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Cliffside Park Public Schools

Grade 4

Mathematics

Topic Name: Continue Topic 15

Topic 16: Lines, Angles, and Shapes

Resource: enVision Math 2.0, Pearson, 2016

Duration: May

Enduring Understandings

Topic 16

- Lines can be classified as parallel, intersecting, or perpendicular.
- Triangles are classified by their sides and by their angles.
- Quadrilaterals are classified by their sides and by their angles.
- A shape that can fold along a line into matching parts is line symmetric.
- Good math thinkers use math to explain why they are right. They can talk about the math that others do, too.

Essential Questions

Topic 16

- How can you classify triangles and quadrilaterals?
- What is line symmetry?
- How can you describe a pair of lines?
- How can you draw figures with line symmetry?

Focus of Standards

Student Outcomes	Skills	Assessments	Resources
Topic 16	<ul style="list-style-type: none"> • Solving problems • Understanding 	Formative <ul style="list-style-type: none"> • Diagnostic assessment 	Envision Math 2.0 Digital



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<ul style="list-style-type: none"> • I can draw and identify perpendicular, parallel and intersecting lines. • I can reason about line segments and angles to classify triangles. • I can reason about line segments and angles to classify quadrilaterals. • I can recognize and draw lines of symmetry and identify line-symmetric figures. • I can draw a figure that has line symmetry. • I can critique the reasoning of others by using what I know about two-dimensional shapes. 	<ul style="list-style-type: none"> • Reasoning 	<ul style="list-style-type: none"> • Study Island • Xtra Math • Exit tickets • Round Robin group work <ul style="list-style-type: none"> ◦ Open ended questions ◦ May/may not be game activity • Analysis of student homework • Class polls <ul style="list-style-type: none"> ◦ Show of hands: 1 finger ok, 2 fingers need help, 3 fingers lost • One thing I learned/One thing I need work on <p>Summative</p> <ul style="list-style-type: none"> • End topic tests • Group topic assessment • EOY test • SGO tests <p>Benchmark</p> <ul style="list-style-type: none"> • Diagnostic assessment 	<ul style="list-style-type: none"> • Student and Teacher eTexts • Interactive Math story • Home-School Connection <p>Classroom Math Materials</p> <ul style="list-style-type: none"> • Street map • Markers • Scissors • Straws • Glue • Centimeter grid paper • Pattern blocks • Construction paper • Dot paper • Centimeter ruler • Inch ruler
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		<ul style="list-style-type: none"> • Pearson benchmark tests • PARCC test <p>Alternative</p> <ul style="list-style-type: none"> • Work paper from tests will also be graded for additional points if reasoning is clear and correct, even if answer is wrong • One on one conferencing • Oral presentation on math strand • Weekly time capsule:summary of what was learned • Topic Pattern search: find the thread in topic • Crosswords with math vocab 	
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Vocabulary

Topic 16: parallel lines, perpendicular lines, intersecting lines, right triangle, obtuse triangle, acute triangle, equilateral triangle, isosceles triangle, scalene triangle, parallelogram, rectangle, square, rhombus, trapezoid, line symmetric, line of symmetry

NJ Student Learning Standards: Math

Geometry

4.G.A.1 Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in



two-dimensional figures.

4.G.A.2 Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize right triangles as a category, and identify right triangles.

4.G.A.3 Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry.

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.

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



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8.1 Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.

8.1.5.A.1 Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems.

8.1.5.A.3 Use a graphic organizer to organize information about a problem or issue.

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 Standards

- RL.4.1. Refer to details and examples in a text and make relevant connections when explaining what the text says explicitly and when drawing inferences from the text.
- RI.4.1. Refer to details and examples in a text and make relevant connections when explaining what the text says explicitly and when drawing inferences from the text.
- RI.4.3. Explain events, procedures, ideas, or concepts in a historical, scientific, or technical text, including what happened and why, based on specific information in the text.
- RI.4.4. Determine the meaning of general academic and domain-specific words or phrases in a text relevant to a grade 4 topic or subject area.

Science

- 4-PS3-1 Use evidence (eg., measurements, observations, patterns) to construct an explanation.
- 4-LS1-1 Construct an argument with evidence, data, and/or a model.
- 4-ESS1-1 Identify the evidence that supports particular points in an explanation.

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

- Global Awareness



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- Financial, Economic, Business and Entrepreneurial Literacy

9.1.4.C.5 Determine the relationship among income, expense and interest

9.1.4.D.2 Explain what it means to “invest”.



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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/g04.pdf New Jersey 21st Century Life and Careers 9.1 - https://www.state.nj.us/education/cccs/2014/career/91.pdf New Jersey Science and Engineering Practices - https://www.state.nj.us/education/aps/cccs/science/resources/QR35.pdf Pearson enVision 2.0 (2016) https://www.pearsonrealize.com/index.html#/		