








Grade 3 Mathematics
Unit 1: Addition and Subtraction Within 1,000

September
2022

Trimester	Unit Title	Recommended Instructional Days
1	Addition and Subtraction Within 1,000	16 - 20 days
Domain		
<p><i>Strand:</i></p> <p> 3.OA.D.9 Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends.</p> <p> 3.NBT.A.1 Use place value understanding to round whole numbers to the nearest 10 or 100.</p> <p> 3.NBT.A.2 Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.</p> <p> 3.OA.D.8 Solve two-step word problems using the four operations. 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. (This standard is limited to problems posed with whole numbers and having whole number answers; students should know how to perform operations in the conventional order when there are no parentheses to specify a particular order (Order of Operations).)</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:

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 1.1 How can you use properties to explain patterns on the addition table?

Lesson 1.2 How can you round numbers?

Lesson 1.3 How can you use compatible numbers and rounding to estimate sums?

Lesson 1.4 What mental math strategies can you use to find sums?

Lesson 1.5 How can you add more than two addends?

Lesson 1.6 How can you use the break apart strategy to add 3-digit numbers?

Lesson 1.7 How can you use place value to add 3-digit numbers?

Lesson 1.8 How can you use compatible numbers and rounding to estimate differences?

Lesson 1.9 What mental math strategies can you use to find differences?

Lesson 1.10 How can you use place value to subtract 3-digit numbers?

Lesson 1.11 How can you use the combine place values strategy to subtract 3-digit numbers?

Lesson 1.12 How can you use the strategy, *draw a diagram*, to solve one- and two-step addition and subtraction problems?

Essential Understandings:

Lesson 1.1 Identify and describe whole-number patterns and solve problems.

Lesson 1.2 Round 2- and 3-digit numbers to the nearest ten or hundred.

Lesson 1.3 Use compatible numbers and rounding to estimate sums.

Lesson 1.4 Count by tens and ones, use a number line, make compatible numbers, or use friendly numbers to find sums mentally.

Lesson 1.5 Use the Commutative and Associative Properties of Addition to add more than two addends.

Lesson 1.6 Use the break apart strategy to add 3-digit numbers.

Lesson 1.7 Use place value to add 3-digit numbers.

Lesson 1.8 Use compatible numbers and rounding to estimate differences.

Lesson 1.9 Use a number line, friendly numbers, or the break apart strategy to find differences mentally.

Lesson 1.10 Use place value to subtract 3-digit numbers.

Lesson 1.11 Use the combine place values strategy to subtract 3-digit numbers.

Lesson 1.12 Solve addition and subtraction problems by using the strategy, *draw a diagram*.

Vocabulary:

- Associative Property of Addition
- Commutative Property of Addition
- Compatible Numbers
- Difference
- Estimate
- Identity Property of Addition
- Pattern
- Round

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, Rtl 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 1, students extend their understanding of addition and subtraction within 1,000, such as using place values to add or combining place values to subtract. 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 1, students connect math and science with the S.T.E.M. Activity In Our Corner of Space and the accompanying worksheets (pgs. 97-98 (In correlation with ScienceFusion pgs. 410-413)). Through this S.T.E.M. Activity, students will connect to the GO Math! Chapter 1 concepts and skills with various addition and subtraction skills, including finding the distance between a planet and the Sun. It is recommended that this S.T.E.M. Activity will be used after Lesson 1.11.

Science:

1. Some stars, like the North Star, look brighter than others. The sun is the brightest star that we can see from Earth. At night, some planets glow like stars, but they don't twinkle. You can see Venus and Mars from Earth, and sometimes you can see Mercury through a telescope. One year on Earth is 365 Earth days long. One year on Venus is about 224 Earth days long. About how much longer is a year on Earth than a year on Venus?

2. Tigers and lions are the largest wild cats. There are many different types (or subspecies) of tigers and lions. Adult tigers usually weigh between 165 and 700 pounds. Adult lions usually weigh between 250 and 500 pounds. The greatest recorded weight of a Bengal tiger is 857 pounds. The greatest recorded weight of an African lion is 688 pounds. What is the difference in weight between these two animals?

Social Studies:

1. The United States consists of 5 regions - the Northeast, Southeast, Midwest, Southwest, and West. Delaware and Rhode Island are the smallest states. They are both located in the Northeast region. The highest point in Rhode Island is at an elevation of 812 feet above sea level. The highest point in Delaware is at an elevation of 448 feet above sea level. About how many feet taller is the highest point in Rhode Island than the highest point in Delaware?

2. In 1903, the Wright brothers flew the first powered airplane. They flew four flights in one day. On the first flight, Orville flew about 120 feet in 12 seconds. Wilbur flew the longest flight that day. He flew 852 feet in 59 seconds. What is the difference between these two flights?

Language Arts:

1. Soccer Bash - (From the Differentiated Centers Kit Grab and Go)
2. So Many Seashells - (From the Differentiated Centers Kit Grab and Go)
3. More Acorns! - (From the Differentiated Centers Kit Grab and Go)
4. Connect to reading, Go Math pg. 58

Spot Light On: *Seek multiple perspectives and different answers to questions.*

Social and Emotional Learning: <i>Competencies</i>	Social and Emotional Learning: <i>Sub-Competencies</i>
SEL Competencies: <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.

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		<ul style="list-style-type: none">• 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, 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			
Technology: • Chromebooks • Online math manipulatives			

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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 LITERACIES & KEY SKILLS	Disciplinary Concept(s): Critical Thinking and Problem Solving	
	Core Ideas:	With a growth mindset, failure is an important part of success.
	Performance Expectation/s:	9.4.12.CI.1: Demonstrate the ability to reflect, analyze, and use creative skills and ideas.
	Career Readiness, Life Literacies, & Key Skills Practices	
	Act as a responsible and contributing community member and employee. Attend to financial well-being.	

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	<p>Consider the environmental, social and economic impacts of decisions.</p> <p>Demonstrate creativity and innovation.</p> <p>Utilize critical thinking to make sense of problems and persevere in solving them.</p> <p>Model integrity, ethical leadership and effective management.</p> <p>Plan education and career paths aligned to personal goals.</p> <p>Use technology to enhance productivity, increase collaboration and communicate effectively.</p> <p>Work productively in teams while using cultural/global competence.</p>
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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> Standards in Action: <i>Climate Change</i>