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Understanding by Design

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Shapes

Beth Morrow *Trinity University*

Anne Peppers Trinity University

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UNDERSTANDING BY DESIGN

Unit Cover Page

Unit Title: Shapes

Grade Level: Pre-Kindergarten

Subject/Topic Area(s): Mathematics

Designed By: Beth Morrow and Anne Peppers

Time Frame: 1 week

School District: East Central Independent School District

School: East Central Development Center

School Address and Phone: 12271 Donop Rd.

San Antonio, TX 78223

(210) 633-3020

Brief Summary of Unit:

This unit addresses the Texas Pre-Kindergarten Guidelines "Child recognizes/describes common shapes" (MVC1) and "Child slides, flips, turns shapes to demonstrate they remain the same" (MVC4), as well as the math standard "Child covers an area with shapes." At the conclusion of this unit, students will know:

- names and features (number of sides/angles) of common shapes: rectangle, square, triangle, circle, oval, and rhombus; and
- shapes remain the same regardless of their position;

and will be able to:

- identify and describe common shapes: rectangle, square, triangle, circle, oval, and rhombus
- cover an area with shapes and explain how they did so
- combine shapes to create an image

Stage 1 – Desired Results								
			Two	nafor				
Established Goals (Texas Pre-Kindergarten Guidelines) Child recognizes/describes common shapes (MVC1) Child slides, flips, turns shapes to demonstrate they remain the same (MVC4) Child covers an area with shapes (assessment)		Students will independently use their learning to - Identify shapes - Describe shapes - Combine shapes to create an image - Cover an area with shapes - Weaning Understandings Students will understand that Shapes can be flipped, turned, or slid but remain the same shape - Objects around them are made of shapes						
		Know		isition Skills				
			Names and features (number of sides/angles) of common shapes: rectangle, square, triangle, circle, oval, and rhombus Shapes remain the same regardless of their position	- Identify and describe common shapes: rectangle, square, triangle, circle, oval, and rhombus - Cover an area with shapes and explain how they did so - Combine shapes to create an image				
			Stage 2 – Evidence					
CODE (M or T)	Evaluative Criteria (for rubric)							
A M /T	- Combines shapes - Creates an image - Describes images - Identifies shapes used		Performance Task(s) Students will demonstrate meaning-making and transfer by 1. Students will use attached Math Mat with shapes to name and describe the following shapes: circle, square, rectangle, rhombus, triangle, and oval. 2. Combine shapes to create an image of their choosing and describe the image and identify the shapes used.					
М			Other Evidence (e.g., formative) 1. Cover an area with shapes (observation during morning work/centers; EMAT assessment)					
Stage 3 – Learning Plan								
CODE	Pre-Assessment							

(A, M, T)	Morning work Day 1-2: Shape and shape name tracing – students will trace a					
	and draw one more, trace the name of the shape, and name each shape to the teacher when finished.					
	when mished.					
	Learning Activities	Progress Monitoring				
A/M	1 Later duce shows writ and EO #1 Dood Cinous	(e.g., formative data)				
A) IVI	1. Introduce shapes unit and EQ #1. Read <u>Circus</u> <u>Shapes</u> (Stuart J. Murphy). Students will participate					
	in a shape scavenger hunt around the classroom, then					
	return to the carpet with their finding(s). Together,	Scavenger hunt				
	we will name the shapes and graph them. In small	findings/sorting				
	groups, teacher will introduce and assign Lakeshore					
	Shape Boxes then students will be invited to find something in the classroom of the same shape, return	Identification of				
	to the group, and share the contents of their shape	shape box and				
	boxes with the group.	contents				
М	2. Read When a Line Bends, a Shape Begins (Rhonda					
	Gowler Greene), invite students to participate in Shape Memory Game. Students will choose a card,					
	look at the shape on their cards, and find their shape					
	partner. Together they will locate 2 items in the room	Shape identification				
	of the same shape and share with the class. In small					
	groups, students will participate in color and shape	BINGO				
	BINGO with the teacher. 3. Read <u>Shape Spotters</u> (Megan E. Bryant) and	BINGO				
A/M	introduce EQ #2. Students will participate in shape					
Ayivi	musical chairs, naming the shape on their chairs and	Shape/object naming				
	name something in real life that contains that shape.					
	The class will repeat the shape name, draw it in the air, and add any additional ideas. Students will use	Additional ideas				
	tangrams and pattern mats in small groups to create	7 Idditional Ideas				
	images with shapes and cover an area with shapes.					
	4. Read <u>The Shape of Things</u> (Dayle Ann Dodds) and					
	introduce partner task: find one example of each basic shape in a magazine, cut it out, and place it on	Shapes				
M/A	the appropriate poster. Individual: EMAT Task	found/identified				
,	(covers an area with shapes) and Math Mat	Sorting				
	assessment (identifying shapes).					
	5. Read <u>Shape by Shape/Sea Shapes</u> (Susie MacDonald). Performance task 2: Student will use a					
	supply of multicolored, differently-sized die-cut					
M/T	shapes to combine shapes and create an image of					
	their choosing, then describe the image and identify the shapes used.					
	Center activities:					

- Play-Doh shape mats
- Shape snacks (different type of cereal)
- Shaving cream shape tracing

Reinforcement:

- Have students name the shape on a flashcard in order to line up, go to centers, etc.

Rubric for Performance Task 1 (Pacing Guide assessment):

+ names 6 shapes

 $\sqrt{\text{names } 3-5 \text{ shapes}}$

- names 0-2 shapes

Rubric for Performance Task 2:

	-		+
Combines shapes	Child does not	Child uses shapes in	Child uses multiple
	combine shapes (uses	isolation	shapes, combined
	one shape)		
Creates an image	Child does not create	Child creates a partial	Child creates a
	an image	image	complete image
Describes images	Child does not	Child gives an	Child gives a
	describe project	inaccurate description	complete, accurate
			description of
			image(s)
Identifies shapes used	Child does not	Child correctly	Child correctly
	correctly identify	identifies some shapes	identifies all shapes
	shapes		used

EMAT assessment guidelines:

- 1. Ask student to use tiles to cover square. *
- 2. Ask student to use tiles to cover L shape.*
- 3. Ask student to use tiles to cover circle.
- 4. Ask, "Was it harder to cover the circle than the other shapes? Why?" (Students must say it was harder to cover the circle and that it was because it has no corners/no sides.)

^{*}Students should keep the tiles within the boundaries of the shape, should leave no large open spaces, and should not stack the tiles.