











Grade K Mathematics
Unit 18: Three-Dimensional Solids

Updated August 2024

Trimester	Unit Title	Recommended Instructional Days
3	Three-Dimensional Solids	6 - 12 days
Domain: Geometry		
<p><i>Strand:</i></p> <p> K.G.A.1 Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind, and next to.</p> <p> K.G.A.2 Correctly name shapes regardless of their orientations or overall size.</p> <p> K.G.A.3 Identify shapes as two-dimensional (lying in a plane, “flat”) or three-dimensional (“solid”).</p> <p> K.G.B.4 Analyze and compare two-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/”corners”) and other attributes (e.g., having sides of equal length).</p> <p> K.G.B.5 Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes. </p>		
<div style="display: flex; justify-content: space-around; align-items: center;"> <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>		
Mathematical Practices:		
<p><i>Progress Indicator:</i> ◊ Tests ◊ Homework / Classwork ◊ Projects ◊ Formative assessments ◊ Summative assessments ◊ Performance Based Assessments</p> <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 1: How can you identify, name, and describe spheres?
Lesson 2: How can you identify, name, and describe cubes?
Lesson 3: How can you identify, name, and describe cylinders?
Lesson 4: How can you identify, name, and describe cones?
Lesson 5: How can you compare three-dimensional shapes based on their similarities and differences?
Lesson 6: How can you identify and sort two- and three dimensional shapes?
Lesson 7: How can you use the terms above and below to describe shapes in the environment?
Lesson 8: How can you use the terms beside and next to to describe shapes in the environment?
Lesson 9: How can you use the terms in front of and behind to describe shapes in the environment?

Essential Understandings:

1. Identify, name, and describe spheres.
2. Identify, name, and describe cubes.
3. Identify, name, and describe cylinders.
4. Identify, name, and describe cones.
5. Compare three-dimensional shapes based on their similarities and differences.
6. Identify and sort two- and three dimensional shapes.
7. Use the terms above and below to describe shapes in the environment.
8. Use the terms beside and next to to describe shapes in the environment.
9. Use the terms in front of and behind to describe shapes in the environment.

Vocabulary:

- three-dimensional shape
- sphere
- curved surface
- cube
- flat surface
- edge
- cylinder
- cone

- flat
- solid
- above
- below
- beside
- next to
- in front of
- behind

Suggested Activity Description:

Playful engagement, Active Child, Daily calendar routine, Whole group mini-lesson, Small group explorations, 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 18.1)

Materials: paper bag, three-dimensional shapes

1. Talk about how people use their senses to see, hear, taste, smell, and touch. As you point to your eyes, ears, mouth, nose, and hands, discuss how each is used.
2. Explain that children are going to focus on their sense of touch by using their hands.
3. Have children watch as you place different shapes into a paper bag. Only one shape should be a sphere.
4. Have children take turns reaching into the bag to find the sphere. Ask that they use only their sense of touch.

Social Studies:


(Lesson 18.1)

Materials: globe

1. Display a globe and identify it for children.
2. What is this globe a model of? planet Earth
3. What shape is the globe and planet Earth?
4. Help children locate the oceans. Which color on the globe is used to show water?
5. Talk about the globe. Determine the colors used to show land.

Language Arts:

1. Vocabulary Builder TE pg. 706.

 Climate Change: Materials: Mini marshmallows, sugar cubes, sticks, glue, pictures of igloos and ice formations. Students will use three-dimensional shapes (cubes and cylinders) to build igloos and ice formations. With prompting and support, students may ask and answer questions about the effects of sunlight on ice.			
Spot Light On: Group work/stations where classmates are included.			
Social and Emotional Learning: Competencies		Social and Emotional Learning: Sub-Competencies	
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. • 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	Reteaching worksheets, Skill building workbook, Math	Multilingual glossary, eGlossary, Multilingual Activities on ED,	ST MATH special projects, Enrichment worksheets, Art of

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<p>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</p>	<p>manipulatives, iTools, Leveled practice worksheets</p>	<p>Vocabulary Cards, Success for English Learners worksheets, Leveled Strategies for English Learners, Linguistic Support</p>	<p>Problem Solving, Leveled assessments</p>
<p>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>Differentiated Student Access to Content: Recommended <i>Strategies & Techniques</i></p>			
<p>Core Resources</p>	<p>Alternate Core Resources <i>IEP/504/At-Risk/ESL</i></p>	<p>ELL Core Resources</p>	<p>Gifted & Talented Core</p>
<p>Deliver instruction utilizing varied learning styles including audio, visual, and tactile/kinesthetic, provide individual instruction as needed, modify assessments and/or rubrics, repeat</p>	<p>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.</p>	<p>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.</p>	<p>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</p>

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	
	<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>
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