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Cliffside Park Public Schools

Kindergarten

Mathematics

Topic Name: Topic 12: Identify and Describe Shapes

Resource: enVision Math 2.0, Pearson, 2016

Duration: April:

Topic 12 (10 days)

Enduring Understandings

Topic 12

- Objects have shapes. Some objects, such as a piece of paper or a photograph are two-dimensional or flat shapes. Some objects such as a ball, can, box, or jar, are three-dimensional or solid shapes.
- A circle is round and does not have any corners (vertices). A triangle has three side and three corners (vertices)
- Flat shapes called rectangles have 4 sides and 4 vertices that look the same. A rectangles look like a door. A square is a special rectangle because their sides are all the same length.
- Six-sided flat shapes are called hexagons. These shapes can be found in objects made by people or in nature.
- Sphere, cylinders, cones, and cubes are solid figures. Many everyday objects closely approximate these figures.
- Objects have shape. Some objects look like flat shapes or solid shapes, including squares, rectangles, triangles, circles, hexagon, spheres, cubes, cylinders, cones.
- The positions of objects in relation to surrounding objects can be described using words such as above, below, beside, in front of, behind, and next to.
- Good math thinkers are careful about what they write and say, so their ideas about math are clear.



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Essential Questions

Topic 12

- How are objects that have solid shapes different from objects that have flat shapes?
- How do you tell the difference between a circle and a triangle?
- What makes a square a special rectangle?
- How do you know whether a shape is a rectangle?
- How are spheres, cubes, cylinders, and cones the same?
- What shapes can you use to describe objects in the environment?
- Why is it important to explain your answers?

Focus of Standards

Student Outcomes	Skills	Assessments	Resources
<p>Topic 12</p> <ul style="list-style-type: none"> • I can name shapes as flat or solid, • I can identify and describe circles and triangles. • I can identify and describe squares and other rectangles. • I can describe and identify hexagons • I can describe and identify solid figures. • I can describe shapes in the environment. • I can describe positions of shapes in the environment, • I can describe positions of shapes in the environment, 	<ul style="list-style-type: none"> • Solving problems • Understanding concepts • Reasoning 	<p>Formative</p> <ul style="list-style-type: none"> • Diagnostic assessment • Exit tickets • Round robin group work • Analysis of homework • Class polls <ul style="list-style-type: none"> ◦ Show of hands: 1 for all set, 2 for just ok, 3 for help • One thing I 	<p>Envision Math 2.0</p> <p>Digital</p> <ul style="list-style-type: none"> • <i>Student and Teacher eTexts</i> • <i>Interactive Math story</i> • <i>Home-School Connection</i> <p>Classroom Math Materials</p> <ul style="list-style-type: none"> • 2-D and 3-D Shapes



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		<p>learned/One thing I need work on</p> <p>Summative</p> <ul style="list-style-type: none"> ● End topic tests ● Post group topic ● EOY tests ● SGO tests <p>Benchmark</p> <ul style="list-style-type: none"> ● Diagnostic Assessment ● Pearson benchmark tests <p>Alternative</p> <ul style="list-style-type: none"> ● Math diagnosis and intervention system 2.0 ● Reteaching Set ● Online Learning <ul style="list-style-type: none"> ○ Games ● Higher Order Thinking Problems ● Leveled homework and practice ● Center games ● One on one conferencing 	<ul style="list-style-type: none"> ● Index cards ● Circles ● Triangles ● Squares ● Attribute locks ● Hexagons ● Pattern blocks ● Real life objects ● Geometric solids ● Tape ● Connecting cubes ● Counters ● Geometric solids ● 3-column chart with top row illustrating actions of <i>roll</i>, <i>stack</i>, and <i>slide</i> ● Yarn ● String ● Pipe cleaners ● Small cubes, ● Building with solid figures ● Craft sticks
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Vocabulary

Topic 12

Sort, two-dimensional shape (flat), three-dimensional shape (solid), circle, side, triangle, vertex/vertices (corner), rectangle, square, hexagon,



cone, cube, cylinder, sphere, above, behind, below, beside, in front of, next to

NJ Student Learning Standards: Math

Topic 12

Geometry

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- and three-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).

Standards for Mathematical Practice

MP1. Make sense of problems and persevere in solving them.

MP2. Reason abstractly and quantitatively.

MP3. Construct viable arguments and critique the reasoning of others.

MP4. Model with mathematics.

MP5. Use appropriate tools strategically.

MP6. Attend to precision.

MP7. Look for and make use of structure.

MP8. Look for and express regularity in repeated reasoning.

Career Ready Practices

CRP1. Act as a responsible and contributing citizen and employee.

CRP2. Apply appropriate academic and technical skills.

CRP3. Attend to personal health and financial well-being.

CRP4. Communicate clearly and effectively and with reason.

CRP5. Consider the environmental, social and economic impacts of decisions.

CRP6. Demonstrate creativity and innovation.

CRP7. Employ valid and reliable research strategies.

CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.

CRP9. Model integrity, ethical leadership and effective management.



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- CRP10.** Plan education and career paths aligned to personal goals.
- CRP11.** Use technology to enhance productivity.
- CRP12.** Work productively in teams while using cultural global competence.

NJSLS Technology Standards

8.1 Educational Technology

E: Research and Information Fluency: Students apply digital tools to gather, evaluate, and use information.

8.1.2.E.1 Use digital tools and online resources to explore a problem or issue.

8.2 Technology Education, Engineering, Design, and Computational Thinking

E. Computational Thinking: Programming: Computational thinking builds and enhances problem solving, allowing students to move beyond using knowledge to creating knowledge.

8.2.2.E.1 List and demonstrate the steps to an everyday task.

Interdisciplinary Connections

NJSLS for ELA and Science are introduced, developed, and practiced in the context of learning math content and engaging in mathematical practices.

ELA

- RI.K.3. With prompting and support, describe the connection between two individuals, events, ideas, or pieces of information in a text.
- NJSLSA.SL2. Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally.
- L.K.6. Use words and phrases acquired through conversations, reading and being read to, and responding to texts.

Science

- K-PS2-1 Scientists use different ways to study the world.
- K-LS1-1 Scientists look for patterns and order when making observations about the world.

NJSLS: 21st Century Life and Careers

Key Subjects and 21st Century: Themes Mastery of key subjects and 21st century themes is essential to student success. Key subjects include English, reading or language arts, world languages, arts, mathematics, economics, science, geography, history, government and civics. In



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addition, schools must promote an understanding of academic content at much higher levels by weaving 21st century interdisciplinary themes into key subjects:

- Relate the following standards to careers that involve mathematics

9.2.4.A.1 Identify reasons why people work, different types of work, and how work can help a person achieve personal and professional goals

9.2.4.A.4 Investigate both traditional and nontraditional careers and relate information to personal likes and dislikes.



Integrated Differentiation/Accommodations/Modifications <i>(Alternate Modes of Instruction and Support)</i>		
Modifications to Support Gifted and Talented Students	Modifications to Support English Language Learners	Modifications to Support Our Learners (Students with IEPs/504s and At-Risk Learners)
<p>Provide appropriate challenge for wide ranging skills and development areas.</p> <p>Participate in inquiry and project-based learning units of study</p> <p>Assigning roles within partnerships</p> <p>Differentiated supports: content, process, product, environment</p>	<p>Native Language Translation (peer, online assistive technology, translation device, bilingual dictionary)</p> <p>Pair visual prompts with verbal presentations</p> <p>Front load and immerse students in literacy and language experiences related to content</p> <p>Provide students with visual models, sentence stems, concrete objects, and hands-on materials.</p> <p>Model procedures for life skills.</p> <p>Collaboration between ELL and general education teacher to maximize learning</p>	<p>Review student individual educational plan and/or 504 plan.</p> <p>Establish procedures for accommodations and modifications for assessments as per IEP/504.</p> <p>Establish procedures for modification of classwork and homework as per IEP/504.</p> <p>Modify classroom environment to support academic and physical needs of the students as per IEP/504.</p> <p>Provide appropriate accommodations, instructional adaptations, and/or modifications as determined by the IEP or 504 team.</p> <p>Differentiation through content, process, product, environment</p> <p>Provide Title I services to students not meeting academic standards in ELA and/or Math.</p> <p>Provide instructional adaptations and interventions in the general education classroom.</p> <p>Modify classroom environment to support student needs.</p> <p>Differentiated instruction</p>



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		Basic Skills Intensive individual intervention
Sources New Jersey Student Learning Standards (2016) http://www.state.nj.us/education/cccs/2016/math/standards.pdf New Jersey Student Learning Standards: Technology (2014) - http://www.state.nj.us/education/cccs/2014/tech/8.pdf New Jersey Student Learning Standards: ELA (2014) - https://www.state.nj.us/education/cccs/2016/ela/k.pdf New Jersey Science and Engineering Practices - https://www.state.nj.us/education/aps/cccs/science/resources/QRk2.pdf New Jersey Career Awareness, Exploration, and Preparation - https://www.state.nj.us/education/cccs/2014/career/92.pdf Pearson enVision 2.0 (2016) https://www.pearsonrealize.com/index.html#/		