

Trimester	Unit Title	Recommended Instructional Days
2	Understand Fractions	16 - 20 days
Domain		
Strand:  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.2a 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.  3.NF.A.2b Understand a fraction as a number on the number line; represent fractions on a number line diagram. 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.3c Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size. 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 of a number line diagram. Key:  Major Cluster  Supporting Cluster  Additional Cluster		
Progress Indicator: ♦ Tests ♦ Homework / Classwork ♦ Projects ♦ Formative assessments ♦ Summative 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 NJSL-CLKS within Unit

Essential Questions:

Lesson 8.1 What are equal parts of a whole?

Lesson 8.2 Why do you need to know how to make equal shares?

Lesson 8.3 What do the top and bottom numbers of a fraction tell?

Lesson 8.4 How does a fraction name part of a whole?

Lesson 8.5 How can you represent and locate fractions on a number line?

Lesson 8.6 When might you use a fraction greater than 1 or a whole number?

Lesson 8.7 How can a fraction name part of a group?

Lesson 8.8 How can a fraction tell how many are in part of a group?

Lesson 8.9 How can you use the strategy, *draw a diagram*, to solve fraction problems?

Essential Understandings:

Lesson 8.1 Explore and identify equal parts of a whole.

Lesson 8.2 Divide models to make equal shares.

Lesson 8.3 Use a fraction to name one part of a whole that is divided into equal parts.

Lesson 8.4 Read, write, and model fractions that represent more than one part of a whole that is divided into equal parts.

Lesson 8.5 Represent and locate fractions on a number line.

Lesson 8.6 Relate fractions and whole numbers by expressing whole numbers as fractions and recognizing fractions that are equivalent to whole numbers.

Lesson 8.7 Model, read, and write fractional parts of a group.

Lesson 8.8 Find fractional parts of a group using unit fractions.

Lesson 8.9 Solve fraction problems by using the strategy, *draw a diagram*.

Vocabulary:

- Eighths
- Equal parts
- Fourths
- Halves
- Sixths
- Thirds
- Whole
- Fraction
- Unit Fraction
- Denominator
- Numerator
- Fraction greater than 1

Suggested Activity Description(s):

Show what you know, Problem of the Day, Fluency Builders, Personal Math Trainer, Math on the Spot Videos, Real World Videos, Vocabulary Preview Activity, Reteach and Enrichment Activities, Interactive Student Edition Textbook, RtI Activities, Grab and Go Differentiated Centers, Journal Writing, Advanced Learners Activities, Assessments, Standards Focus Packets for the related NJSLs, Success for English Learners Activities, Performance Task

Interdisciplinary Connections:

STEM Activity: In Chapter 8, students develop their understanding of fractions by finding parts of a whole. These same topics are used often in the development of various science concepts and process skills. Help students make the connection between math and science through the S.T.E.M. activities and activity worksheets found at Think Central.

In Chapter 8, students connect math and science with the S.T.E.M. Activity Water Moves All Around and the accompanying worksheets (pgs. 111-112 (In correlation with ScienceFusion pgs. 344-345)). Through this S.T.E.M. Activity, students will connect to the GO Math! Chapter 8 concepts and skills with various components of the earth's surface, including representing information with a diagram. It is recommended that this S.T.E.M. Activity will be used after Lesson 8.4.

Science:

1. Provide students with a globe. Give them an opportunity to compare the amount of land to the amount of water that covers Earth. Then, have each student estimate whether $\frac{1}{4}$, $\frac{1}{2}$, or $\frac{3}{4}$ of Earth is covered with water. Make a line plot to show the class choices. Discuss the shape of the data in the line plot.
2. The scientific study of rocks is called petrology. Rocks can be classified by properties such as color, texture (rough or smooth surface), and size. Have students work in groups to compare the rocks by a single property. Some students are comparing rocks by color. There are 6 rocks in the group. One of the rocks is red. What fraction of the group of rocks is red?
3. Take a class walk through a local park. Have students classify the animals they see according to birds, reptiles, and amphibians. Remind students that animals like alligators and turtles are reptiles, and animals like frogs and salamanders are amphibians. Suppose $\frac{1}{6}$ of the animals they saw were reptiles. If they saw 2 reptiles, what was the total number of animals they saw?

Social Studies:

1. Display a U.S. map and have students identify some of the larger and smaller states. Have students trace around the border of a smaller state and compare its size to a larger state by placing the outline over the larger state. Students can write comparison statements about two states; for example, about 5 outlines of Arkansas will fit on California. So, California is about 5 times the size of Arkansas and Arkansas is about $\frac{1}{5}$ the size of California.
2. Congress is part of the federal government. It consists of both the Senate and the House of Representatives. Senators and representatives are elected to office by people that vote for them. There are 100 senators that make up the Senate. In order for a bill to pass, more than 50 senators must vote for the bill. Have students complete the sentence below with a fraction. More than ____ of the senators must vote for a bill in order for it to pass in the Senate.
3. Discuss how people use money to purchase goods and services. Goods are items you can see and touch, like food, clothing, or a book. Services are provided by other people like the doctor, the person who cuts your hair, or the person who fixes the washing machine. Ask students how they buy items they want. Lindsay saved \$5 to buy a game. She has $\frac{1}{4}$ the amount of money she needs. How much money does the game cost?

Language Arts:

1. Pizza Parts! - (From the Differentiated Centers Kit Grab and Go)
2. The Whole Picture - (From the Differentiated Centers Kit Grab and Go)

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

Social and Emotional Learning: <i>Competencies</i>		Social and Emotional Learning: <i>Sub-Competencies</i>	
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) <i>To show evidence of meeting the standard/s, students will successfully engage within:</i>		Assessments (Summative) <i>To show evidence of meeting the standard/s, students will successfully complete:</i>	
<u>Formative Assessments:</u> • Teacher Observations • Exit Tickets • Quizzes • Self Assessments • Math Journals • Homework/Classwork • Teacher created assessments		<u>Benchmarks & Summative Assessments:</u> Chapter/Unit Assessments • Standardized Tests • District Assessments • Project-based Assessments	
Differentiated Student Access to Content: Teaching and Learning <u>Resources/Materials</u>			
Core Resources	Alternate Core Resources <i>IEP/504/At-Risk/ESL</i>	ELL Core Resources	Gifted & Talented Core Resources
Go Math Workbook, IXL, Personal Math Trainer, Math on the Spot Videos, My HRW, Khan Academy, Illustrative Mathematics, Learn360, TeacherTube, BrainPOP, Freckle, LearnZillion, MobyMax, 60 minutes of weekly ST Math, Edulastic, Achieve the Core,	Reteaching worksheets, Skill building workbook, Math manipulatives, Leveled practice worksheets	Dictionary for native language, Video tutorial in native language, Success for English Learners worksheets, Go Math Leveled Strategies for English Learners, Go Math Linguistic Support	ST Math Challenge Objectives, G&T tasks, Enrichment worksheets, Art of Problem Solving, Leveled assessments, Go Math Teaching for Depth

Grade 3 Mathematics
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Desmos			
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 <i>Strategies & Techniques</i>			
Core Resources	Alternate Core Resources <i>IEP/504/At-Risk/ESL</i>	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.	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 students to related content.
NJSLS CAREER READINESS, LIFE	Disciplinary Concept(s): Responsible and Contributing Community Member		
	<i>Core Ideas:</i>	Curiosity and willingness to try new ideas (intellectual risk taking) contributes to the development of creativity and innovation.	

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LITERACIES & KEY SKILLS	<i>Performance Expectation/s:</i>	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: <i>N.J.S.A. 18A 52:16A-88</i>		Holocaust Law: <i>N.J.S.A. 18A:35-28</i>		LGBT and Disabilities Law: <i>N.J.S.A. 18A:35-4.35</i>	x	Diversity & Inclusion: <i>N.J.S.A. 18A:35-4.36a</i>	x
							Standards in Action: <i>Climate Change</i>