Trimester	Unit Title	Recommended Instructional Days
2	**Multiply Fractions**	**8-10 days**

Domain: Number and Operations - Fractions

Strand:

5.NF.B.4 Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction.
a. Interpret the product $(\frac{a}{b}) \times q$ as a parts of a partition of q into b equal parts; equivalently, as the result of a sequence of operations $a \times q \div b$. *For example, use a visual fraction model to show* $\frac{2}{3} \times 4 = \frac{8}{3}$*, and create a story context for this equation. Do the same with* $(\frac{2}{3}) \times (\frac{4}{5}) = \frac{8}{15}$*. (In general,* $(\frac{a}{b}) \times (\frac{c}{d}) = \frac{ac}{bd}$*.)*

5.NF.B.4 Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction.
b. Find the area of a rectangle with fractional side lengths by tiling it with unit squares of the appropriate unit fraction side lengths, and show that the area is the same as would be found by multiplying the side lengths. Multiply fractional side lengths to find areas of rectangles, and represent fraction products as rectangular areas.

5.NF.B.5 Interpret multiplication as scaling (resizing), by:
a. Comparing the size of a product to the size of one factor on the basis of the size of the other factor, without performing the indicated multiplication.

5.NF.B.5 Interpret multiplication as scaling (resizing), by:
b. Explaining why multiplying a given number by a fraction greater than 1 results in a product greater than the given number (recognizing multiplication by whole numbers greater than 1 as a familiar case); explaining why multiplying a given number by a fraction less than 1 results in a product smaller than the given number; and relating the principle of fraction equivalence $\frac{a}{b} = \frac{(n \times a)}{(n \times b)}$ to the effect of multiplying $\frac{a}{b}$ by 1.

5.NF.B.6 Solve real world problems involving multiplication of fractions and mixed numbers, e.g., by using visual fraction models or equations to represent the problem.

Key:

Major Cluster **Supporting Cluster** **Additional Cluster** **Climate Change Opportunity**

Progress Indicator: ◊ Tests ◊ Homework / Classwork ◊ Projects ◊ Formative assessments ◊ Summative assessments ◊ Performance assessments

Mathematical Practices:

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reason 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.

Recommended Activities, Investigations, Interdisciplinary Connections, and/or Student Experiences to Explore NJSLS-CLKS within Unit

Essential Questions:

Lesson 11.1: How can we find part of a group by multiplying a whole number by a fraction?
Lesson 11.2: How can we use models to multiply fractions by whole numbers or whole numbers by fractions?
Lesson 11.3: How can we solve real-world problems that multiply a fraction by a whole number or a whole number by a fraction?
Lesson 11.4: How can we use visual models to show the product of two fractions?
Lesson 11.5: How can we compare the size of a product to the size of one factor when multiplying fractions?
Lesson 11.6: How can we multiply fractions and explain how the size of a product compares to the size of the factors?
Lesson 11.7: How can we compare the size of a product to the size of one factor when multiplying fractions greater than one?
Lesson 11.8: How can we solve real-world problems involving fractional lengths?

Essential Understandings:

Lesson 11.1: Finding part of a group by multiplying a whole number by a fraction involves breaking the whole into equal parts and determining the specified fraction of those parts.
Lesson 11.2: Using models to multiply fractions by whole numbers or whole numbers by fractions helps visualize the multiplication process and understand how the quantities interact.
Lesson 11.3: Solving real-world problems that multiply a fraction by a whole number or a whole number by a fraction involves applying multiplication to practical situations.

Lesson 11.4: Using visual models to show the product of two fractions provides a concrete representation of how fractions combine.
Lesson 11.5: Comparing the size of a product to the size of one factor when multiplying fractions helps us understand how multiplication affects the size of a fraction.
Lesson 11.6: Multiplying fractions and explaining how the size of a product compares to the size of the factors involves analyzing the relationship between the factors and the product.
Lesson 11.7: Comparing the size of a product to the size of one factor when multiplying fractions greater than one involves understanding how multiplication affects larger fractions and their products.
Lesson 11.8: Solving real-world problems involving fractional lengths applies fraction multiplication to practical situations.

No New Vocabulary

Suggested Activity Description:
Waggle, On the Spot Videos, Tier 2 and 3 Intervention Resources, Vocabulary Activities, Grab and Go Differentiation Kit, Explore and Guided/Independent Practice related to the NJSLS, Essential Question Discussion and Check-In, Share and Show, Basic Skills Review, Manipulative Activity, Reteach Activity, Reading Strategies Activity, Making Connections, Multilingual Support, Performance Task, Enrich Activity, Exit Ticket

Interdisciplinary Connections:
Language Arts:
1. Problem #9 on TB page 411.
2. Problem #11 on TB page 417.
3. Problem #12 on TB page 423.
4. Problem #9 on TB page 435.

Music:
1. Problem #15 on TB page 442.

Art:
1. Problem #7 on TB page 411.
2. Connect to Art on TB page 434.

Physical Education:
1. Problem #12 on TB page 418.

Spot Light On: *Acknowledge every student's comment or response, even if it's incorrect.*

Social and Emotional Learning: *Competencies*	**Social and Emotional Learning: *Sub-Competencies***
SEL Competencies: • Self- awareness • Social Awareness • Self- Management • Relationship Skills • Responsible Decision-Making	• Recognizing the importance of self-confidence in handling daily tasks and challenges. • Demonstrate an awareness of the expectations for social interactions in a variety of ways. • Demonstrate an understanding of the need for mutual respect when viewpoints differ. • Identify and apply ways to persevere through alternative methods to achieve goals. • Utilize positive communication and social skills to interact effectively with others. •Develop, implement, and model effective problem solving and critical thinking skills.
Assessments (Formative) ***To show evidence of meeting the standard/s, students will successfully engage within:***	**Assessments (Summative)** ***To show evidence of meeting the standard/s, students will successfully complete:***
Formative Assessments: • Teacher Observations • Exit Tickets • Quizzes • Self Assessments • Math Journals • Homework/Classwork • Teacher created assessments	**Benchmarks & Summative Assessments:** Chapter/Unit Assessments • Standardized Tests • Project-based Assessments

Differentiated Student Access to Content:
Teaching and Learning *Resources/Materials*

Core Resources	**Alternate Core Resources** ***IEP/504/At-Risk/ESL***	**ELL Core Resources**	**Gifted & Talented Core Resources**
Go Math Workbook, Interactive Student Edition, ST MATH 60 minutes a week, Waggle, Math on the Spot Videos, iReady, Khan Academy, Illustrative Mathematics, Learn360, TeacherTube, BrainPOP, Freckle, LearnZillion, MobyMax, Achieve the Core, Desmos, RTI	Reteaching worksheets, Skill building workbook, Math manipulatives, iTools, Leveled practice worksheets	Multilingual glossary, eGlossary, Multilingual Activities on ED, Vocabulary Cards, Success for English Learners worksheets, Leveled Strategies for English Learners, Linguistic Support	ST MATH special projects, Enrichment worksheets, Art of Problem Solving, Leveled assessments

Supplemental Resources			
Technology: • Chromebooks • Online math manipulatives **Other:** • Google Classroom, Google Meets, Schoology, Interactive Workbooks • Illustrative Mathematics • insidemathematics.org • National Library of Virtual Manipulatives			
Differentiated Student Access to Content: **Recommended *Strategies & Techniques***			
Core Resources	**Alternate Core Resources** *IEP/504/At-Risk/ESL*	**ELL Core Resources**	**Gifted & Talented Core**
Deliver instruction utilizing varied learning styles including audio, visual, and tactile/kinesthetic, provide individual instruction as needed, modify assessments and/or rubrics, repeat	Utilize a multi-sensory (VAKT) approach during instruction, provide alternate presentations of skills by varying the method (repetition, simple explanations, additional examples, modeling, etc.), modify test content and/or format, allow students to retake test for additional credit, provide additional times and preferential seating as needed, review, restate and repeat directions, provide study guides, and/or break assignments into segments of shorter tasks.	Extend time requirements, preferred seating, positive reinforcement, check often for understanding/review, oral/visual directions/prompts when necessary, supplemental materials including use of an online bilingual dictionary, and modified assessment and/or rubric.	Create an enhanced set of introductory activities, integrate active teaching/learning opportunities, incorporate authentic components, propose interest-based extension activities, and connect student to related

NJSLS CAREER READINESS, LIFE LITERACIES & KEY SKILLS	**Disciplinary Concept(s):** Responsible and Contributing Community Member	
	Core Ideas:	Curiosity and willingness to try new ideas (intellectual risk taking) contributes to the development of creativity and innovation.
	Performance Expectation/s:	**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.

	Career Readiness, Life Literacies, & Key Skills Practices
	Act as a responsible and contributing community member and employee. **Attend to financial well-being.** **Consider the environmental, social and economic impacts of decisions.** **Demonstrate creativity and innovation.** **Utilize critical thinking to make sense of problems and persevere in solving them.** **Model integrity, ethical leadership and effective management.** **Plan education and career paths aligned to personal goals.** **Use technology to enhance productivity, increase collaboration and communicate effectively.** **Work productively in teams while using cultural/global competence.**

New Jersey Legislative Statutes and Administrative Code (place an "X" before each law/statute if/when present within the curriculum map)									
	Amistad Law: *N.J.S.A. 18A 52:16A-88*		Holocaust Law: *N.J.S.A. 18A:35-28*		LGBT and Disabilities Law: *N.J.S.A. 18A:35-4.35*	**X**	Diversity & Inclusion: *N.J.S.A. 18A:35-4.36a*		Standards in Action: *Climate Change*