












Grade K Mathematics
Unit 17: Two-Dimensional Shapes

Updated August 2024

Trimester	Unit Title	Recommended Instructional Days
3	Two-Dimensional Shapes	10 - 14 days
Domain: Geometry		
<p><i>Strand:</i></p> <ul style="list-style-type: none">  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.  K.G.A.2 Correctly name shapes regardless of their orientations or overall size.  K.G.A.3 Identify shapes as two-dimensional (lying in a plane, “flat”) or three-dimensional (“solid”).  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).  K.G.B.5 Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.   K.G.B.6 Compose simple shapes to form larger shapes. <i>For example, “can you join these two triangles with full sides touching to make a rectangle?”</i> 		
<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>		
<p>Progress Indicator: ◇ Tests ◇ Homework / Classwork ◇ Projects ◇ Formative assessments ◇ Summative assessments ◇ Performance Based 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: How can you identify and name circles?

Lesson 2: How can you describe circles?

Lesson 3: How can you identify and name squares and rectangles?

Lesson 4: How can you describe squares and rectangles?

Lesson 5: How can you identify and name triangles?

Lesson 6: How can you describe triangles?

Lesson 7: What is a hexagon?

Lesson 8: What is a hexagon?

Lesson 9: How can you compare two-dimensional shapes based on their similarities and differences?

Lesson 10: How can you combine shapes to make larger shapes?

Essential Understandings:

1. Identify and name circles.

2. Describe circles.

3. Identify and name squares and rectangles.

4. Describe squares and rectangles.

5. Identify and name triangles.

6. Describe triangles.

7. Identify and name hexagons.

8. Describe hexagons.

9. Compare two-dimensional shapes based on their similarities and differences.

10. Combine shapes to make larger shapes.

Vocabulary:

- two-dimensional shape
- circle
- curve
- square
- rectangle
- side
- vertex
- vertices
- corner
- sides of equal length
- triangle
- hexagon
- alike
- different

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 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:

Science:

(Lesson 17.2)

Discuss the difference between natural and human made objects.

1. What things found in nature have a curve, like a circle? Possible answers: the sun, a grape, the center of a sunflower
2. Have children describe the object they name.
3. Then have them draw a picture. Use the children's pictures to create a bulletin board of natural objects that have a curve like a circle.

(Lesson 17.5)

Materials: two-dimensional shapes, empty box

1. Ask children to watch as you let several shapes fall to the ground. Ask a volunteer to identify and name the shapes. Discuss how objects fall to the floor or the ground when nothing stops the fall.
2. Hold several shapes above an empty box and ask children to watch as you drop several shapes into it. Have a volunteer identify and name the shapes.
3. Ask children to tell what happened and why. Discuss the fact that the shapes did not fall to the floor or the ground because the box held them up.

(Lesson 17.9)

Materials: drawing paper, crayons

1. Ask children to name their favorite animals and to tell what they know about them. Compare two of the animals, noting how they are alike or different.
2. Have children suggest how they might use shapes to draw their favorite animal, and draw it for them on the whiteboard.
3. After the drawing is completed, have children identify the shapes that were used.
4. Then give children crayons and drawing paper, and invite them to use shapes to draw any animal, real or imaginary.

Social Studies:

(Lesson 17.2)

1. Discuss how some stories have been passed down from long ago and are still told today.
2. Explain that people long ago made an alphabet so they could write down stories and information they wanted to share and keep.
3. Tell children that some letters and numbers are made with circles.
4. Help children name the letters and numbers that are formed using circles: a, b, d, g, o, p, q and 0, 6, 9, 10.

(Lesson 17.5)

Materials: crayons, paper, scissors

1. Take children on a neighborhood walk to look for different shapes. Look for shapes on trees, flowers, sidewalks, and buildings.
2. Have children choose a shape or two that they saw on the walk and cut that shape out of construction paper. Children can use the shapes that they cut out to create a picture of what they saw.
3. Remind children that they can use more than one shape to create their picture.

(Lesson 17.9)

Materials: American flag

1. Display an American flag. Discuss how it is a symbol for the United States. Tell children that some people like to wave American flags, especially on days like July 4, Memorial Day, and Flag Day.
2. Ask children to identify the flag's matching sides that are long and the matching sides that are short.
3. What shape is an American flag if it has two long sides and two short sides?
4. Then call attention to other parts of the flag, such as the stripes, the stars, and the blue box surrounding the stars.
5. What parts of this flag are alike?
6. How are the stripes different?

Language Arts:

1. And the Wheels Go - (From the Differentiated Centers Kits Grab and Go)
2. What Do You See? - (From the Differentiated Centers Kits Grab and Go)



Climate Change: Students may use sticks and clay to model trees and umbrellas and may then draw shapes (e.g., triangle, rectangle) to model those objects. With prompting and support, they may ask and answer questions about how trees and umbrellas may be used to reduce the warming effect of sunlight.

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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 <u>Resources/Materials</u>			
Core Resources	Alternate Core Resources IEP/504/At-Risk/ESL	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,	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

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Achieve the Core, Desmos, RTI			
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 <u>Strategies & Techniques</u>			
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	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

LITERACIES & KEY SKILLS		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>