Marking Period	Unit Title	Recommended Instructional Days			
1 (Module 4) and 2 (Module 5)	Number Operations	22 - 26			
Domain					

Strand:

**6.NS.A.1** Interpret and compute quotients of fractions and solve word problems involving division of fractions by fractions, e.g., by using visual fraction models and equations to represent the problem. For example, create a story context for  $(2/3) \div (3/4)$  and use a visual fraction model to show the quotient; use the relationship between multiplication and division to explain that  $(2/3) \div (3/4) = 8/9$  because 3/4 of 8/9 is 2/3. (In general,  $(a/b) \div (c/d) = ad/bc$ ). How much chocolate will each person get if 3 people share 1/2 lb. of chocolate equally? How many 3/4- cup servings are in 2/3 of a cup of yogurt? How wide is a rectangular strip of land with length 3/4 mi and area 1/2 square mi?

**0**6.NS.B.2 Fluently divide multi-digit numbers using the standard algorithm.

O 6.NS.B.3 Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.

**6.NS.B.4** Find the greatest common factor of two whole numbers less than or equal to 100 and the least common multiple of two whole numbers less than or equal to 12. Use the distributive property to express a sum of two whole numbers 1-100 with a common factor as a multiple of a sum of two whole numbers with no common factor. *For example, express* 36 + 8 *as* 4 (9 + 2).

Key:

Major Cluster

Supporting Cluster

Output: Contract Additional Cluster

**Progress Indicator:**  $\diamond$  Tests  $\diamond$  Homework / Classwork  $\diamond$  Projects  $\diamond$  Formative assessments  $\diamond$  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 NJSLS-CLKS within Unit

#### **Essential Questions:**

#### Module 4:

How can you use operations with fractions to solve real-world problems? How do you use the GCF and LCM when adding, subtracting, and multiplying fractions?

How is the reciprocal of a fraction related to the original fraction?

How do you divide fractions?

How do you divide mixed numbers?

How can you solve word problems involving more than one fraction operation?

## Module 5:

How can you use the operations with decimals to solve real-world problems? How do you divide multi-digit whole numbers? How do you add and subtract decimals? How do you multiply decimals? What pattern do you notice when multiplying by a decimal? How do you divide decimals? What pattern do you notice when dividing by a decimal? How can you solve problems involving multiplication and division of fractions and decimals?

How do I know which mathematical operation to use?

#### Essential Understandings:

#### Module 4:

Fractions can be used to solve real-life problems.

#### Module 5:

Decimals can be used to solve real-life problems.

### <u>Vocabulary:</u>

- reciprocals
- order of operations

\*Encourage students to practice using the unit vocabulary as they talk and write about mathematics. Understanding vocabulary will aid their understanding of the concepts.

### **Suggested Activity Descriptions:**

- Have students work together in pairs with two dice each. The first student rolls their dice: the first forms the numerator, and the second forms the denominator. The second student does the same. Have the students practice multiplying the fractions together.
- Let students model the fraction division first from a whole and then from a part using graham crackers. For example, begin with the whole graham cracker and ask them to divide by 1/4. They will then have 4 pieces. Then, begin with the 1/4 and ask them to divide it in half and compare it to the 1/4.
- Take a few envelopes and mark a dollar amount on the front of each. Place a variety of coins inside each envelope. Tell students that the value on the outside is what should be in the box. Then, ask students to find the missing amount.
- Use graph paper to help students align decimals properly.
- GoMATH Game 4.2 Fracto on GoMATH page 90C.
- GoMATH Unit 2 Review Project: A Fine Kettle of Fish

## ◊ Suggested Sample Tasks:

1. Add 4.815 + 2.17. Now multiply those numbers. Find the difference between the sum and the product of those numbers.

## Interdisciplinary Connections:

## Science:

1. Performance Task: Careers in Math: Chefs on GoMATH page 140.

## Social Studies:

1. Performance Task: Careers in Math: Chefs on GoMATH page 140.

## Language Arts:

- 1. Vocabulary Preview Activity on GoMATH page 74.
- 2. Reading Start-Up Activities on GoMATH pages 76 and 104.

Spot Light On: Dr. Marie M. Daly						
Social and Emo Comp	tional Learning: etencies	Social and Emotional Learning: Sub-Competencies				
SEL Competencies: • Self-Awareness • Social Awareness • Self-Management • Relationship Skills • Responsible Decision-Making		<ul> <li>Recognizing the importance of self-confidence in handling daily tasks and challenges.</li> <li>Demonstrate an awareness of the expectations for social interactions in a variety of ways.</li> <li>Demonstrate an understanding of the need for mutual respect when viewpoints differ.</li> <li>Identify and apply ways to persevere through alternative methods to achieve goals.</li> <li>Utilize positive communication and social skills to interact effectively with others.</li> <li>Develop, implement, and model effective problem solving and critical thinking skills.</li> </ul>				
To show evidence of meeting the s	s (Formative) tandard/s, students will successfully e within:	Assessments (Summative) To show evidence of meeting the standard/s, students will successfully complete:				
Formative Assessments: • Teacher Observations • Exit Tickets Journals • Homework/Classwork • Te		Benchmarks & Summative Assessments: • Chapter/Unit Assessments • Standardized Tests • District Assessments • Project-based Assessments				
Differentiated Student Access to Content: Teaching and Learnin <u>g Resources/Materials</u>						
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,	Reteaching worksheets, Skill building workbook, Math manipulatives, Leveled practice worksheets	Dictionary for native language, Video tutorial in native language, Success for English Learners worksheets, GoMATH Leveled Strategies for English Learners, GoMATH Linguistic Support	ST Math Challenge Objectives, G&T tasks, Enrichment worksheets, Art of Problem Solving, Leveled assessments, GoMATH Teaching for Depth			

# Grade 6 Mathematics Unit 2: Number Operations

Edulastic, Achieve the Core, Desmos							
Supplemental Resources							
<ul> <li>Technology:</li> <li>Chromebooks • Scientific/Graphing Calculators (upper grades only) • Online math manipulatives</li> <li>Other:</li> <li>Google Classroom, Google Meets, Schoology, Interactive Workbooks • Illustrative Mathematics • insidemathematics.org • National Library of Virtual Manipulatives</li> </ul>							
Differentiated Student Access to Content: Recommended <u>Strategies &amp; Techniques</u>							
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, modi assessments and/or rubrics.	provide alternate presentations	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 content.				

	Disciplinary Concept(s): Critical Thinking and Problem Solving			
NJSLS CAREER	Core Ideas:	With a growth mindset, failure is an important part of success.		
READINESS, LIFE LITERACIES & KEY SKILLS	Performance Expectation/s:	9.4.12.CI.1: Demonstrate the ability to reflect, analyze, and use creative skills and ideas.		
SKILLS	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)								
X	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: <i>N.J.S.A. 18A:35-4.36a</i>		Standards in Action: <i>Climate Change</i>