






Marking Period	Unit Title	Recommended Instructional Days
1	Multiply 2-Digit Numbers	8 - 10 Days
Domain		
<p><i>Strand:</i></p> <p> 4.OA.A.3 Use the four operations with whole numbers to solve problems. 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.</p> <p> 4.NBT.B.5 Use place value understanding and properties of operations to perform multi-digit arithmetic. 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.</p> <p>Key:</p> <p> Major Cluster  Supporting Cluster  Additional Cluster</p>		
<p>Progress Indicator: ◊ Tests ◊ Homework / Classwork ◊ Projects ◊ Formative assessments ◊ Summative assessments</p>		
Mathematical Practices:		
<ol style="list-style-type: none"> 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 What strategies can you use to multiply by tens?

Lesson 3.2 What strategies can you use to estimate products?

Lesson 3.3 How can you use area models and partial products to multiply 2-digit numbers?

Lesson 3.4 How can you use place value and partial products to multiply 2-digit numbers?

Lesson 3.5 How can you use regrouping to multiply 2-digit numbers?

Lesson 3.6 How can you find and record products of two 2-digit numbers?

Lesson 3.7 How can you use the strategy, *draw a diagram*, to solve multi-step multiplication problems?

Essential Understandings:

Lesson 3.1 Use place value and multiplication properties to multiply by tens.

Lesson 3.2 Estimate products by rounding or by using compatible numbers.

Lesson 3.3 Use area models and partial products to multiply 2-digit numbers.

Lesson 3.4 Use place value and partial products to multiply 2-digit numbers.

Lesson 3.5 Use regrouping to multiply 2-digit numbers.

Lesson 3.6 Choose a method to multiply 2-digit numbers.

Lesson 3.7 Use the strategy, *draw a diagram*, to solve multistep multiplication problems.

Vocabulary:

- Associative Property of Multiplication
- Commutative Property of Multiplication
- Compatible Numbers
- Estimate
- Factor
- Partial Product
- Place Value
- Regroup

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

◇ **Suggested Sample Tasks:**

Interdisciplinary Connections:

STEM Activity: In Chapter 3, students develop their understanding of multiplying by 2-digit numbers, such as multiplying a 2-digit number by a 2-digit number. These same topics are used often in the development of various science concepts and process skills. For example, students can use multiplication of 2-digit numbers to find how much food a group of animals eats if how much one of the animals eats is known. Help students make the connection between math and science through the S.T.E.M. activities and activity worksheets found at Think Central.

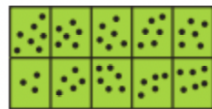
In Chapter 3, students connect math and science with the S.T.E.M. Activity The Food-Eaters and the accompanying worksheets (pages 107 and 108). Through this S.T.E.M. Activity, students will connect to the GO Math! Chapter 3 concepts and skills with various types of animals and the type of food they eat, including determining how much a certain animal eats. It is recommended that this S.T.E.M. Activity be used after Lesson 3.7.

Science:

Scientists can test water samples to find if small living things, called bacteria, are present. They can place a water sample from a lake, for example, onto a slide. A material on the slide allows bacteria to grow. After a certain amount of time, the scientist can look at the slide and count the bacterial colonies. To estimate the number of bacterial colonies in two 1-milliliter samples of water, multiply the number of bacterial colonies (a dot) by 20. Have students count the bacterial colonies on each slide. Have them multiply the number by 20 to find the number of bacterial colonies in each 1-milliliter sample of water?



100 colonies per 1 ml



1,120 colonies per 1 ml

<p>Social Studies: Maps can help show the distance between locations. A scale on a map tells how much one unit of length represents on the map. For example, 1 inch = 20 miles. Have students choose two locations on a map and find the actual distance between them. Discuss how multiplication can be used to find the distance.</p> <p>Language Arts: 1. Vocabulary Preview Activity, Go Math pg. 144 2. Vocabulary Game, Go Math pg. 144A 3. The Write Way, Go Math pg. 144B</p> <p>Spot Light On: <i>Ask challenging questions equitably of all students.</i></p>	
<p>Social and Emotional Learning: <i>Competencies</i></p>	<p>Social and Emotional Learning: <i>Sub-Competencies</i></p>
<p>SEL Competencies:</p> <ul style="list-style-type: none"> • Self- awareness • Social Awareness • Self- Management • Relationship Skills • Responsible Decision-Making 	<ul style="list-style-type: none"> • 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.
<p>Assessments (Formative) <i>To show evidence of meeting the standard/s, students will successfully engage within:</i></p>	<p>Assessments (Summative) <i>To show evidence of meeting the standard/s, students will successfully complete:</i></p>
<p>Formative Assessments: • Teacher Observations • Exit Tickets • Quizzes • Self Assessments • Math Journals • Homework/Classwork • Teacher created assessments</p>	<p>Benchmarks & Summative Assessments: Chapter/Unit Assessments • Standardized Tests • District Assessments • Project-based Assessments</p>

Differentiated Student Access to Content: Teaching and Learning <i>Resources/Materials</i>			
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, Desmos	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
Supplemental Resources			
<p>Technology:</p> <ul style="list-style-type: none"> • Chromebooks • Online math manipulatives <p>Other:</p> <ul style="list-style-type: none"> • 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	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.

	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.		
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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		
	<p>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.</p>		

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>