

Grade K Mathematics – Unit 4: Solid and Flat Shapes

Phoenixville Area School District

Stage 1 Desired Results			
<p>PA Core Standards: CC.2.3.K.A.1 Identify and describe two- and three-dimensional shapes.</p> <p>CC.2.3.K.A.2 Analyze, compare, create, and compose two- and three-dimensional shapes.</p>	Transfer		
	<p>TRANSFER GOALS <i>Students will be able to independently use their learning to...</i></p> <ul style="list-style-type: none"> • <i>Number Sense:</i> Develop a sound foundation to demonstrate the value of numbers by describing their various representations, relationships, and patterns. • <i>Problem-Solving:</i> Persistently apply various problem-solving strategies and organized approaches to accurately understand and solve problems • <i>Mathematical Vocabulary:</i> Interpret mathematical vocabulary and apply proper terminology to engage in meaningful oral and written expression that communicates mathematical thinking, problem-solving methods, and rationale. 		
	Meaning		
	<table border="1"> <tr> <td> <p>UNDERSTANDINGS <i>Students will understand that...</i></p> <ul style="list-style-type: none"> • Mathematics is a language of carefully defined terms and symbols. • -Mathematicians think about reasonableness throughout the problem-solving process. • -A shape's characteristics (dimensionality, side measures, angle measures, faces, edges, area, perimeter, and volume) are used for identification. • -Concepts of congruency and similarity are used to relate and compare two- and three-dimensional figures. • -Points, lines, and planes are the building blocks of geometry. </td> <td> <p>ESSENTIAL QUESTIONS <i>Students will keep considering...</i></p> <ul style="list-style-type: none"> • How is mathematics used to quantify and compare situations, events and phenomena? • Have I sufficiently supported my answer and shown my work? • How are geometric shapes and objects measured/classified/compare? </td> </tr> </table>	<p>UNDERSTANDINGS <i>Students will understand that...</i></p> <ul style="list-style-type: none"> • Mathematics is a language of carefully defined terms and symbols. • -Mathematicians think about reasonableness throughout the problem-solving process. • -A shape's characteristics (dimensionality, side measures, angle measures, faces, edges, area, perimeter, and volume) are used for identification. • -Concepts of congruency and similarity are used to relate and compare two- and three-dimensional figures. • -Points, lines, and planes are the building blocks of geometry. 	<p>ESSENTIAL QUESTIONS <i>Students will keep considering...</i></p> <ul style="list-style-type: none"> • How is mathematics used to quantify and compare situations, events and phenomena? • Have I sufficiently supported my answer and shown my work? • How are geometric shapes and objects measured/classified/compare?
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Knowledge and Skills Acquisition			
KNOWLEDGE <i>Students will...</i> <ul style="list-style-type: none"> Recognize, name, and draw 2D shapes (circle, triangle, square, rectangle, hexagon) Recognize and name basic 3D shapes (cube, cone, cylinder, sphere, pyramid) Describe basic 2D and 3D shapes Recognize the relationship between 2D and 3D shapes Identify basic 2D within a scene 		SKILLS <i>Students will be skilled at...</i> <ul style="list-style-type: none"> Recognizing and naming basic 2D shapes (circle, triangle, square, rectangle, hexagon) verbally. Recognizing and naming basic 3D shapes (cube, cone, cylinder, sphere, pyramid) verbally. Describing basic 2D shapes verbally using number of sides up to six. Describing basic 3D shapes verbally using terms such as faces, edges, and corners. Identifying a 2D shape verbally within a 3D shape given a manipulative or picture. 	
VOCABULARY <ul style="list-style-type: none"> 2D Shape 3D Shape Face Edge Corner 			

Stage 2 – Evidence

Code A/M/T	Evaluative Criteria	Assessment Evidence	
A/M/T Acquisition Meaning Making Transfer	<i>What criteria will be used in each assessment to evaluate attainment of the desired results?</i>	PERFORMANCE TASK(S) <i>Students will demonstrate understanding (meaning-making and transfer) through complex performance by...</i> Performance Task A: Create a picture for a house by tracing 3D shapes onto your canvas. You will identify 2D shapes verbally from your blueprint drawing. <ul style="list-style-type: none"> <i>Goal:</i> Your task is to create a picture for a house by tracing 3D shapes onto your canvas. You will identify 2D shapes verbally from your blueprint drawing. <i>Role:</i> You are an artist. <i>Audience:</i> The homeowner. 	Differentiation Considerations: <ul style="list-style-type: none"> IEP/ 504 plans Small group instruction One-on-one conferring

		<ul style="list-style-type: none"> • <i>Product:</i> Given the following 3D shapes (cube, cone, cylinder, sphere, pyramid) you will create a picture. Your picture must include: a house with a roof, bushes and a sun. • <i>Success Criteria:</i> Your picture must include the appropriate 2D shape name associated with the 3D shape that was used. Your picture must include: a house with a roof (made from a cube and pyramid,) bushes (made from a cone, cylinder, sphere, or pyramid) and a sun (made from a cone, cylinder or sphere.) 	<ul style="list-style-type: none"> • Vocabulary Posters • Individual goal setting • Audio and visual supports • Various questioning strategies • Strategic partnering • Flexible Math Groups • Extra Practice • Enrichment • Space for movement and breaks • Additional time as needed • Review directions • Restate information
<p>A/M/T</p> <p>Acquisition</p> <p>Meaning Making</p> <p>Transfer</p>	<p><i>What criteria will be used in each assessment to evaluate attainment of the</i></p>	<p>OTHER EVIDENCE</p> <ul style="list-style-type: none"> • Teacher created identification checklist of flat and solid shapes (identify & name) and describe basic flat shapes verbally using number of sides up to six (flat shapes only - circle, triangle, square, rectangle, hexagon.) • White board assessment- draw 2D shapes • Teacher created checklist to analyze and compare 2D and 3D shapes (circle and cone/cylinder/sphere, triangle and pyramid, square and cube.) Students need to compare knowing how they are similar and different. 	<p>Differentiation Considerations:</p> <ul style="list-style-type: none"> • IEP/ 504 plans • Small group instruction

	<i>desired results?</i>		<ul style="list-style-type: none">• One-on-one conferring• Vocabulary Posters• Individual goal setting• Audio and visual supports• Various questioning strategies• Strategic partnering• Flexible Math Groups• Extra Practice• Enrichment• Space for movement and breaks• Additional time as needed• Review directions• Restate information
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