## THIRD TERM WEEKLY LESSON NOTES WEEK 10

Week Ending: 01	nding: 01-09-2023 DA			Subject: Mathematics		
Duration: 60MINS				Strand: Geometry & Measurement		
Class: B8	Class Size: Sub Strand: Posit		Sub Strand: Position & Tr	ransformation		
<b>Content Standard:</b> B8.3.3.1 Perform a single transform rotation) on a 2D shape using grap		nation (i.e. oh paper.	Indicator: B8.3.3.1.1 Under real-life situation	rstand rotation and identify ns involving rotation.		
Performance Indic Learners can under situations involving	and identify	real-life	<b>Core Competencies:</b> Communication and Collaboration (CC) Critical Thinking and Problem solving (CP)			
<b>References:</b> Mather	matics Curricul	um Pg. 150				
Dha a a /Danna ti a n	1 <b>A</b>				Deserves	
Phase/Duration	Learners Acti	vities	a previous lesson	•	Resources	
STARTER			le pi evious lessoi			
	Share perforr lesson.	nance indica	tors with learners	and introduce the		
PHASE 2: NEW LEARNING	<ul> <li>Start by spinning a bottle top or use the clock.</li> <li>Engage learners with a question: "Have you noticed how things rotate around us every day?"</li> <li>Define rotation in mathematical terms, relating it to a central point.</li> <li>Using a clock, explain how the hands move in a particular direction.</li> <li>Introduce the terms "clockwise" and "anti-clockwise".</li> <li>Use the whiteboard to draw examples of both rotational movements.</li> <li>Discuss everyday scenarios where rotation is evident: <ul> <li>Turning a doorknob</li> </ul> </li> </ul>			Counters, bundle and loose straws base ten cut square, Bundle of sticks		
	<ul> <li>Spin</li> <li>Oper</li> <li>The</li> <li>Ask learners</li> <li>example as o</li> <li>Use interact</li> <li>rotating.</li> </ul>	ing a bicycl ning a jar lic rotation of to identify clockwise o ive digital to	the nature of th r anti-clockwise.	e rotation for each show different items		

	Let learners change the direction of rotation to see the
	difference between clockwise and anti-clockwise movements.
	Discuss why understanding the direction of rotation might be important in certain situations.
	Assessment
	Divide learners into small groups.
	Task them with identifying 3-5 objects or scenarios in the
	classroom or their memory where rotation is essential and
	determining the nature of that rotation (clockwise or anti-
	clockwise).
	Allow learners a few minutes to discuss and list down their
	observations.
PHASE 3:	Use peer discussion and effective questioning to find out from
REFLECTION	learners what they have learnt during the lesson.
	I ake feedback from learners and summarize the lesson.

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Duration: 60MINS		L		Strand: Geometry & Measurement	
Class: B8	Class Size: Sub Strand: Position &		ransformation		
<b>Content Standar</b> B8.3.3.1 Perform rotation) on a 2D	<b>d:</b> a single transfo shape using gr	rmation (i.e. aph paper.	Indicator: B8.3.3.1.2 Drav coordinate plan of rotation.	w rotation image in a Lesson ne and determine the angle I of 2	
Performance Indicator:Core CoreLearners can draw rotation image in a coordinate plane and determine the angle of rotation.Core CoreCommunicationCore CoreCommunicationCoreCriticalCritical			<b>Core Competencies:</b> Communication and Collabo Critical Thinking and Probler	ration (CC) m solving (CP)	
References: Math	ematics Curric	ulum Pg. 152			
Phase/Duration PHASE I: <b>STARTER</b>	Learners Activities Revise with learners on the previous lesson.			Resources	
PHASE 2: NEW LEARNING	lesson.Give a briefIntroduce thplane.Explain the iShow how thprotractor.Discuss the270°.Highlight therotations.Introduce th90° c90° a180°270°270°Use the whitDistribute grPlot a simplethe whiteboxAsk learners	Share performance indicators with learners and introduce the lesson. Give a brief review of what rotation means in math. Introduce the concept of rotating a shape on a coordinate plane. Explain the importance of a center of rotation. Show how the angle of rotation is measured using a protractor. Discuss the most common angles of rotation: 90°, 180°, and 270°. Highlight the difference between clockwise and anti-clockwise rotations. Introduce the rules for rotating points on a coordinate plane: 90° clockwise: (x, y) becomes (y, -x) 90° anti-clockwise: (x, y) becomes (-y, x) 180°: (x, y) becomes (-x, -y) 270° clockwise: (x, y) becomes (-y, x) 270° anti-clockwise: (x, y) becomes (y, -x) Use the whiteboard to demonstrate a few examples. Distribute graph paper and protractors to each student. Plot a simple shape (e.g., a triangle) on the coordinate plane on			Counters, bundle and loose straws base ten cut square, Bundle of sticks

	Guide learners in rotating the shape 90° clockwise, plotting the
	Let learners verify the rotation using protractors.
	Repeat with other angles and directions.
	Assessment Plot the point A(2,3) on graph paper. Now, rotate it 90° clockwise about the origin. Plot the new point and label it A'. What are the coordinates of A'?
	Using a protractor and graph paper, plot the point B(4,2). Rotate this point 180° about the origin. Mark and label the new position B'. What are the coordinates of B'?
	Plot a triangle with vertices at $C(1,1)$ , $D(4,1)$ , and $E(2,5)$ . Rotate the triangle 270° anti-clockwise about the origin. Draw the new triangle and label its vertices C', D', and E'. What are their coordinates?
PHASE 3:	Use peer discussion and effective questioning to find out from
REFLECTION	learners what they have learnt during the lesson.
	Take feedback from learners and summarize the lesson.

Week Ending: 01-09-2023		DAY:		Subject: Mathematics	
Duration: 60MINS	5			Strand: Geometry & Measurement	
Class: B8	s: B8 C			Sub Strand: Position & Tr	ransformation
<b>Content Standar</b> B8.3.3.1 Perform rotation) on a 2D	<b>d:</b> a single transfo shape using gr	rmation (i.e. aph paper	Indicator: B8.3.3.1.3 Inve congruent shap	stigate the concept of Lesson:	
Performance Indicator: Learners can investigate the concept of congruent shapes.Core Competencies: Communication and Collab Critical Thinking and Proble			ration (CC) n solving (CP)		
References: Math	ematics Curric	ulum Pg. 152			
Phase/Duration	Learners Act	ivities			Resources
PHASE I: STARTER	Revise with learners on the previous lesson.				
	Share perforr lesson.	mance indicato	ors with learners	and introduce the	
PHASE 2: NEW LEARNING	Show how the angle of rotation is measured using a protractor.			Counters, bundle and loose straws	
	Discuss the most common angles of rotation: 90°, 180°, and 270°.				base ten cut square, Bundle of sticks
	Highlight the difference between clockwise and anti-clockwise rotations.				
	<ul> <li>Introduce the rules for rotating points on a coordinate plane:</li> <li>90° clockwise: (x, y) becomes (y, -x)</li> <li>90° anti-clockwise: (x, y) becomes (-y, x)</li> <li>180°: (x, y) becomes (-x, -y)</li> <li>270° clockwise: (x, y) becomes (-y, x)</li> <li>270° anti-clockwise: (x, y) becomes (y, -x)</li> </ul>				
	Use the whi	teboard to d	emonstrate a f	ew examples.	
	Distribute g Plot a simple the whitebo	raph paper ai e shape (e.g., ard or projec	nd protractors a triangle) on t ctor.	to each student. the coordinate plane on	
	Ask learners Guide learne new points l Let learners Repeat with	s to draw the ers in rotatin pased on the verify the ro other angles	e same shape of g the shape 90' rotation rules. ptation using pr and directions	n their graph paper. ° clockwise, plotting the otractors. 5.	
	Divide learn Assign each	ers into pairs group a diffe	s or small grou rent shape and	ps. angle of rotation.	

	Allow groups a few minutes to draw the original and rotated	
	shapes.	
	Assessment On graph paper, draw two seemingly congruent trapezoids, with one trapezoid's orientation different from the other. By rotating one of them, prove if they are congruent or not.	
	Plot a square with vertices at $F(1,1)$ , $G(3,1)$ , $H(3,3)$ , and $I(1,3)$ . Now, plot another square with vertices at $J(-1,-1)$ , $K(-1,-3)$ , $L(-3,-3)$ , and $M(-3,-1)$ . By rotating one of the squares, determine if the two squares are congruent.	
	Draw a rhombus on the coordinate plane. Next to it, draw another rhombus that looks congruent but is oriented differently. Using the rules of rotation, demonstrate (by rotating and marking the new coordinates) whether or not the two shapes are congruent.	
PHASE 3:	Use peer discussion and effective questioning to find out from	
REFLECTION	learners what they have learnt during the lesson.	
	Take feedback from learners and summarize the lesson.	