











Grade 2 Mathematics
Unit 14: Length in Metric Units

Updated August 2024

Trimester	Unit Title	Recommended Instructional Days
3	Length in Metric Units	7 - 10 days
Domain: Measurement		
<p>Strand:</p> <p> 2.M.A.1 Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes..</p> <p> 2.M.A.3 Estimate lengths using units of inches, feet, centimeters, and meters.</p> <p> 2.M.A.4 Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.</p> <p> 2.M.B.5 Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem. </p> <p> 2.M.B.6 Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, ..., and represent whole-number sums and differences within 100 on a number line diagram.</p> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;"> Major Cluster</div> <div style="text-align: center;"> Supporting Cluster</div> <div style="text-align: center;"> Additional Cluster</div> <div style="text-align: center;"> Climate Change Opportunity</div> </div>		
<p>Progress Indicator: ◊ Tests ◊ Homework / Classwork ◊ Projects ◊ Formative assessments ◊ Summative assessments ◊ Performance 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 NJSL-CLKS within Unit

Essential Questions:

Lesson 14.1: What is the difference between a centimeter and an inch?

Lesson 14.2: How can you use known lengths to help estimate the lengths of other objects?

Lesson 14.3: How can you use a centimeter ruler to measure lengths?

Lesson 14.4: How can you solve addition and subtraction problems involving length?

Lesson 14.5: Why do you need more or fewer of some units to measure the same object in meters or centimeters?

Lesson 14.6: How can you use the length of objects you know to estimate the lengths of other objects?

Lesson 14.7: How can you find how much longer one length is than another?

Essential Understandings:

Lesson 14.1: Use a centimeter model to measure the lengths of objects.

Lesson 14.2: Use known lengths to estimate unknown lengths.

Lesson 14.3: Use a centimeter ruler to measure lengths.

Lesson 14.4: Solve problems about lengths.

Lesson 14.5: Understand the difference between measuring in meters and in centimeters.

Lesson 14.6: Estimate the lengths of objects in meters.

Lesson 14.7: Compare the lengths of two objects.

Vocabulary

- centimeter
- meter

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 NJSL, 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:

Science:

(Lesson 14.7)

1. Explain to children that when scientists list characteristics of an animal, they often list the average length of the adult animal.
2. Tell children that the length of a male southern koala is about 78 centimeters and the length of a female southern koala is about 72 centimeters.
3. Have children write an equation to find the difference between the two lengths.
4. Repeat the activity for the normal wingspans of cardinals and blue jays, which are 27 centimeters and 39 centimeters, respectively.

Social Studies:

(Lesson 14.7)

1. Discuss how accurate measuring is important to many jobs, such as those in construction.
2. Explain that when a builder places a window in a wall, the window needs to be the correct size to match the opening in the wall.
3. Have children work in small groups. Ask each small group to describe a situation in which accurate measuring is important.
4. Have children share their descriptions with the class.

Language Arts:

1. Nature Walk - (From the Differentiated Centers Kits Grab and Go)
2. We Can Measure! - (From the Differentiated Centers Kits Grab and Go)



Climate Change: Students may add and subtract within 100 to solve word problems about a climate change issue that involves length. To solve these problems, they may use drawings or equations to represent a climate change related issue in their school, such as food waste, recycling, reusing and/or reducing the consumption of goods.

Spot Light On: Define "include" with examples.

Social and Emotional Learning: Competencies	Social and Emotional Learning: Sub-Competencies
<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.

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<p align="center">Assessments (Formative) <i>To show evidence of meeting the standard/s, students will successfully engage within:</i></p>		<p align="center">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 • Project-based Assessments</p>	
<p align="center">Differentiated Student Access to Content: Teaching and Learning <i>Resources/Materials</i></p>			
Core Resources	Alternate Core Resources <i>IEP/504/At-Risk/ESL</i>	ELL Core Resources	Gifted & Talented Core Resources
Go Math Workbook, Interactive Student Edition, ST MATH 60 minutes a week, Waggle, Math on the Spot Videos, iReady, Khan Academy, Illustrative Mathematics, Learn360, TeacherTube, BrainPOP, Freckle, LearnZillion, MobyMax, Achieve the Core, Desmos, RTI	Reteaching worksheets, Skill building workbook, Math manipulatives, iTools, Leveled practice worksheets	Multilingual glossary, eGlossary, Multilingual Activities on ED, Vocabulary Cards, Success for English Learners worksheets, Leveled Strategies for English Learners, Linguistic Support	ST MATH special projects, Enrichment worksheets, Art of Problem Solving, Leveled assessments
<p align="center">Supplemental Resources</p>			
<p>Technology: • Chromebooks • Online math manipulatives Other: • Google Classroom, Google Meets, Schoology, Interactive Workbooks • Illustrative Mathematics • insidemathematics.org • National Library of Virtual Manipulatives</p>			
<p align="center">Differentiated Student Access to Content: Recommended <i>Strategies & Techniques</i></p>			
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,	Utilize a multi-sensory (VAKT) approach during instruction,	Extend time requirements, preferred seating, positive reinforcement, check	Create an enhanced set of introductory activities, integrate

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and tactile/kinesthetic, provide individual instruction as needed, modify assessments and/or rubrics, repeat	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.	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.	active teaching/learning opportunities, incorporate authentic components, propose interest-based extension activities, and connect student to related
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NJSLS CAREER READINESS, LIFE LITERACIES & KEY SKILLS	Disciplinary Concept(s): Global & Cultural Awareness	
	Core Ideas:	Culture and geography can shape an individual’s experiences and perspectives.
	Performance Expectation/s:	9.4.5.GCA.1: Analyze how culture shapes individual and community perspectives and points of view
	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>	

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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>	X	Standards in Action: <i>Climate Change</i>
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