Trimester	Unit Title	Recommended Instructional Days
1	**Multiply by 1-Digit Numbers**	**14-16 days**

Domain: Operations and Algebraic Thinking; Number and Operations in Base Ten

Strand:

4.OA.A.1 Interpret a multiplication equation as a comparison, e.g., interpret 35 = 5 × 7 as a statement that 35 is 5 times as many as 7 and 7 times as many as 5. Represent verbal statements of multiplicative comparisons as multiplication equations.

4.OA.A.2 Multiply or divide to solve word problems involving multiplicative comparison, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison.

4.OA.A.3 Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.

4.NBT.A.3 Use place value understanding to round multi-digit whole numbers to any place.

4.NBT.B.5 Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.

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 3.1: How can we use models and equations to solve multiplication comparisons?
Lesson 3.2: How can we draw models and write equations to help solve comparison problems?
Lesson 3.3: How can we use place value and other strategies to multiply tens, hundreds, and thousands?
Lesson 3.4: How can we estimate products by rounding and determine if exact answers are reasonable?
Lesson 3.5: How can we use models, equations, and the Distributive Property to solve 2-digit by 1-digit multiplication problems?
Lesson 3.6: How can we use expanded form to multiply a multi-digit number by a 1-digit number?
Lesson 3.7: How can we use different strategies such as place value and partial products to multiply by a 1-digit number?
Lesson 3.8: How can we multiply numbers using mental math and properties of operations?
Lesson 3.9: How can we solve real-world problems involving multiplication of whole numbers?
Lesson 3.10: How can we multiply whole numbers using estimation, rounding, and place value?
Lesson 3.11: How can we solve real-world multi-step problems using multiplication, addition, and subtraction?

Essential Understandings:
Lesson 3.1: Multiplication equations are related to comparison equations.
Lesson 3.2: Models and equations help us solve multiplication comparisons.
Lesson 3.3: Using place value and other strategies to multiply tens, hundreds, and thousands helps us understand the structure of our number system, making it easier to perform calculations efficiently and accurately.
Lesson 3.4: Estimating products by rounding helps us quickly approximate answers, and comparing these estimates to exact calculations allows us to determine the reasonableness of our results, enhancing our number sense and problem-solving skills.
Lesson 3.5: The Distributive Property, along with models and equations, help us solve 2-digit by 1-digit multiplication problems.
Lesson 3.6: Using expanded form to multiply a multi-digit number by a 1-digit number breaks the problem into smaller, more manageable parts, helping us understand and apply the distributive property for accurate and efficient calculations.

Lesson 3.7: Using strategies like place value and partial products to multiply by a 1-digit number helps us simplify complex problems, enhancing our understanding of multiplication and improving our calculation accuracy.
Lesson 3.8: Multiplying numbers using mental math and properties of operations allows us to perform calculations quickly and efficiently, fostering a deeper understanding of mathematical relationships and number sense.
Lesson 3.9: Solving real-world problems involving multiplication of whole numbers helps us apply mathematical concepts to everyday situations, demonstrating the practical utility and relevance of multiplication.
Lesson 3.10: Multiplying whole numbers using estimation, rounding, and place value enables us to approximate results and verify the accuracy of our calculations, enhancing our problem-solving skills and mathematical reasoning.
Lesson 3.11: Solving real-world multi-step problems using multiplication, addition, and subtraction requires us to integrate various mathematical operations, promoting critical thinking and the ability to tackle complex challenges effectively.

Vocabulary

- area model
- Distributive Property
- partial product

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 #11 on TB page 81.
2. Problem #5 on TB page 87.
3. Problem #11 on TB page 99.
4. Problem #3 on TB page 129.

Science:

1. Example on TB page 132.

Social Studies:

1. Problem #9 on TB page 135.

Physical Education:

1. Problem #12 on TB page 124.

Climate Change: Students may, knowing that energy and fuels are derived from natural resources and that their uses affect the climate, use the four operations to solve multi-step word problems posed with whole numbers, having whole-number answers and that are based on energy, fuels, and natural resources.

Spot Light On: *Ask challenging questions equitably of all students.*

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	Reteaching worksheets, Skill building workbook, Math manipulatives, iTools, Leveled	Multilingual glossary, eGlossary, Multilingual Activities on ED, Vocabulary Cards, Success for	ST MATH special projects, Enrichment worksheets, Art of

the Spot Videos, iReady, Khan Academy, Illustrative Mathematics, Learn360, TeacherTube, BrainPOP, Freckle, LearnZillion, MobyMax, Achieve the Core, Desmos, RTI	practice worksheets	English Learners worksheets, Leveled Strategies for English Learners, Linguistic Support	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):** Financial Well Being	
	Core Ideas:	The ability to solve problems effectively begins with gathering data, seeking resources, and applying critical thinking skills.
	Performance Expectation/s:	**9.4.5.CT.1**: Identify and gather relevant data that will aid in the problem-solving process.
	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*	**X**	Standards in Action: *Climate Change*