







Trimester	Unit Title	Recommended Instructional Days
3	Volume	9-11 days
Domain: Measurement		
<p><i>Strand:</i></p> <p> 5.M.B.2 Recognize volume as an attribute of solid figures and understand concepts of volume measurement. a. A cube with side length 1 unit, called a “unit cube,” is said to have “one cubic unit” of volume, and can be used to measure volume.</p> <p> 5.M.B.2 Recognize volume as an attribute of solid figures and understand concepts of volume measurement. b. A solid figure which can be packed without gaps or overlaps using n unit cubes is said to have a volume of n cubic units.</p> <p> 5.M.B.3 Measure volumes by counting unit cubes, using cubic cm, cubic in, cubic ft, and non-standard units.</p> <p> 5.M.B.4 Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume. a. Find the volume of a right rectangular prism with whole-number side lengths by packing it with unit cubes, and show that the volume is the same as would be found by multiplying the edge lengths, equivalently by multiplying the height by the area of the base. Represent threefold whole-number products as volumes, e.g., to represent the associative property of multiplication.</p> <p> 5.M.B.4 Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume. b. Apply the formulas $V = l \times w \times h$ and $V = B \times h$ for rectangular prisms to find volumes of right rectangular prisms with whole number edge lengths in the context of solving real world and mathematical problems.</p> <p> 5.M.B.4 Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume. c. Recognize volume as additive. Find volumes of solid figures composed of two non-overlapping right rectangular prisms by adding the volumes of the non-overlapping parts, applying this technique to solve real world problems.</p>		

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 16.1: How can we recognize a unit cube and how to use it to build a three-dimensional figure?

Lesson 16.2: How can we use unit cubes to find the volume of a rectangular prism?

Lesson 16.3: How can we use an everyday object to estimate the volume of a rectangular prism?

Lesson 16.4: How can we find the volume of a rectangular prism?

Lesson 16.5: How can we use a formula to find the volume of a rectangular prism?

Lesson 16.6: How can we find the volume of rectangular prisms that are combined?

Essential Understandings:

Lesson 16.1: Recognizing a unit cube and using it to build a three-dimensional figure involves understanding its dimensions and how these basic building blocks combine to form more complex shapes.

Lesson 16.2: Using unit cubes to find the volume of a rectangular prism involves counting the total number of unit cubes that fit inside the prism.

Lesson 16.3: Using an everyday object to estimate the volume of a rectangular prism involves comparing the object's size to the prism.

Lesson 16.4: Finding the volume of a rectangular prism involves calculating the total space inside the prism, using length, width, and height measurements.

Lesson 16.5: Using a formula to find the volume of a rectangular prism involves applying the volume formula $V = l \times w \times h$ to determine the total cubic units within the prism.

Lesson 16.6: Finding the volume of combined rectangular prisms involves calculating the volume of each individual prism and summing them.

Vocabulary

- unit cube
- cubic unit
- volume

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 #6 on TB page 603.
2. Problem #7 on TB page 609.
3. Problem #7 on TB page 615.

Art:

1. Connect to Art on TB page 590.

Spot Light On: *Show students the why behind how things are done when possible.*

Social and Emotional Learning: *Competencies*

- SEL Competencies:
- Self- awareness
 - Social Awareness
 - Self- Management
 - Relationship Skills
 - Responsible Decision-Making

Social and Emotional Learning: *Sub-Competencies*

- 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) <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>	
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 <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, 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
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 <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, 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): Responsible and Contributing Community Member	
	Core Ideas:	Curiosity and willingness to try new ideas (intellectual risk taking) contributes to the development of creativity and innovation.
	Performance Expectation/s:	9.4.5.CI.3: Participate in a brainstorming session with individuals with diverse perspectives to expand one’s thinking about a topic of curiosity.
	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.	

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