

Unit 3: Fractions and Decimals

Content Area: **Template**
Course(s):
Time Period: **Full Year**
Length: **Full Year**
Status: **Published**

UNIT RATIONALE

Students develop understanding of fraction equivalence and operations with fractions. They recognize that two different fractions can be equal (e.g., $15/9 = 5/3$), and they develop methods for generating and recognizing equivalent fractions. Students extend previous understandings about how fractions are built from unit fractions, composing fractions from unit fractions, decomposing fractions into unit fractions, and using the meaning of fractions and the meaning of multiplication to multiply a fraction by a whole number. Students further their learning by understanding decimal notation for fractions, and comparing decimal fractions.

OUTLINE

Module 10: Algebraic Thinking: Number Theory (5 lessons, 1 review day, 1 assessment day)

Module 11: Fraction Equivalence and Comparison (7 lessons, 1 review day, 1 assessment day)

Module 12: Relate Fractions and Decimals (6 lessons, 1 review day, 1 assessment day)

Module 13: Use Fractions to Understand Angles (7 lessons, 1 review day, 1 assessment day)

Module 14: Understand Addition and Subtraction of Fractions with Like Denominators (6 lessons and 1 assessment day)

Module 15: Add and Subtract Fractions and Mixed Numbers with Like Denominators (5 Lessons and 1 assessment day)

Module 16: Multiply Fractions by Whole Numbers (4 Lessons and 1 assessment day)

ESSENTIAL QUESTIONS

Module 10: What is the relationship between factors and multiples?

Module 11: How can we compare fractions of different sizes?

Module 12: How are fractions and decimals related?

Module 13: How do we use fractions to understand angles?

Module 14: How do we add and subtract fractions with like denominators?

Module 15: How do we add or subtract mixed numbers with like denominators?

Module 16: How do we multiply a fraction and a whole number?

STANDARDS

AND KEY SKILLS

TECH.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 (e.g., 8.2.5.ED.2, 1.5.5.CR1a).
TECH.9.4.5.CT.1	Identify and gather relevant data that will aid in the problem-solving process (e.g., 2.1.5.EH.4, 4-ESS3-1, 6.3.5.CivicsPD.2).
TECH.9.4.5.CT.4	Apply critical thinking and problem-solving strategies to different types of problems such as personal, academic, community and global (e.g., 6.1.5.CivicsCM.3).

NEW JERSEY STUDENT LEARNING STANDARDS: COMPUTER SCIENCE AND DESIGN THINKING

CS.3-5.8.1.5.DA.1	Collect, organize, and display data in order to highlight relationships or support a claim.
CS.3-5.8.2.5.ED.3	Follow step by step directions to assemble a product or solve a problem, using appropriate tools to accomplish the task.

NEW JERSEY STUDENT LEARNING STANDARDS: CONTENT AREA

MATH.4.OA.B.4	Find all factor pairs for a whole number in the range 1–100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1–100 is a multiple of a given one-digit number. Determine whether a given whole number in the range 1–100 is prime or composite.
MATH.4.OA.C.5	Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself.
MATH.4.NF.A.1	Explain why a fraction a/b is equivalent to a fraction $(n \times a)/(n \times b)$ by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions.
MATH.4.NF.A.2	Compare two fractions with different numerators and different denominators, e.g., by creating common denominators or numerators, or by comparing to a benchmark fraction such as $1/2$. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols $>$, $=$, or $<$, and justify the conclusions, e.g., by using a visual fraction model.
MATH.4.NF.B.3	Understand a fraction a/b with $a > 1$ as a sum of fractions $1/b$.
MATH.4.NF.B.3.a	Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.
MATH.4.NF.B.3.b	Decompose a fraction into a sum of fractions with the same denominator in more than one way, recording each decomposition by an equation. Justify decompositions, e.g., by using a visual fraction model.
MATH.4.NF.B.3.c	Add and subtract mixed numbers with like denominators, e.g., by replacing each mixed number with an equivalent fraction, and/or by using properties of operations and the relationship between addition and subtraction.
MATH.4.NF.B.3.d	Solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators, e.g., by using visual fraction models and equations to represent the problem.
MATH.4.NF.B.4	Apply and extend previous understandings of multiplication to multiply a fraction by a whole number.

MATH.4.NF.B.4.a	Understand a fraction a/b as a multiple of $1/b$.
MATH.4.NF.B.4.b	Understand a multiple of a/b as a multiple of $1/b$, and use this understanding to multiply a fraction by a whole number.
MATH.4.NF.B.4.c	Solve word problems involving multiplication of a fraction by a whole number, e.g., by using visual fraction models and equations to represent the problem.
MATH.4.NF.C.5	Express a fraction with denominator 10 as an equivalent fraction with denominator 100, and use this technique to add two fractions with respective denominators 10 and 100.
MATH.4.NF.C.6	Use decimal notation for fractions with denominators 10 or 100.
MATH.4.NF.C.7	Compare two decimals to hundredths by reasoning about their size. Recognize that comparisons are valid only when the two decimals refer to the same whole. Record the results of comparisons with the symbols $>$, $=$, or $<$, and justify the conclusions, e.g., by using a visual model.
MATH.4.M.A.2	Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.
MATH.4.M.B.4.a	An angle is measured with reference to a circle with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the circle. An angle that turns through $1/360$ th of a circle is called a “one-degree angle,” and can be used to measure angles.
MATH.4.M.B.4.b	An angle that turns through n one-degree angles is said to have an angle measure of n degrees.
MATH.4.M.B.5	Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.
MATH.4.M.B.6	Recognize angle measure as additive. When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts. Solve addition and subtraction problems to find unknown angles on a diagram in real world and mathematical problems, e.g., by using an equation with a symbol for the unknown angle measure.
MATH.4.G.A.1	Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.

PRE-ASSESSMENTS

Prior to starting each module, have students complete the Into Math “Are You Ready?” diagnostic assessment (perhaps as an independent center activity or as a Morning Meeting activity). Form B of the module test can be given as a pre-assessment the first day of the module. Use pre-assessment data to diagnose prerequisite mastery, identify intervention needs, and modify or set up leveled acceleration groups. Use the “Data-Driven Intervention” chart for each diagnostic assessment, as well as data from the Form B test and standards data from the benchmark assessment, to identify intervention resources for each concept/skill. Prior to every lesson, use the Test Prep found at the end of each homework assignment to check for skill mastery.

“Are you Ready” diagnostic

Module 10: p240, SE

Module 11: p266, SE

Module 12: p298, SE

Module 13: p326, SE

Module 14: p362, SE

Module 15: p 390, SE

INSTRUCTIONAL PLAN

MODULE 10

Module 10: Algebraic Thinking: Number Theory

LESSON 10.1

10.1

Student Learning Intentions (SLI) WALT: (We are learning to...)	We are learning to use concrete and visual models to identify all the factors of numbers up to 100. 4.OA. B.4
Student Learning Strategies	<ul style="list-style-type: none">• Explain what a factor is• Find and list factors of whole numbers• Use visual models to represent pairs
Success Criteria	I can: Use visual models and equations to find all the factor pairs of a number.
Formative Assessment (drives instructional decisions)	Turn and Talks , p241-243, SE Check Understanding p243, SE Exit Ticket p244, TE
Activities and Resources	Warm Up: Activate prior knowledge p241B, TE Mini Lesson: Spark Your Learning p241, SE Guided Practice: Build Understanding p242, SE Independent Practice: On Your Own p244, SE Homework: P95, SE Wrap up: Exit Ticket p244, TE

	<p>Plan for differentiated instruction: Small group options (On Track, Almost There, and Ready for More) p241C, TE</p> <p>Materials: Square tiles, 0.5cm grid paper</p>
Suggested Modifications	See Suggested Modifications list.

LESSON 10.2

10.2

Student Learning Intentions (SLI) WALT: (We are learning to...)	<p>We are learning to use division and divisibility rules to determine if a number is a factor of a given number.</p> <p>4.OA. B.4</p>
Student Learning Strategies	<ul style="list-style-type: none"> • Understand the relationship between division and multiplication. • Determine whether a number number is divisible by another number. • Apply divisibility rules for 2, 3, 4, 5, 6, and 9 to find factors.
Success Criteria	<p>I can:</p> <p>Use division to determine whether a number is a factor of another number.</p>
Formative Assessment (drives instructional decisions)	<ul style="list-style-type: none"> • Test Prep: P96, SE • Turn and Talks, p245-247, SE • Check Understanding p248, SE • Exit Ticket p250, TE
Activities and Resources	Pre-Warm Up: Test Prep P96, SE

	<p>Warm Up: Activate prior knowledge p245B, TE</p> <p>Mini Lesson: Spark Your Learning p245, SE</p> <p>Guided Practice: Build Understanding p246, SE</p> <p>Independent Practice: On Your Own p249, SE</p> <p>Homework: P97, SE</p> <p>Wrap up: Exit Ticket p250, TE</p> <p>Plan for differentiated instruction: Small group options (On Track, Almost There, and Ready for More) p245C, TE</p> <p>Materials: Square tiles, 0.5cm grid paper</p>
<p>Suggested Modifications</p>	<p>See Suggested Modifications list.</p>

LESSON 10.3

10.3

<p>Student Learning Intentions (SLI) WALT: (We are learning to...)</p>	<p>We are learning to determine if a number is a multiple of a given number, and list multiples of a given number.</p> <p>4.OA. B.4</p>
<p>Student Learning Strategies</p>	<ul style="list-style-type: none"> Determine whether one number is a multiple of another number by determining if the second number is a factor of the first

	<p>number.</p> <ul style="list-style-type: none"> • Use multiplication to generate multiples.
<p>Success Criteria</p>	<p>I can:</p> <p>Determine whether a number is a multiple of another number and generate lists of multiples.</p>
<p>Formative Assessment (drives instructional decisions)</p>	<ul style="list-style-type: none"> • Test Prep P98, SE • Turn and Talks, p251-252, SE • Check Understanding p252, SE • Exit Ticket p254, TE
<p>Activities and Resources</p>	<p>Pre-Warm Up: Test Prep P98, SE</p> <p>Warm Up: Activate prior knowledge p251B, TE</p> <p>Guided Practice: Step it Out p251, SE</p> <p>Independent Practice: On Your Own p253</p> <p>Homework: P99, SE</p> <p>Wrap up: Exit Ticket p254, TE</p> <p>Plan for differentiated instruction: Small group options (On Track, Almost There, and Ready for More) p251C, TE</p>
<p>Suggested Modifications</p>	<p>See Suggested Modifications list.</p>

LESSON 10.4

10.4

Student Learning Intentions (SLI) WALT: (We are learning to...)	We are learning to use factors and division to identify prime and composite numbers
Student Learning Strategies	Understand that a prime number has only 1 and itself as factors. Use the number of possible arrays that can be formed to identify prime and composite numbers.
Success Criteria	I can: Determine whether a number is prime or composite.
Formative Assessment (drives instructional decisions)	<ul style="list-style-type: none">• Test Prep: P100, SE• Turn and Talks, p255-256, SE• Check Understanding p256, SE• Exit Ticket p258, TE
Activities and Resources	<p>Pre-Warm Up: Test Prep P100, SE</p> <p>Warm Up: Activate prior knowledge p255B, TE</p> <p>Guided Practice: Step it Out p255, SE</p> <p>Independent Practice: On Your Own p257, SE</p> <p>Homework: P101, SE</p> <p>Wrap up: Exit Ticket p258, TE</p> <p>Plan for differentiated instruction: Small</p>

	<p>group options (On Track, Almost There, and Ready for More) 255C, TE</p> <p>Materials: 0.5 cm grid paper</p>
<p>Suggested Modifications</p>	<p>See Suggested Modifications list.</p>

LESSON 10.5

10.5

<p>Student Learning Intentions (SLI) WALT: (We are learning to...)</p>	<p>We are learning to use a rule to find numbers in a pattern and identify other features of the pattern not stated in the rule.</p> <p>4. OA. C.5</p>
<p>Student Learning Strategies</p>	<p>Generate numbers in a pattern given a starting number and rule.</p> <p>Describe features of number patterns, including even and odd, patterns in the digits, and relationships to multiples.</p>
<p>Success Criteria</p>	<p>I can:</p> <p>Follow a given rule to write numbers in a pattern and to identify other features of the pattern that are not stated in the rule.</p>
<p>Formative Assessment (drives instructional decisions)</p>	<ul style="list-style-type: none"> • Test Prep P102, SE • Turn and Talks, p259-260, SE • Check Understanding p260, SE • Exit Ticket p262, TE

<p>Activities and Resources</p>	<p>Pre-Warm Up: Test Prep P102, SE</p> <p>Warm Up: Activate prior knowledge p259B, TE</p> <p>Guided Practice: Step It Out p259, SE</p> <p>Independent Practice: On Your Own p261, SE</p> <p>Homework: P103, SE</p> <p>Wrap up: Exit Ticket p262, TE</p> <p>Plan for differentiated instruction: Small group options (On Track, Almost There, and Ready for More) p259C, TE</p>
<p>Suggested Modifications</p>	<p>See Suggested Modifications list.</p>

Module 10 Review/ Module Test Form A

Module 10 Review/ Module Test Form A

<p>Student Learning Intentions (SLI) WALT: (We are learning to...)</p>	<p>Today we are showing what we understand from module 10.</p>
<p>Student Learning Strategies</p>	<p>Review of vocabulary terms</p> <p>Strategies and tools used throughout the module</p>
<p>Success Criteria</p>	<p>I can:</p> <p>Complete the assessment.</p>

Formative Assessment (drives instructional decisions)	Pre-Warm Up: Test Prep P104, SE Module 10 Review p 263-264, SE
Activities and Resources	Pre-Warm Up: Test Prep P104, SE Module 10 Review p 263-264, SE
Suggested Modifications	.See Suggested Modifications list.

MODULE 11

Module 11: Fraction Equivalence and Comparison

LESSON 11.1

Student Learning Intentions (SLI) WALT: (We are learning to...)	11.1 We are learning to use visual models to compare fractions with unlike numerators and denominators. 4. NF.A.2
Student Learning Strategies	Compare fractions with different numerators and denominators by representing them with the same-sized fraction models. Compare fractions with different numerators and denominators by using visual models.
Success Criteria	I can: Use visual models to compare two fractions with different numerators and denominators.

Formative Assessment (drives instructional decisions)	<ul style="list-style-type: none"> • Turn and Talks, p 267-268, SE • Check Understanding p 269, SE • Exit Ticket p270, TE
Activities and Resources	<p>Warm Up: Activate prior knowledge p267B, TE</p> <p>Mini Lesson: Spark Your Learning p267, SE</p> <p>Guided Practice: Build Understanding, p268, SE</p> <p>Independent Practice: On Your Own p270, SE</p> <p>Homework: P105, SE</p> <p>Plan for differentiated instruction: Small group options (On Track, Almost There, and Ready for More) p267C, TE</p>
Suggested Modifications	See Suggested Modifications list.

LESSON 11.2

11.2

Student Learning Intentions (SLI) WALT: (We are learning to...)	<p>We are learning how to use benchmarks to compare fractions with different numerators and different denominators.</p> <p>4. NF.A.2</p>
Student Learning Strategies	Reason that fractions can only be compared when

	<p>they refer to the same-sized whole.</p> <p>Use visual models and number lines to compare fractions to benchmark fractions.</p> <p>Reason about the relative sizes of fractions with different numerators and denominators by comparing them to benchmark fractions.</p>
<p>Success Criteria</p>	<p>I can:</p> <p>Use benchmarks to compare two fractions and record the comparison with the symbols $<$ or $>$.</p>
<p>Formative Assessment (drives instructional decisions)</p>	<ul style="list-style-type: none"> • Test Prep: P106, SE • Turn and Talks, p271, SE • Check Understanding p273, SE • Exit Ticket p274, TE
<p>Activities and Resources</p>	<p>Pre-Warm Up: Test Prep P106, SE</p> <p>Warm Up: Activate prior knowledge p271B, TE</p> <p>Mini Lesson: Spark Your Learning p271, SE</p> <p>Guided Practice: Building Understanding p272, SE</p> <p>Independent Practice: On Your Own p274, SE</p> <p>Homework: P107, SE</p> <p>Wrap up: Exit Ticket p274, TE</p>

	<p>Plan for differentiated instruction: Small group options (On Track, Almost There, and Ready for More) p271C, TE</p> <p>Materials: fraction circles, fraction strips, number lines (fractions)</p>
<p>Suggested Modifications</p>	<p>See Suggested Modifications list.</p>

LESSON 11.3

11.3

<p>Student Learning Intentions (SLI) WALT: (We are learning to...)</p>	<p>We are learning to use visual fraction models to explain why two fractions are or not equal.</p> <p>4. NF. A.1</p>
<p>Student Learning Strategies</p>	<p>Use models to explain fraction equivalence</p> <p>Understand how the number and size of parts relates to fraction equivalence.</p> <p>Understand the relationship between multiplication and fraction equivalence.</p>
<p>Success Criteria</p>	<p>I can:</p> <p>Use a visual model to show that two fractions are equivalent and explain why they are equivalent.</p>
<p>Formative Assessment (drives instructional decisions)</p>	<ul style="list-style-type: none"> • Test Prep: P108, SE • Turn and Talks, p275-, SE

	<ul style="list-style-type: none"> • Check Understanding p277, SE • Exit Ticket p278, TE
<p>Activities and Resources</p>	<p>Pre-Warm Up: Test Prep P108, SE</p> <p>Warm Up: Activate prior knowledge p275B, TE</p> <p>Mini Lesson: Spark Your Learning p275, SE</p> <p>Guided Practice: Build Understanding p276, SE</p> <p>Independent Practice: On Your Own p278, SE</p> <p>Homework: P109, SE</p> <p>Wrap up: Exit Ticket p278, TE</p> <p>Plan for differentiated instruction: Small group options (On Track, Almost There, and Ready for More) p275C, TE</p> <p>Materials: Fraction circles and fraction strips</p>
<p>Suggested Modifications</p>	<p>See Suggested Modifications list.</p>

LESSON 11.4

11.4

<p>Student Learning Intentions (SLI) WALT: (We are learning to...)</p>	<p>11.4 We are learning to use multiplication and division to identify and generate equivalent fractions. 4. NF. A.1</p>
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Student Learning Strategies	<p>Identify equivalent fractions</p> <p>Write equivalent fractions by multiplying the numerator and denominator by the same amount</p> <p>Write equivalent fractions by dividing the numerator and denominator by the same amount</p>
Success Criteria	<p>I can:</p> <p>Use multiplication and division to write fractions that are equivalent to a given fraction</p>
Formative Assessment (drives instructional decisions)	<p>Test Prep: P110, SE Turn and Talks, p280, SE Check Understanding p280, SE</p> <p>Exit Ticket p282, TE</p>
Activities and Resources	<p>Pre-Warm Up: Test Prep P110, SE Warm Up: Activate prior knowledge p279B, TE</p> <p>Guided Practice: Step it Out p279, SE Independent Practice: On Your Own p281, SE Homework: P111, SE</p> <p>Plan for differentiated instruction: Small group options (On Track, Almost There, and Ready for More) p279C, TE</p> <p>Wrap up: Exit Ticket p282, TE</p>
Suggested Modifications	<p>See Suggested Modifications list.</p>

LESSON 11.5

11.5

Student Learning Intentions (SLI) WALT: (We are learning to...)	<p>11.5 We are learning to use common multiples to represent a pair of fractions as equivalent fractions with common denominators or common numerators. 4. NF. A.1</p>
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Student Learning Strategies	<p>Recognize and understand fraction equivalence using visual models.</p> <p>Rename fractions so they have a common numerator</p> <p>Rename fractions so they have a common denominator</p>
Success Criteria	<p>I can:</p> <p>Use common multiples to rewrite two fractions so they have a common denominator or common numerator.</p>
Formative Assessment (drives instructional decisions)	<p>Test Prep: P112, SE Turn and Talks, p283-284, SE Check Understanding p284, SE</p> <p>Exit Ticket p286, TE</p>
Activities and Resources	<p>Pre-Warm Up: Test Prep P112, SE Warm Up: Activate prior knowledge p283B, TE Guided Practice: Step it Out p283, SE Independent Practice: On Your Own p285, SE Homework: P113, SE</p> <p>Plan for differentiated instruction: Small group options (On Track, Almost There, and Ready for More) p283C, TE</p> <p>Wrap up: Exit Ticket p286, TE</p>
Suggested Modifications	<p>See Suggested Modifications list.</p>

LESSON 11.6

11.6

Student Learning Intentions (SLI) WALT: (We are learning to...)	<p>11.6 We are learning to write equivalent fractions to compare fractions using common numerators or common denominators.</p> <p>4. NF.A.2</p>
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Student Learning Strategies	Use common denominators to compare fractions Use common numerators to compare fractions Determine a strategy to compare fractions
Success Criteria	I can: Use common numerators or common denominators to compare two fractions that have different numerators and denominators.
Formative Assessment (drives instructional decisions)	Test Prep: P114, SE Turn and Talks, p287, SE Check Understanding p288, SE Exit Ticket p290, TE
Activities and Resources	Pre-Warm Up: Test Prep P114, SE Warm Up: Activate prior knowledge p287B, TE Guided Practice: Step it Out p287, SE Independent Practice: On Your Own p289, SE Homework: P115, SE Wrap up: Exit Ticket p290, TE Plan for differentiated instruction: Small group options (On Track, Almost There, and Ready for More) p287C, SE
Suggested Modifications	See Suggested Modifications list.

LESSON 11.7

11.7

Student Learning Intentions (SLI) WALT: (We are learning to...)	11.7 We are learning to use various comparison strategies to order sets of fractions. 4. NF.A.2
Student Learning Strategies	Compare and order fractions using benchmark fractions Compare and order fractions using common denominators

	<p>Compare and order fractions using common numerators</p> <p>Determine strategies to use to compare and order fractions</p>
Success Criteria	<p>I can:</p> <p>Use a different strategy to compare and order three or more fractions</p>
Formative Assessment (drives instructional decisions)	<p>Test Prep: P116, SE Turn and Talks, p291, SE Check Understanding p292, SE</p> <p>Exit Ticket p294, TE</p>
Activities and Resources	<p>Pre-Warm Up: Test Prep P116, SE</p> <p>Warm Up: Activate prior knowledge p291B, TE Guided Practice: Step it Out p291, SE Independent Practice: On Your Own p293, SE Homework: P117, SE</p> <p>Wrap up: Exit Ticket p294, TE</p> <p>Plan for differentiated instruction: Small group options (On Track, Almost There, and Ready for More) p291C, TE</p>
Suggested Modifications	<p>See Suggested Modifications list.</p>

Module 11 Review/ Module Test Form A

Module 11 Review/ Module Test Form A

Student Learning Intentions (SLI) WALT: (We are learning to...)	Module 11 Review/ Module Test Form A
Student Learning Strategies	<p>Review of vocabulary terms</p> <p>Strategies and tools used throughout the module</p>
Success Criteria	I can:

	Complete the assessment.
Formative Assessment (drives instructional decisions)	Pre-Warm Up: Test Prep P118, SE Module 11 Review p 295-296, SE
Activities and Resources	
Suggested Modifications	See Suggested Modifications list.

MODULE 12

Module 12: Relate Fractions and Decimals

LESSON 12.1

12.1

Student Learning Intentions (SLI) WALT: (We are learning to...)	12. 1 We are learning to use decimal notation for fractions with denominators 10 or 100. 4. NF. C6
Student Learning Strategies	Use tenths models and number lines to represent tenths Represent tenths using fractions and decimals Read and write decimals and fractions in tenths
Success Criteria	I can: Use a visual model and decimal notation to represent fractions, mixed numbers, and decimals in tenths.
Formative Assessment (drives instructional decisions)	Turn and Talks, p299-300, SE Check Understanding p301, SE Exit Ticket p302, TE
Activities and Resources	Warm Up: Activate prior knowledge p299B, TE Mini Lesson: Spark Your Learning p299, SE Guided Practice: Building Understanding p300, SE

	<p>Independent Practice: On Your Own p302, SE Homework: P119, SE Wrap up: Exit Ticket p302, TE</p> <p>Plan for differentiated instruction: Small group options (On Track, Almost There, and Ready for More) p299C, TE</p> <p>Materials: decimal models (tenths), number lines (tenths and hundredths)</p>
Suggested Modifications	See Suggested Modifications list.

LESSON 12.2

12.2

<p>Student Learning Intentions (SLI) WALT: (We are learning to...)</p>	<p>12.2 We are learning to use decimal notation for fractions with denominators 10 or 100. 4. NF. C6</p>
<p>Student Learning Strategies</p>	<p>Use hundredths models and number lines to represent hundredths.</p> <p>represent hundreds using fractions and decimals Read and write decimals and fractions in hundredths</p>
<p>Success Criteria</p>	<p>I can: Use a visual model and a decimal notation to represent fractions, mixed numbers, and decimals in hundredths.</p>
<p>Formative Assessment (drives instructional decisions)</p>	<p>Test Prep: P120, SE Turn and Talks, p303-305, SE Check Understanding p305, SE</p> <p>Exit Ticket p306, TE</p>
<p>Activities and Resources</p>	<p>Pre-Warm Up: Test Prep P120 , SE Warm Up: Activate prior knowledge p303B, TE Mini Lesson: Spark Your Learning p303, SE Guided Practice: Building Understanding p304, SE Independent Practice: On Your Own p306, SE</p>

	<p>Homework: P121, SE Wrap up: Exit Ticket p306, TE</p> <p>Plan for differentiated instruction: Small group options (On Track, Almost There, and Ready for More) p303C, TE</p> <p>Materials: number lines (tenths and hundredths)</p>
<p>Suggested Modifications</p>	<p>See Suggested Modifications list.</p>

LESSON 12.3

12.3

<p>Student Learning Intentions (SLI) WALT: (We are learning to...)</p>	<p>12.3 We are learning to express a fraction with a denominator 10 as an equivalent fraction with denominator 100, and use the technique to add two fractions with respective denominators 10 and 100. 4. NF. C6</p>
<p>Student Learning Strategies</p>	<p>Write decimals and fractions in tenths as decimal and fractions in hundredths.</p> <p>Write decimals and fractions in hundredths as decimals and fractions in tenths.</p> <p>Identify equivalent fractions and decimals in tenths and hundredths.</p>
<p>Success Criteria</p>	<p>I can: Write a fraction in tenths as a fraction in hundredths and as a decimal in tenths and hundredths.</p>
<p>Formative Assessment (drives instructional decisions)</p>	<p>Test Prep: P122, SE Turn and Talks, p307, SE Check Understanding p309, SE</p> <p>Exit Ticket p310, TE</p>
<p>Activities and Resources</p>	<p>Pre-Warm Up: Test Prep P122 , SE Warm Up: Activate prior knowledge p307B, TE Mini Lesson: Spark Your Learning p307, SE Guided Practice: Building Understanding p308, SE</p>

	<p>Independent Practice: On Your Own p310, SE Homework: P123, SE Wrap up: Exit Ticket p310, TE</p> <p>Plan for differentiated instruction: Small group options (On Track, Almost There, and Ready for More) P307C, TE</p> <p>Materials: decimal models (tenths/hundredths), number lines (fraction and decimal equivalence), place value charts (decimals)</p>
Suggested Modifications	See Suggested Modifications list.

LESSON 12.4

12.4

Student Learning Intentions (SLI) WALT: (We are learning to...)	<p>12.4 We are learning to compare two decimals to hundredths by reasoning about their size. Recognize that comparisons are valid only when the two decimals refer to the same whole. Record the results of the comparisons with symbols $>$, $=$, or $<$, and justify the conclusions by using a visual model.</p> <p>4. NF. C7</p>
Student Learning Strategies	<p>Compare decimal values in tenths and hundredths. Use inequality symbols to compare decimal values</p> <p>Understand that the tenths place has a greater value than the hundredths place</p>
Success Criteria	<p>I can:</p> <p>Use decimal models, number lines, and place value charts to compare decimals.</p> <p>Use $<$, $>$, or $=$ to write decimal comparisons</p>
Formative Assessment (drives instructional decisions)	<p>Test Prep: P124, SE Turn and Talks, p311-312, SE Check Understanding p312, SE</p>

	Exit Ticket P125, TE
Activities and Resources	<p>Pre-Warm Up: Test Prep P124, SE Warm Up: Activate prior knowledge p311B, TE Guided Practice: Step It Out p311, SE Independent Practice: On Your Own p313, SE Homework: P125, SE</p> <p>Wrap up: Exit Ticket P126, TE</p> <p>Plan for differentiated instruction: Small group options (On Track, Almost There, and Ready for More) 312C.</p>
Suggested Modifications	See Suggested Modifications list.

LESSON 12.5

12.5

Student Learning Intentions (SLI) WALT: (We are learning to...)	<p>12.5 We are learning to use decimal notation for fractions with denominators 10 or 100. 4. NF. C6</p>
Student Learning Strategies	<p>Represent combinations of bills and coins as decimals and fractions.</p> <p>Represent fractions and decimals as combinations of coins and bills.</p>
Success Criteria	<p>I can: Use hundredths models, fractions, and decimals to represent money amounts.</p>
Formative Assessment (drives instructional decisions)	<p>Test Prep: P126, SE Turn and Talks, p315-316, SE Check Understanding p316, SE</p> <p>Exit Ticket p318, TE</p>
Activities and Resources	<p>Pre-Warm Up: Test Prep P126, SE Warm Up: Activate prior knowledge p315 B, TE</p>

	<p>Guided Practice: Step It Out p315, SE Independent Practice: On Your Own p317, SE Homework: P127, SE</p> <p>Plan for differentiated instruction: Small group options (On Track, Almost There, and Ready for More) p315C, TE</p> <p>Wrap up: Exit Ticket p318, TE</p>
Suggested Modifications	See Suggested Modifications list.

LESSON 12.6

12.6

<p>Student Learning Intentions (SLI) WALT: (We are learning to...)</p>	<p>12.6 We are learning to use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money and to represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.</p> <p>4. MD. A.2</p>
<p>Student Learning Strategies</p>	<p>Solve problems involving multiplying and dividing dollar amounts.</p> <p>Solve problems involving adding and subtracting dollar amounts.</p> <p>Represent money problems using diagrams and numbers</p>
<p>Success Criteria</p>	<p>I can: Solve multi step money problems using bills and coins, visual models, or cents and represent money amounts as fractions, mixed numbers, and decimals.</p>
<p>Formative Assessment (drives instructional decisions)</p>	<p>Test Prep: P128, SE Turn and Talks, p319-320, SE Check Understanding p320, SE</p> <p>Exit Ticket p322, TE</p>

Activities and Resources	<p>Pre-Warm Up: Test Prep P128 , SE Warm Up: Activate prior knowledge p319B, TE Guided Practice: Step It Out p319, SE</p> <p>Independent Practice: On Your Own p321, SE Homework: P129, SE</p> <p>Plan for differentiated instruction: Small group options (On Track, Almost There, and Ready for More) 319C, TE</p> <p>Wrap up: Exit Ticket p322, TE</p>
Suggested Modifications	See Suggested Modifications list.

Module 12 Review/ Module Test Form A

Module 12 Review/ Module Test Form A

Student Learning Intentions (SLI) WALT: (We are learning to...)	Module 12 Review/ Module Test Form A
Student Learning Strategies	Review of vocabulary terms Strategies and tools used throughout the module
Success Criteria	I can: Complete the assessment.
Formative Assessment (drives instructional decisions)	<p>Pre-Warm Up: Test Prep P130 , SE</p> <p>Module 12 Review p 323-324, SE</p>
Activities and Resources	
Suggested Modifications	See Suggested Modifications list.

MODULE 13

Module 13: Use Fractions to Understand Angles

LESSON 13.1

13.1

Student Learning Intentions (SLI) WALT: (We are learning to...)	13.1 We are learning to draw points, line segments, rays, angles, and perpendicular lines and to identify these in two-dimensional figures. 4.GA.1
Student Learning Strategies	Define, draw, and identify lines, line segments, rays, points, and angles.
Success Criteria	I can: Identify, draw, and name angles.
Formative Assessment (drives instructional decisions)	Turn and Talks , p327, 329, SE Check Understanding p329, SE Exit Ticket p330, TE
Activities and Resources	Warm Up: Activate prior knowledge pB327, TE Mini Lesson: Spark Your Learning p327, SE Guided Practice: Building Understanding p328, SE Independent Practice: On Your Own p330, SE Homework: P131, SE Wrap up: Exit Ticket p330, TE Plan for differentiated instruction: Small group options (On Track, Almost There, and Ready for More) 327C, TE Materials: straightedge
Suggested Modifications	See Suggested Modifications list.

LESSON 13.2

13.2

Student Learning Intentions (SLI) WALT: (We are learning to...)	<p>13.2 We are learning to recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement.</p> <p>4. MD. C.5a</p>
Student Learning Strategies	<p>Compare angles to develop a sense of angle measure.</p> <p>Define an unit angle and use it to measure angles. Develop the idea of rotation or turing to measure angles.</p>
Success Criteria	<p>I can:</p> <p>Compare angles and use unit angles to find how many of the unit angles complete a circle.</p>
Formative Assessment (drives instructional decisions)	<p>Test Prep: P132, SE Turn and Talks, p331, 333, SE Check Understanding p333, SE</p> <p>Exit Ticket p334, TE</p>
Activities and Resources	<p>Pre-Warm Up: Test Prep P132, SE Warm Up: Activate prior knowledge p331B, TE Mini Lesson: Spark Your Learning p331, SE Guided Practice: Building Understanding p332, SE Independent Practice: On Your Own p334, SE</p> <p>Homework: P133, SE</p> <p>Plan for differentiated instruction: Small group options (On Track, Almost There, and Ready for More) p331C, TE</p> <p>Wrap up: Exit Ticket p334, TE Materials: straightedge</p>
Suggested Modifications	<p>See Suggested Modifications list.</p>

LESSON 13.3

Student Learning Intentions (SLI) WALT: (We are learning to...)	13.3 We are learning to recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement. 4. MD. C.5a
Student Learning Strategies	Recognize angles as geometric shapes. Use fractions to understand concepts of angle measurement. Relate angles to fractional parts of the circle.
Success Criteria	I can: Measure an angle as it relates to the fractional part of the circle.
Formative Assessment (drives instructional decisions)	Test Prep: P134, SE Turn and Talks, p335-337, SE Check Understanding p337, SE Exit Ticket p338, TE
Activities and Resources	Pre-Warm Up: Test Prep P134, SE Warm Up: Activate prior knowledge p335 BB, TE Mini Lesson: Spark Your Learning p335, SE Guided Practice: Building Understanding p336, SE Independent Practice: On Your Own p338, SE Homework: P135, SE Wrap up: Exit Ticket p338, TE Plan for differentiated instruction: Small group options (On Track, Almost There, and Ready for More) p335C, TE Materials: fraction circles
Suggested Modifications	See Suggested Modifications list.

LESSON 13.4

13.4

Student Learning Intentions (SLI) WALT:	13.4 We are learning to recognize angles as geometric shapes that are formed wherever two rays
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(We are learning to...)	share a common endpoint, and understand concepts of angle measurement. 4. MD. C.5a 4. MD. C.5b
Student Learning Strategies	Classify angles as obtuse, acute, right, straight or reflex. Develop an understanding of a degree as a $\frac{1}{360}$ turn of a circle.
Success Criteria	I can: Find the measure of an angle by using its fractional part of a circle.
Formative Assessment (drives instructional decisions)	Test Prep: P136, SE Turn and Talks, p339, 341-342, SE Check Understanding p342, SE Exit Ticket p344, TE
Activities and Resources	Pre-Warm Up: Test Prep P136, SE Warm Up: Activate prior knowledge p339B, TE Mini Lesson: Spark Your Learning p339, SE Guided Practice: Building Understanding p340, SE Independent Practice: On Your Own p343, SE Homework: P137, SE Wrap up: Exit Ticket p344, TE Plan for differentiated instruction: Small group options (On Track, Almost There, and Ready for More) p339C, TE
Suggested Modifications	See Suggested Modifications list.

LESSON 13.5

13.5

Student Learning Intentions (SLI) WALT: (We are learning to...)	13.5 We are learning to measure angles in whole number degrees using a protractor and to sketch angles of specified measure. We are learning to draw points, lines, line segments,
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	<p>rays, angles, and perpendicular and parallel lines and to identify these in two-dimensional figures.</p> <p>4.GA.1 4. MD. C.6</p>
Student Learning Strategies	<p>Measure angles using a protractor Draw angles with a given measurement using a protractor.</p>
Success Criteria	<p>I can: Use a protractor to accurately and precisely measure and draw an angle.</p>
Formative Assessment (drives instructional decisions)	<p>Test Prep: P138, SE Turn and Talks, p345-346, SE Check Understanding p346, SE</p> <p>Exit Ticket p348, TE</p>
Activities and Resources	<p>Pre-Warm Up: Test Prep P138, SE Warm Up: Activate prior knowledge p345B, TE Guided Practice: Step It Out p345, SE Independent Practice: On Your Own p347, SE Homework: P139, SE Wrap up: Exit Ticket p348, TE</p> <p>Plan for differentiated instruction: Small group options (On Track, Almost There, and Ready for More) p345C, TE</p> <p>Materials: protractor</p>
Suggested Modifications	<p>See Suggested Modifications list.</p>

LESSON 13.6

13.6

Student Learning Intentions (SLI) WALT: (We are learning to...)	<p>13.6 We are learning to recognize angle measure as additive. We are learning to solve addition and subtraction problems to find unknown angles on a diagram in real world and mathematical problems.</p>
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	4. MD. C.7
Student Learning Strategies	Use addition and subtraction to calculate the angle measure of an angle formed by joining or separating angles
Success Criteria	I can: Find the measure of angles that are joined or separated.
Formative Assessment (drives instructional decisions)	Test Prep: P140, SE Turn and Talks, p349, SE Check Understanding p350, SE Exit Ticket p352, TE
Activities and Resources	Pre-Warm Up: Test Prep P140, SE Warm Up: Activate prior knowledge p349B, TE Guided Practice: Step It Out p349, SE Independent Practice: On Your Own p351, SE Homework: P141, SE Wrap up: Exit Ticket p352, TE Materials: protractors Plan for differentiated instruction: Small group options (On Track, Almost There, and Ready for More) p349C, TE
Suggested Modifications	See Suggested Modifications list.

LESSON 13.7

13.7

Student Learning Intentions (SLI) WALT: (We are learning to...)	13.7 We are learning to recognize angle measure as additive. We are learning to solve addition and subtraction problems to find unknown angles on a diagram in real world and mathematical problems. 4. MD. C.7
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Student Learning Strategies	Calculate unknown angle measures in problem solving situations. Join angles to form benchmark angles and decompose benchmark angles.
Success Criteria	I can: Use the mathematical relationship between known angles to find the measure of unknown angles.
Formative Assessment (drives instructional decisions)	Test Prep: P142, SE Turn and Talks, p 353-354, SE Check Understanding p354, SE Exit Ticket p356, TE
Activities and Resources	Pre-Warm Up: Test Prep P142, SE Warm Up: Activate prior knowledge p353B, TE Guided Practice: Step It Out p353, SE Independent Practice: On Your Own p355, SE Homework: P143, SE Wrap up: Exit Ticket p356, TE Plan for differentiated instruction: Small group options (On Track, Almost There, and Ready for More) p353C, TE
Suggested Modifications	See Suggested Modifications list.

Module 13 Review/ Module Test Form A

Module 13 Review/ Module Test Form A

Student Learning Intentions (SLI) WALT: (We are learning to...)	Module 13 Review/ Module Test Form A
Student Learning Strategies	I can: Complete the assessment.
Success Criteria	Review of vocabulary terms Strategies and tools used throughout the module

Formative Assessment (drives instructional decisions)	Test Prep: P144, SE
Activities and Resources	Pre-Warm Up: Test Prep P144, SE Module 13 Review p 357-358, SE
Suggested Modifications	See Suggested Modifications list.

MODULE 14

Module 14: Understand Addition and Subtraction of Fractions with Like Denominators

LESSON 14.1

Student Learning Intentions (SLI) WALT: (We are learning to...)	14.1 We are learning to decompose a fraction into a sum of fractions with the same denominator in more than one way, recording each decomposition by an equation. 4. NF. B.3b
Student Learning Strategies	Understand fractions as a sum of unit fractions. Write fractions as a sum of fractions with the same denominator.
Success Criteria	I can: Decompose visual fraction models into sums and model the decomposition with additional equations.
Formative Assessment (drives instructional decisions)	Turn and Talks, p363-365 , SE Check Understanding p365, SE Exit Ticket p366, TE
Activities and Resources	Warm Up: Activate prior knowledge p363B, TE Mini Lesson: Spark Your Learning p363, SE Guided Practice: Building Understanding p364, SE Independent Practice: On Your Own p366, SE

	<p>Homework: P145, SE Wrap up: Exit Ticket p366, TE</p> <p>Materials: fraction circles, fraction strips</p> <p>Plan for differentiated instruction: Small group options (On Track, Almost There, and Ready for More) p363C, TE</p>
<p>Suggested Modifications</p>	<p>See Suggested Modifications list.</p>

LESSON 14.2

14.2

<p>Student Learning Intentions (SLI) WALT: (We are learning to...)</p>	<p>14.2 We are learning to understand addition and subtraction of fractions as joining and separating parts referring to the same whole. 4. NF. B.3a</p>
<p>Student Learning Strategies</p>	<p>Use visual models to find the sum of fractions with the same denominator.</p>
<p>Success Criteria</p>	<p>I can: Use fraction models to solve problems and describe joining fractions with like denominators.</p>
<p>Formative Assessment (drives instructional decisions)</p>	<p>Test Prep: P146, SE Turn and Talks, p 367-368 , SE Check Understanding p369, SE</p> <p>Exit Ticket p370, TE</p>
<p>Activities and Resources</p>	<p>Pre-Warm Up: Test Prep P146, TE Warm Up: Activate prior knowledge p367B, TE Mini Lesson: Spark Your Learning p367, SE Guided Practice: Building Understanding p368, SE Independent Practice: On Your Own p370, SE</p> <p>Homework: P147, SE</p> <p>Wrap up: Exit Ticket p370, TE</p>

	<p>Materials: fraction circles and fraction strips</p> <p>Plan for differentiated instruction: Small group options (On Track, Almost There, and Ready for More) p367C, TE</p>
Suggested Modifications	See Suggested Modifications list.

LESSON 14.3

14.3

Student Learning Intentions (SLI) WALT: (We are learning to...)	<p>14.3 We are learning to solve word problems involving addition and subtraction of fractions referring to the same whole having like denominators.</p> <p>4. NF. B.3d</p>
Student Learning Strategies	<p>Add fractions with like denominators.</p> <p>Represent fraction addition and equations.</p>
Success Criteria	<p>I can:</p> <p>Use visual representation to add fractions.</p> <p>Write equations to model a given number line or word problem.</p>
Formative Assessment (drives instructional decisions)	<p>Test Prep: P148, SE</p> <p>Turn and Talks, p371-372, SE</p> <p>Check Understanding p373, SE</p> <p>Exit Ticket p374, TE</p>
Activities and Resources	<p>Pre-Warm Up: Test Prep P148, TE</p> <p>Warm Up: Activate prior knowledge p371B, TE</p> <p>Mini Lesson: Spark Your Learning p371, SE</p> <p>Guided Practice: Building Understanding p372, SE</p> <p>Independent Practice: On Your Own p374, SE</p> <p>Homework: P149, SE</p> <p>Wrap up: Exit Ticket p374, TE</p>

	<p>Materials: Fraction strips, fraction circles and number lines</p> <p>Plan for differentiated instruction: Small group options (On Track, Almost There, and Ready for More) p372C, TE</p>
Suggested Modifications	See Suggested Modifications list.

LESSON 14.4

14.4

Student Learning Intentions (SLI) WALT: (We are learning to...)	<p>14.4 We are learning to understand addition and subtraction of fractions as joining and separating parts referring to the same whole.</p> <p>4. NF. B.3a</p>
Student Learning Strategies	<p>Use visual models to find the difference of fractions with the same denominator.</p> <p>Solve word problems involving the subtraction of fractions with the same denominator.</p>
Success Criteria	<p>I can :</p> <p>Show subtraction of fractions with visual models and use words to describe the difference.</p>
Formative Assessment (drives instructional decisions)	<p>Test Prep: P150, SE</p> <p>Turn and Talks, p375-376 , SE</p> <p>Check Understanding p377, SE</p> <p>Exit Ticket p378, TE</p>
Activities and Resources	<p>Pre-Warm Up: Test Prep P150, TE</p> <p>Warm Up: Activate prior knowledge p375B, TE</p> <p>Mini Lesson: Spark Your Learning p375, SE</p> <p>Guided Practice: Building Understanding p376, SE</p> <p>Independent Practice: On Your Own p378, SE</p> <p>Homework: P151, SE</p> <p>Wrap up: Exit Ticket p378, TE</p> <p>Materials: Fraction strips, fraction circles and number lines</p>

	Plan for differentiated instruction: Small group options (On Track, Almost There, and Ready for More) p376C, TE
Suggested Modifications	See Suggested Modifications list.

LESSON 14.5

14.5

Student Learning Intentions (SLI) WALT: (We are learning to...)	14.5 We are learning to solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators.
Student Learning Strategies	Subtract fractions with like denominators. Represent fraction subtraction with equations.
Success Criteria	I can: Write equations and find the difference of fractions with like denominators
Formative Assessment (drives instructional decisions)	Test Prep: P152, SE Turn and Talks, p379 , SE Check Understanding p381, SE Exit Ticket p382, TE
Activities and Resources	Pre-Warm Up: Test Prep P,152 TE Warm Up: Activate prior knowledge p379B, TE Mini Lesson: Spark Your Learning p379, SE Guided Practice: Building Understanding p380, SE Independent Practice: On Your Own p382, SE Homework: P153, SE Wrap up: Exit Ticket p382, TE Materials: Fraction strips, fraction circles and number lines

	Plan for differentiated instruction: Small group options (On Track, Almost There, and Ready for More) p379C
Suggested Modifications	See Suggested Modifications list.

LESSON 14.6

14.6

Student Learning Intentions (SLI) WALT: (We are learning to...)	14.6 We are learning to express a fraction with denominator 10 as an equivalent fraction with denominator 100, and use the technique to add two fractions with respective denominators 10 and 100. 4. NF. C5
Student Learning Strategies	Rename fractions with denominator of 10 to have a denominator of 100. Add fractions with denominators of 10 and 100 by renaming the fraction with a denominator of 10 as a fraction with a denominator of 100.
Success Criteria	I can: Rename fractions with denominators of 10 and 100 so both have denominators of 100. I can add the fractions.
Formative Assessment (drives instructional decisions)	Test Prep: P154, SE Turn and Talks, p384 , SE Check Understanding p384, SE Exit Ticket p386, TE
Activities and Resources	Pre-Warm Up: Test Prep P154, TE Warm Up: Activate prior knowledge p383B, TE Guided Practice: Step It Out p383, SE Independent Practice: On Your Own p386, SE Homework: P155, SE Wrap up: Exit Ticket p386, TE Plan for differentiated instruction: Small group

	options (On Track, Almost There, and Ready for More) p383C
Suggested Modifications	See Suggested Modifications list.

Module 14 Review/ Module Test Form A

Module 14 Review/ Module Test Form A

Student Learning Intentions (SLI) WALT: (We are learning to...)	Module 14 Review/ Module Test Form A
Student Learning Strategies	Review of vocabulary terms Strategies and tools used throughout the module
Success Criteria	I can: Complete the assessment.
Formative Assessment (drives instructional decisions)	Test Prep: P156, SE
Activities and Resources	Pre-Warm Up: Test Prep P156, TE Module 14 Review p 387-388, SE
Suggested Modifications	See Suggested Modifications list.

MODULE 15

Module 15: Add and Subtract Fractions and Mixed Numbers with Like Denominators

LESSON 15.1

Student Learning Intentions (SLI) WALT:	15.1 We are learning to solve word problems involving addition and subtraction of fractions
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(We are learning to...)	referring to the same whole and having like denominators. 4. NF. B.3d
Student Learning Strategies	Add and subtract fractions with the same denominator, including fractions greater than 1. Solving word problems involving addition and subtraction of fractions with like denominators.
Success Criteria	I can: Add and subtract fractions greater than one with like denominators to solve real world problems.
Formative Assessment (drives instructional decisions)	Turn and Talks , p391, 393 , SE Check Understanding p393, SE Exit Ticket p394, TE
Activities and Resources	Warm Up: Activate prior knowledge p391B, TE Mini Lesson: Spark Your Learning p391, SE Guided Practice: Building Understanding p392, SE Independent Practice: On Your Own p394, SE Homework: P157, SE Wrap up: Exit Ticket p394, TE Materials: fraction circles, fraction strips, number lines Plan for differentiated instruction: Small group options (On Track, Almost There, and Ready for More) p391C
Suggested Modifications	See Suggested Modifications list.

LESSON 15.2

15.2

Student Learning Intentions (SLI) WALT: (We are learning to...)	15.2 We are learning to decompose a fraction into a sum of fractions with the same denominator in more than one way. 4. NF. B.3b
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Student Learning Strategies	Rename fractions greater than one as a mixed number. Rename mixed numbers as fractions greater than one.
Success Criteria	I can: Rename mixed numbers as a sum of fractions with like denominators
Formative Assessment (drives instructional decisions)	Test Prep: P158, SE Turn and Talks, p395, 397 , SE Check Understanding p397, SE Exit Ticket p398, TE
Activities and Resources	Pre-Warm Up: Test Prep P158, TE Warm Up: Activate prior knowledge p395B, TE Mini Lesson: Spark Your Learning p395, SE Guided Practice: Building Understanding p396, SE Independent Practice: On Your Own p398, SE Homework: P159, SE Wrap up: Exit Ticket p398, TE Materials: fraction circles, fraction strips, number lines Plan for differentiated instruction: Small group options (On Track, Almost There, and Ready for More) p395C
Suggested Modifications	See Suggested Modifications list.

LESSON 15.3

15.3

Student Learning Intentions (SLI) WALT: (We are learning to...)	15.3 We are learning to add and subtract mixed numbers with like denominators by replacing each mixed number with an equivalent fraction by using properties of operations and the relationship between addition and subtraction. 4. NF. B.3c
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Student Learning Strategies	Add mixed numbers, renaming the sum if necessary Subtract mixed numbers requiring renaming.
Success Criteria	I can: Use visual models and equations to add and subtract mixed numbers with like denominators.
Formative Assessment (drives instructional decisions)	Test Prep: P160, SE Turn and Talks, p 399-401 , SE Check Understanding p402, SE Exit Ticket p404, TE
Activities and Resources	Pre-Warm Up: Test Prep P160, TE Warm Up: Activate prior knowledge p399B, TE Mini Lesson: Spark Your Learning p399, SE Guided Practice: Building Understanding p400, SE Independent Practice: On Your Own p403, SE Homework: P161, SE Wrap up: Exit Ticket p404, TE Materials: fraction circles, fraction strips, number lines Plan for differentiated instruction: Small group options (On Track, Almost There, and Ready for More) p399C
Suggested Modifications	See Suggested Modifications list.

LESSON 15.4

15.4

Student Learning Intentions (SLI) WALT: (We are learning to...)	15.4 We are learning to add and subtract mixed numbers with like denominators by replacing each mixed number with an equivalent fraction by using properties of operations and the relationship between addition and subtraction. 4. NF. B.3c
Student Learning Strategies	Subtract mixed numbers when renaming is required.

Success Criteria	I can: Rename mixed numbers to subtract fractions with like denominators to solve real world problems.
Formative Assessment (drives instructional decisions)	Test Prep: P162, SE Turn and Talks, p405-407 , SE Check Understanding p407, SE Exit Ticket p408, TE
Activities and Resources	Pre-Warm Up: Test Prep P162, TE Warm Up: Activate prior knowledge p405B, TE Mini Lesson: Spark Your Learning p405, SE Guided Practice: Building Understanding p406, SE Independent Practice: On Your Own p408, SE Homework: P163, SE Wrap up: Exit Ticket p408, TE Materials: fraction circles, fraction strips, number lines Plan for differentiated instruction: Small group options (On Track, Almost There, and Ready for More) p405C
Suggested Modifications	See Suggested Modifications list.

LESSON 15.5

15.5

Student Learning Intentions (SLI) WALT: (We are learning to...)	15.5 We are learning to add and subtract mixed numbers with like denominators by replacing each mixed number with an equivalent fraction by using properties of operations and the relationship between addition and subtraction. 4. NF. B.3c
Student Learning Strategies	Apply the commutative and associative properties to add fractions and mixed numbers.

Success Criteria	I can: Add fractions and mixed numbers using the properties of addition.
Formative Assessment (drives instructional decisions)	Test Prep: P164, SE Turn and Talks, p409 , SE Check Understanding p410, SE Exit Ticket p412, TE
Activities and Resources	Pre-Warm Up: Test Prep P164, TE Warm Up: Activate prior knowledge p409B, TE Guided Practice: Step It Out p409, SE Independent Practice: On Your Own p411, SE Homework: P165, SE Wrap up: Exit Ticket p412, TE Plan for differentiated instruction: Small group options (On Track, Almost There, and Ready for More) p409C
Suggested Modifications	See Suggested Modifications list.

LESSON 15.6

15.6

Student Learning Intentions (SLI) WALT: (We are learning to...)	15.6 We are learning to solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators. 4. NF. B.3d
Student Learning Strategies	Determine which operation to apply to solve problems. Solve problems requiring addition and subtraction of fractions and mixed numbers with like denominators.
Success Criteria	I can: Add and subtract fractions and mixed numbers with like denominators to solve real world problems.

Formative Assessment (drives instructional decisions)	Test Prep: P166, SE Turn and Talks, p413, 414 , SE Check Understanding p414, SE Exit Ticket p416, TE
Activities and Resources	Pre-Warm Up: Test Prep P166, TE Warm Up: Activate prior knowledge p413 B, TE Guided Practice: Step It Out p413, SE Independent Practice: On Your Own p415, SE Homework: P167, SE Wrap up: Exit Ticket p416, TE Plan for differentiated instruction: Small group options (On Track, Almost There, and Ready for More) p413C
Suggested Modifications	See Suggested Modifications list.

Module 15 Review/ Module Test Form A

Module 15 Review/ Module Test Form A

Student Learning Intentions (SLI) WALT: (We are learning to...)	Module 15 Review/ Module Test Form A
Student Learning Strategies	Review of vocabulary terms Strategies and tools used throughout the module
Success Criteria	I can: Complete the assessment.
Formative Assessment (drives instructional decisions)	Test Prep: P168, SE
Activities and Resources	Pre-Warm Up: Test Prep P168, TE Module 15 Review p 417-418, SE

	Plan for differentiated instruction: Small group options (On Track, Almost There, and Ready for More) p418
Suggested Modifications	See Suggested Modifications list.

MODULE 16

Module 16: Multiply Fractions by Whole Numbers

LESSON 16.3

16.3

Student Learning Intentions (SLI) WALT: (We are learning to...)	16.3 We are learning to understand a multiple of a/b as a multiple of $1/b$, and use this understanding to multiply a fraction by a whole number. 4. NF. B.4b
Student Learning Strategies	Identify and list multiples of fractions. Use visual models to represent multiplication of whole numbers and fractions. Write equations to represent multiplication of whole numbers and fractions.
Success Criteria	I can: Find the product of a whole number and a fraction using a visual representation or an equation.
Formative Assessment (drives instructional decisions)	Test Prep: P172, SE Turn and Talks, p429, 431 , SE Check Understanding p432, SE Exit Ticket p434, TE
Activities and Resources	Pre-Warm Up: Test Prep P172, TE Warm Up: Activate prior knowledge p429B, TE

	<p>Mini Lesson: Spark Your Learning p429, SE Guided Practice: Building Understanding p431, SE Independent Practice: On Your Own p433, SE Homework: P173, SE Wrap up: Exit Ticket p434, TE</p> <p>Materials: fraction circles, fraction strips, number lines</p> <p>Plan for differentiated instruction: Small group options (On Track, Almost There, and Ready for More) p429C</p>
<p>Suggested Modifications</p>	<p>See Suggested Modifications list</p>

LESSON 16.2

16.2

<p>Student Learning Intentions (SLI) WALT: (We are learning to...)</p>	<p>16.2 We are learning to understand a multiple of a/b as a multiple of $1/b$, and use this understanding to multiply a fraction by a whole number. 4. NF. B.4b</p>
<p>Student Learning Strategies</p>	<p>Understand that the product of a whole number and a fraction can be thought of as the product of the whole number and a multiple of a unit fraction.</p> <p>Use visual models to represent multiplication of whole numbers and fractions.</p>
<p>Success Criteria</p>	<p>I can: Represent the product of a whole number and a fraction as the product of a whole number and a unit fraction.</p>
<p>Formative Assessment (drives instructional decisions)</p>	<p>Test Prep: P170, SE Turn and Talks, p425, 426 , SE Check Understanding p427, SE</p> <p>Exit Ticket p428, TE</p>

<p>Activities and Resources</p>	<p>Pre-Warm Up: Test Prep P170, TE Warm Up: Activate prior knowledge p425B, TE Mini Lesson: Spark Your Learning p425, SE Guided Practice: Building Understanding p436, SE</p> <p>Independent Practice: On Your Own p428, SE</p> <p>Plan for differentiated instruction: Small group options (On Track, Almost There, and Ready for More) p425C</p> <p>Homework: P171, SE Wrap up: Exit Ticket p428, TE</p> <p>Materials: fraction circles, fraction strips</p>
<p>Suggested Modifications</p>	<p>See Suggested Modifications list.</p>

LESSON 16.1

<p>Student Learning Intentions (SLI) WALT: (We are learning to...)</p>	<p>16.1 We are learning to understand a fraction a/b as a multiple of $1/b$. 4. NF. B.4a</p>
<p>Student Learning Strategies</p>	<p>Use visual models to represent fractions as multiples of unit fractions.</p> <p>Understand fractions as a unit fraction times as a whole number.</p>
<p>Success Criteria</p>	<p>I can: Represent a fraction as the product of a whole number and a unit fraction and as an equation using repeated addition.</p>
<p>Formative Assessment (drives instructional decisions)</p>	<p>Turn and Talks, p421, 422, SE Check Understanding p423, SE</p> <p>Exit Ticket p424, TE</p>
<p>Activities and Resources</p>	<p>Warm Up: Activate prior knowledge p421B, TE Mini Lesson: Spark Your Learning p421, SE</p>

	<p>Guided Practice: Building Understanding p422, SE Independent Practice: On Your Own p424, SE Homework: P169, SE</p> <p>Wrap up: Exit Ticket p424, TE</p> <p>Materials: fraction circles, fraction strips, number lines</p> <p>Plan for differentiated instruction: Small group options (On Track, Almost There, and Ready for More) p421C</p>
Suggested Modifications	See Suggested Modifications list.

LESSON 16.4

16.4

<p>Student Learning Intentions (SLI) WALT: (We are learning to...)</p>	<p>16.4 We are learning to solve word problems involving multiplication of a fraction by a whole number. 4. NF. B.4c</p>
<p>Student Learning Strategies</p>	<p>Apply strategies to multiply whole numbers by mixed numbers.</p> <p>Apply strategies to rename fractions as mixed numbers and mixed numbers as fractions.</p> <p>Solve word problems involving multiplication of whole numbers and mixed numbers or fractions.</p>
<p>Success Criteria</p>	<p>I can :</p> <p>Solve problems involving the multiplication of mixed numbers and whole numbers.</p>
<p>Formative Assessment (drives instructional decisions)</p>	<p>Test Prep: P174, SE Turn and Talks, p435, 436 , SE Check Understanding p436, SE</p> <p>Exit Ticket p438, TE</p>

Activities and Resources	<p>Pre-Warm Up: Test Prep P174, TE Warm Up: Activate prior knowledge p435B, TE Guided Practice: Step It Out p435, SE Independent Practice: On Your Own p437, SE Homework: P175, SE</p> <p>Wrap up: Exit Ticket p438, TE</p> <p>Plan for differentiated instruction: Small group options (On Track, Almost There, and Ready for More) p435c</p>
Suggested Modifications	See Suggested Modifications list

Module 16 Review/ Module Test Form B

Module 16 Review/ Module Test Form B

Student Learning Intentions (SLI) WALT: (We are learning to...)	Module 16 Review/ Module Test Form B
Student Learning Strategies	Review of vocabulary terms Strategies and tools used throughout the module
Success Criteria	I can: Complete the assessment.
Formative Assessment (drives instructional decisions)	Test Prep: P176, SE
Activities and Resources	<p>Pre-Warm Up: Test Prep P176, TE</p> <p>Module 15 Review p 439-440, SE</p>
Suggested Modifications	See Suggested Modifications list

REFLECTIONS

Module 10 Reflections:

Module 11 Reflections:
Module 12 Reflections:
Module 13 Reflections:
Module 14 Reflections:
Module 15 Reflections:
Module 16 Reflections:

INTERDISCIPLINARY CONNECTIONS: NEW JERSEY STUDENT LEARNING STANDARDS FOR ELA, SOCIAL STUDIES, SCIENCE AND/OR MATHEMATICS

LA.K-12.NJSLSA.R1	Read closely to determine what the text says explicitly and to make logical inferences and relevant connections from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.
LA.K-12.NJSLSA.R2	Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.
LA.K-12.NJSLSA.R4	Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone.
LA.K-12.NJSLSA.W4	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
LA.K-12.NJSLSA.SL1	Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively.