C.7
145	16-Apr		6-5	Exploring Geometry Problems, Measurement Data, and Polygons			3.M.B.4, 3.M.C.6, 3.G.A.1
146	17-Apr			Buffer			
	18-Apr	Good Friday					
	19-Apr	Sat					
	20-Apr	Sun					
	21-Apr	Spring Break					
	22-Apr	Spring Break					
	23-Apr	Spring Break					

	24-Apr	Spring Break					
	25-Apr	Spring Break					
	26-Apr	Sat					
	27-Apr	Sun					
147	28-Apr		6-6	Multiplication and Division Diagrams			3.OA.A.2, 3.OA.A.3, 3.OA.A.4, 3.OA.B.6, 3.OA.C.7
148	29-Apr		6-6	Multiplication and Division Diagrams			3.OA.A.2, 3.OA.A.3, 3.OA.A.4, 3.OA.B.6, 3.OA.C.7
149	30-Apr		6-7	**6.7 Multiplication with Larger Products-Play Top it	Start here since it was done in previous units.		3.OA.A.4, 3.OA.B.5, 3.OA.C.7
150	1-May		6-8	Number Sentences with Parentheses			3.OA.C.7, 3.OA.D.8, 3.NBT.A.2
151	2-May			Buffer			
	3-May	Sat					
	4-May	Sun					
152	5-May			Order of Operations/Valid Equalities		pp. 241-247	3.OA.C.7, 3.OA.D.8, 3.NBT.A.2
153	6-May		6-10	Order of Operations			3.OA.C.7, 3.OA.D.8, 3.NBT.A.2
154	7-May		6-11	Number Models for Two-Step Number Stories			3.OA.C.7, 3.OA.D.8, 3.NBT.A.2
155	8-May			Review			
156	9-May		6-12	Unit 6 Assessment			3.OA.A.3, 3.OA.A.4, 3.OA.B.5, 3.OA.C.7, 3.OA.D.8, 3.NBT.A.2
	10-May	Sat					
	11-May	Sun					
157	12-May			NJSLA	If time allows, choose a project during testing week.		
158	13-May			NJSLA			
159	14-May			NJSLA			
160	15-May			NJSLA			
161	16-May			NJSLA			
	17-May	Sat					
	18-May	Sun					
162	19-May		8-3	Factors of Counting Numbers			3.OA.A.2, 3.OA.A.3, 3.OA.A.4, 3.OA.B.6, 3.OA.C.7, 3.NBT.A.3
163	20-May		8-4	Setting Up Chairs			3.OA.A.2, 3.OA.A.3
164	21-May		8-5	Playing Factor Bingo			3.OA.A.4, 3.OA.B.6, 3.OA.C.7
165	22-May		8-6	Sharing Money			3.OA.A.2, 3.OA.A.3, 3.OA.C.7
166	23-May			Buffer			
	24-May	Sat					
	25-May	Sun					
	26-May	Memorial Day					
167	27-May		8-7	Exploring Number Lines, Fractions, and Area			3.OA.B.6, 3.NF.A.1, 3.NF.A.2, 3.NF.A.2a, 3.NF.A.2b, 3.NF.A.3, 3.NF.A.3b, 3.NF.A.3d, 3.M.B.5, 3.M.B.5b
168	28-May		8-8	Solid Shapes			3.G.1
169	29-May			Review			
170	30-May		8-9	Unit 8 Assessment			3.OA.A.2, 3.OA.A.3, 3.OA.B.6, 3.OA.C.7, 3.NBT.A.3, 3.M.B.4, 3.G.A.1
	31-May	Sat					
	1-Jun	Sun					
171	2-Jun		9-1	Playing Product Pile-Up			3.OA.A.1, 3.OA.A.4, 3.OA.C.7
172	3-Jun			Multiplying with Multiples of 10		pp. 248-253	
173	4-Jun		9-2	Multiply and Divide with Multiples of 10			3.OA.A.3, 3.OA.A.4, 3.OA.B.6, 3.NBT.A.3
174	5-Jun		9-3	Using Mental Math to Multiply			3.OA.B.5, 3.OA.D.9, 3.NBT.A.3, 3.M.A.2
175	6-Jun		9-4	Exploring Elapsed Time, Squares, and Bridges			3.G.1, 3.G.2
	7-Jun	Sat					
	8-Jun	Sun					
176	9-Jun		9-6	Packing Apples			3.OA.A.2, 3.OA.C.7
177	10-Jun		9-7	The Length-of-Day Project, Revisited			3.M.A.1, 3.DL.B.3
178	11-Jun		7-3	Number Stories with Measurement			3.OA.A.2, 3.OA.A.3, 3.NBT.A.2, 3.NBT.A.3
179	12-Jun			Review			
180	13-Jun		9-8	Unit 9 Assessment			3.OA.B.5, 3.OA.C.7, 3.OA.D.9, 3.NBT.A.3, 3.M.A.1, 3.M.A.2, 3.M.B.5, 3.M.B.5c

	14-Jun	Sat					
	15-Jun	Sun					
181	16-Jun			Math Games			
182	17-Jun			Math Games			
183	18-Jun	12:45pm Dismissal		Math Games			
184	19-Jun	Last Day Dismiss 12:45		Math Games			

September 2024

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
Pp. 1-5 Word Problem Notes- ALL word problems should be done this way. Do not try to categorize problems such as "change to more" or "comparison". Pp. 6-8 Diagnostic Days			Practice Centers and Math Routines	Practice Centers and Math Routines	**1-1** Number Grids	
	Labor Day					
8	9	10	11	12	13	14
	1-1 Number Grids	1-2 Find differences using a number grid	1-2 Find differences using a number grid	Rounding Whole Numbers ***pp. 9-19***	1-4 Number Lines and Rounding	
15	16	17	18	19	20	21
Clock Masters pp. 20-26	Time: Hour Hand Only ***pp. 27-30***	Time: Minute Hand Only ***pp. 31-34***	Time: Both Hands/ 5 minutes/AM-PM ***pp. 35-40***	1-5 Time/Elapsed Time ***pp. 41-50***	Buffer	
22	23	24	25	26	27	28
	1-6 Accurately Calculated Elapsed Time	1-7 Scaled Bar Graphs	Intro to Multiplication through Repeated Addition/Comes in Arrays ***pp. 51-53***	Intro to Multiplication/ Rectangular Arrays ***pp. 54-59***	1-8 Multiplication Strategies	
29	30					
	1-9 Use drawings to rep and solve division number stories					

October 2024

Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1 1-10 Use skip counting or repeated addition to solve multiplication problems	**2** 1-12 Exploring Mass, Equal Shares, Equal Groups	**3** Closed ***Rosh Hashanah***	**4** Buffer	**5**
6	**7** 1-13 Estimate and Measure Mass	**8** Review Day 1	**9** Review Day 2	**10** 1-14 Unit 1 Assessment	**11** Buffer	**12** ***Yom Kippur***
13	**14** 2-1 Extend Facts: Addition and Subtraction ***Columbus Day***	**15** Adding on a Number Line ***pp. 60-64***	**16** 2-2 Number Stories	**17** 2-3 More Number Stories	**18** 2-4 Multistep Number Stories, Part 1	**19**
20	**21** 2-5 Multistep Number Stories, Part 2	**22** 2-6 Equal Groups ***Conf Dismiss 12:45***	**23** 2-7 Multiplication Arrays ***PD Dismiss 12:45***	**24** Buffer ***Conf Dismiss 12:45***	**25** Visual Division/Two Interpretations of Division ***pp. 65-71***	**26**
27	**28** 2-8 Picturing Division	**29** 2-9 Modeling Division/ "The Remainder of One" Interdisciplinary	**30** Dividing with a Number Line ***pp. 72-73***	**31** Buffer ***Halloween***		

North Caldwell Grade 3

November 2024

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1 Diwali - Closed	2
3	4 2-10 Playing Division Arrays	5 Buffer ***Election Day***	6 2-11 Frames and Arrows	7 Closed ***NJEA***	8 Closed ***NJEA***	9
10	11 Area of Rectangles - Connect product of any 2 factors-area of rectangle w/ factors as the dimensions./ Determining Area ***pp. 74-79***	12 Area Day 2	13 Review	14 2-13 Unit 2 Assessment- Add Area Problems to the test	15 Unit 2 Assessment (Cumulative)	16
17	18 3-1 "What's My Rule?"	19 3-2 Estimating Costs	20 3-4 Column Addition ***pp. 80-84***	21 Addition with Regrouping ***pp. 85-87***	22 Buffer	23
24	25 3-3 Partial-Sums Addition (Do Not Replace) ***pp. 88-89***	26 Subtraction w/o Regrouping then w/ Regrouping ***pp. 90-96***	27 Buffer	28 Closed ***Thanksgiving***	29 Closed	30

North Caldwell Grade 3

December 2024

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2 Modeling Subtraction on a Number Line ***pp. 97-102***	3 3-5 Counting-Up Subtraction	4 3-6 Subtraction	5 3-7 Exploring Bar Graphs, Area, Partitioning Rectangles	6 3-8 Scaled Picture Graphs	7
8	9 3-9 Exploring Multiplication Squares	10 3-10 Commutative Property of Multiplication	11 The Distributive Property ***pp. 103-107***	12 3-11 Adding a Group	13 Buffer	14
15	16 3-12 Subtracting a Group	17 3-13 Equivalent Names	18 Review	19 3-14 Unit 3 Asessment	20 Buffer	21
22	23 Recess	24 Recess ***Christmas Eve***	25 Recess ***Christmas Day***	26 Recess ***Hanukkah***	27 Recess	28
29	30 Recess	31 Recess ***New Year's Eve***				

North Caldwell Grade 3

January 2025

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1 Recess ***New Year's Day***	2 Understand a Ruler/Measuring Inches ***pp. 108-111***	3 4-1 Practice Sheets, HW 4:1 "How Big Is a Foot?" ***pp. 112-113***	4
5	6 Making a drawing using pattern blocks/What the Hex? Game/Block Exchange/Sub Trade/ Interdisciplinary - Visual Arts ***pp. 114-118***	7 Intro to Fractions with Pattern Blocks/Sub Trade ***pp. 119-142***	8 Intro to Fractions with Pattern Blocks/Sub Trade ***pp. 119-142***	9 5-1 Exploring Equal Parts, Fractions of Different Wholes, Area	10 Buffer	11
12	13 Identifying Partitioned Shapes/Naming & Identifying Fractions ***pp. 143-148***	14 5-2 Representing Fractions; do not use fraction circles, use tiles/pattern blocks	15 Equivalent Fractions (Area) ***pp. 149-154***	16 Finding Equivalent Fractions ***pp. 155-164***	17 5-3 Equivalent Fractions	18
19	**12:45 Dismissal** 20 Buffer ***MLK Day***	21 5-5 Multiplication Facts Strategies: Doubling, Part 1	22 5-6 Multiplication Facts Strategies: Doubling, Part 2	23 5-7 Patterns in Products ***pp. 165-169***	24 5-8 Finding Missing Factors	25
26	27 Skip Count Multiples ***p. 170***	28 5-10 Button Dolls: Solving a Number Story	29 5-11 Multiplication Facts Strategies: Break-Apart Strategy	30 8-2 Extended Facts: Multiplication/Division/ Extended Facts	31 9-5 Multi-Digit Multiplication/ Decomposing	

North Caldwell Grade 3

February 2025

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	3 Review Day 1	4 Review Day 2	5 5-12 Unit 5 Assessment	6 7-1 Liquid Volumes	7 Buffer	8
9	10 7-2 Exploring Arrays, Volume, Equal Shares	11 7-3 Number Stories with Measures	12 7-4 Fraction Strips	13 Fractions on a Number Line ***pp. 171-182***	14 Buffer	15
16	17 Closed ***Presidents' Day***	18 Winter Break	19 7-5 Fractions on a Number Line, Part 1	20 7-6 Fractions on a Number Line, Part 2	21 7-6 Improper Fractions/ Mixed Numbers	22
23	24 Comparing Fractions with the Same Numerator/IM Comparing Fraction ***pp. 183-184***	25 Comparing Fractions with Same Numerator/IM Comparing Fractions ***pp. 185-192***	26 7-7 Comparing Fractions	27 7-8 Finding Rules of Comparing Fractions	28 Buffer	

North Caldwell Grade 3

March 2025

Sun	Mon	Tue	Wed	Thu	Fri	Sat
2	3 7-9 Locating Fractions on Number Lines	4 Finding Equivalent Fractions on a Number Ling ***pp. 193-194***	5 7-10 Justifying Fraction Comparisons	6 7-11 Fractions in Number Stories	7 Buffer	1/8
9	10 Review Day 1	11 Review Day 2	12 7-13 Unit 7 Assessment	13 4-2 Application: Line Plots	14 4-3 Exploring Measures of Distance and Comparison of Mass	15
16	17 4-4 Polygon Review	18 Quadrilateral Hierarchy ***pp. 195-199***	19 Assorted Quadrilateral Sheets ***pp. 200-206***	20 4-5 Special Quadrilaterals	21 Buffer	22
23	24 Perimeter Investigation ***pp. 207-214***	***Conf Dismiss 12:45*** 25 4-10 Playing the Area and Perimeter Game ***pp. 215-218***	***PD Dismiss 12:45*** 26 4-11 Building a Rabbit Pen	***Conf Dismiss 12:45*** 27 Buffer	28 Same Area, Different Perimeter ***pp. 219-223***	29
30	31 Same Perimeter, Different Area ***pp. 224-228***					

North Caldwell Grade 3

April 2025

Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1 Area of Rectilinear Figures ***pp. 229-233***	**2** Three Hidden Figures Applications/Square Counting Shortcut ***pp. 234-240***	**3** 4-9 Number Sentences for Area of Rectangles	**4** Buffer	**5**
6	**7** 4-12 Rectilinear Figures (if still needed)/ Review	**8** Review	**9** 4-13 Unit 4 Assessment Adjust for sections moved	**10** 6-1 Trade-First Subtraction	**11** Buffer	***12*** ***Pass -over***
13	**14** 6-2 Playing Baseball Multiplication	**15** 6-4 Fact Power and Beat the Calculator	**16** 6-5 Exploring Geometry Problems, Measurement Data, Polygons	**17** Buffer	**18** ***Good Friday***	**19**
20 ***Easter***	**21** Spring Break	**22** Spring Break	**23** Spring Break	**24** Spring Break	**25** Spring Break	**26**
27	**28** 6-6 Multiplication and Division Diagrams	**29** 6-6 Multiplication and Division Diagrams	**30** 6-7 Multiplication with Large Products -Play Top It			

North Caldwell Grade 3

May 2025

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1 6-8 Number Sentences with Parentheses	2 Buffer	3
4	5 Order of Operations/ Valid Equalities ***pp. 241-247***	6 6-10 Order of Operations	7 6-11 Number Models for Two-Step Number Stories	8 Review	9 6-12 Unit 6 Assessment	10
11	12 NJSLA	13 NJSLA	14 NJSLA	15 NJSLA	16 NJSLA	17
18	19 8-3 Factors of Counting Numbers	20 8-4 Setting Up Chairs	21 8-5 Playing Factor Bingo	22 8-6 Sharing Money	23 Buffer	24
25	26 Closed ***Memorial Day***	27 8-7 Exploring Number Lines, Fractions, Area	28 8-8 Solid Shapes	29 Review	30 8-9 Unit 8 Assessment	31

North Caldwell Grade 3

June 2025

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2 9-1 Playing Product Pile-Up	3 Multiplying with Multiples of 10	4 9-2 Multiply and Divide with Multiples of 10	5 9-3 Using Mental Math to Multiply	6 9-4 Exploring Elapsed Time, Squares, and Bridges	7
8	9 9-6 Packing Apples	10 9-7 The Length-of-Day Project, Revisited	11 7-3 Number Stories with Measurement	12 Review	13 9-8 Unit 9 Assessment	14
15	16 Math Games	17 Math Games	18 Math Games ***12:45 Dismissal***	***Juneteenth*** 19 Math Games ***12:45 Dismissal***	20	21
22	23	24	25	26	27	28
29	30					

North Caldwell Grade 3