



Lesson Exemplar for Mathematics

Quarter 1 Lesson

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IMPLEMENTATION OF THE MATATAG K TO 10 CURRICULUM

Lesson Exemplar for Mathematics Grade 4 Quarter 1: Lesson 2 (Week 2) SY 2024-2025

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MATHEMATICS / QUARTER 1 / GRADE 4

I. CUI	RRICULUM CONT	ENT, STANDARDS, AND LESSON COMPETENCIES			
А.	Content Standards	The learners should have knowledge and understanding of the priorities of triangles and quadrilaterals.			
В.	Performance Standards	By the end of the quarter, the learners are able toClassify triangles and quadrilaterals, and differentiate quadrilaterals, by applying their properties.			
C.	Learning Competencies and Objectives	By the end of the quarter, the learners are able to1. Draw and state the properties of triangles and quadrilaterals.2. Classify triangles and quadrilaterals according to sides and angles.			
D.	Content	 Exploring the properties of triangles Classifying triangles by sides and by angles Discovering the properties of quadrilaterals Classifying Quadrilaterals 			
E.	Integration	Triangles and Quadrilateral in the designs of objects and structures			

II. LEARNING RESOURCES

BYJU'S Future School. (n.d.). What Are Some Real-Life Examples of Congruent Triangles? [Webpage]. https://www.byjusfutureschool.com/blog/what-are-some-real-life-examples-of-congruent-triangles/

K5 Learning. (n.d.). Grade 3 Geometry: Classify Triangles & Angles [PDF document]. <u>https://www.k5learning.com/worksheets/math/grade-3-geometry-classify-triangles-angles.pdf</u>

Live Worksheets. (n.d.). Geometry Worksheet [Webpage]. https://www.liveworksheets.com/w/en/geometry/737173

Math Worksheets 4 Kids. (n.d.). Classifying Triangles: Sides with Numerals [PDF document].

https://www.mathworksheets4kids.com/triangles/classifying/customary/sides-numerals-1.pdf

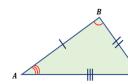
III. TEACHING AND LEA	NOTES TO TEACHERS				
A. Activating Prior Knowledge	A. Activating Prior Knowledge DAY 1 1. Short Review Look around you or inside our classroom and identify things or objects with the shape of a triangle. Can you name the "triangular" structures given below?				



We see triangles around us and all over the world! Can you think of some "triangular" structures that you can find in the Philippines?

DAY 2

Name the sides of the triangle below. What is the classification of this triangle based on its side?



DAY 3

- 1. What is a triangle? How many sides and angles does a triangle have?
- 2. Can you name and describe different types of triangles based on their side lengths and angles?
- 3. Image you have a triangle with one angle measuring 90 degrees. What is this type of triangle called?

DAY 4

- 1. What is a quadrilateral? How does it differ from a triangle in terms of the number of sides and angles?
- 2. Review what was learned in the previous lesson. How will you differentiate parallelogram, square, and rectangle? Can you draw it on the board?
- 3. Can you identify a quadrilateral with all sides of equal length and all angles at 90 degrees? What is this type of quadrilateral called?

DAY 5

Ask learners to recall what they know about triangles and quadrilaterals. Triangles:

- 1. How many sides does a triangle have?
- 2. If a triangle has one angle that measures 90 degrees, what type of triangle is it called?
- 3. Can a triangle have two sides of the same length? What is this type of triangle called?

Quadrilaterals:

- 1. What is a quadrilateral?
- 2. If a quadrilateral has all sides of equal length, what do we call it?
- 3. Draw a square and label its sides and angles.

Sample answers:

A local version of the Eiffel Tower is located in Pampanga and at Summit Resort Canaman, Camarines Sur, and Transfiguration Church (Malaybalay, Bukidnon). The teacher may ask questions to process the activity. Example: Focus on one face of each structure. How many sides are there in each triangular face?

DAY 2

Answers:

sides: <u>AB</u>, <u>BC</u>, <u>CA</u> The triangle is scalene. It has three different sides.

DAY 3

Answers:

- 1. A triangle is a 3-sided figure.
- Types of triangles according to sides: (a)isosceles, (b) scalene, (c) equilateral Types of triangles according to angles: (a) right, (b) acute, (c) obtuse
- 3. Right Triangle

DAY 4

Answers:

1. Quadrilateral is a 4-sided figure. It has 4 angles, while a triangle has 3 sides and 3 angles.

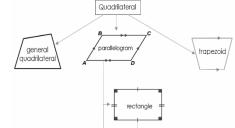
	2. Feedback (Optional)	 2. Parallelogram is a quadrilateral with 2 pairs of parallel sides. Rectangle is a parallelogram with 4 right angles. Square is a rectangle with equal sides. 3. Square DAY 5 Answers: (Triangles) 3 Right triangle Yes; Isosceles Triangle Answers: (Quadrilaterals) Quadrilateral is a 4-sided polygon.
B. Establishing	DAY 1 в	3. $H^{\perp} T$
Lesson Purpose	 1. Lesson Purpose Think and Share. Observe the triangle and answer the following questions: How many points (vertices) are there in the triangle? What are those points? What are the sides that connect the points? DAY 2 This time observe carefully the angles in the triangle. How many angles are there? What are those angles? Do you think the angles have the same measure or different measure? 	DAT 1The processing question on the given triangle will trigger learners' curiosity about the parts of the triangle. This will serve as a good springboard for teachers to present the properties and classification of triangles. Expected answers: 1. 3 points, namely Points A, B, and C 2. Sides AB, BC, and AC

DAY 3

Find, Observe, and Share! Look around. Observe the different objects you see. Find objects that have four sides. Share your findings with the class. For today you will learn about quadrilaterals and their characteristics. A Quadrilateral is a four-sided figure with broad, several types, and unique properties. Today, we will focus our discussion on the following: parallelogram, rectangle, and square.

DAY 4

Today, we will continue with the rest of the kinds of quadrilaterals. Looking at the diagram, which ones have we not discussed yet? They are general quadrilateral, rhombus, and trapezoid.



For today, you are going to apply all that you have learned through the arts. This will be your Performance task.

DAY 1

2. Unlocking Content Vocabulary

- 1. The prefix **"tri"** in triangle means three.
- 2. A **triangle** is a three-sided polygon.
- 3. A **polygon** is a closed plane figure whose sides are segments.
- 4. A **vertex** is a corner point. It is the **intersection point** of two sides of a polygon. It is a point where two sides meet.
- 5. The symbol Δ is read as "triangle".
- 6. Equilateral triangle all sides of equal length
- 7. Isosceles triangle with two sides of equal length
 - The congruent or equal sides are called legs.
 - The third side is called the base.
 - The angles opposite the legs are called base angles.
 - The angle opposite the base is called the vertex angle.
- 8. **Scalene triangle** all sides of different lengths

DAY 2

- 1. An **acute** triangle has all angles less than 90 degrees.
- 2. An **obtuse** triangle has one angle greater than 90 degrees.
- 3. A **right** triangle has one angle that is exactly 90 degrees.
 - The longest side is called the **hypotenuse**. It is opposite the right angle.
 - The two shorter sides are called **legs**.

DAY 2

The purpose of the lesson is established by carefully observing the given question and asking the learners their observations about the angles in the given triangle.

DAY 3

Let the learners observe their surroundings and prompt them to look for objects with four sides. This will lead you to introduce learners to a foursided figure called a quadrilateral. Explain that they will learn about different types of quadrilaterals and their properties.

DAY 4

Display visual representations of different types of quadrilaterals and their labels. Create clear and visually appealing images or diagrams of each type of quadrilateral (square, rectangle, rhombus, parallelogram, trapezoid) along with their labels. (These can be hand-drawn or created using graphic design software.)

	 The angles opposite the legs are acute angles. 4. An equiangular triangle has three equal angles. DAY 3 Quadrilateral is a 4-sided figure. Parallelogram is a quadrilateral with 2 pairs of parallel sides. Rectangle is a parallelogram with 4 right angles. Square is a rectangle with equal sides. DAY 4 Trapezoid is a quadrilateral with exactly 1 pair of parallel sides. Rhombus is a parallelogram with 4 equal sides. General Quadrilateral has no parallel sides. 	
C. Developing and Deepening Understanding	DAY 1SUB-TOPIC 1: Exploring the Properties of Triangles1. ExplicitationThe prefix "tri" in triangle means three. A triangle is a three-sided figure with three (3) vertices, three (3) sides, and three (3) angles. Triangles are named using its vertices (plural for vertex) in a clockwise or counterclockwise order. In naming triangles, you may start from any vertex. A vertex is a corner point. It is the intersection point of two sides of a polygon. It is a point where two sides meet. Example: The vertices of the triangle are points X, Y, and Z. 	 DAY 1 Let the learners observe the given 3 triangular objects. Process their observations by asking them the following: What are the names of the objects presented? How are these objects similar or different from one another? Do you think the sides of the given triangular objects are the same (equal) or different (not equal)? If yes, which object(s) have the same sides? different sides? How many sides have the same/different dimensions in terms of their lengths? After this, the teacher may now present one by one the classifications of triangles according to sides. Note: Emphasize that the marks or ticks (/) found on the sides of the triangle tell us

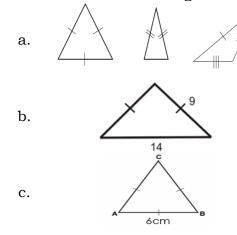
Isosceles triangle – this is a triangle with two sides of equal length. This means that the 2 equal sides of the given triangle are side DO and side CO. The congruent or equal are called **legs.** These are sides DO and CO. The third side is called the **base.** Side DC is the base. The angles opposite the legs are called **base angles.** The base angles are Angles D and C. The $_{\rm D}^2$ angle opposite the base is called the **vertex angle.** The vertex angle is O.

Scalene triangle – this triangle has all sides of different lengths. This means that sides $AB \neq BC \neq CA$.

that describes each triangle best considering its sides.

Classify each triangle using the side length you've learned. Write down the name

2. Worked Example



What kind of triangle is shown?

What must be the length of the third side?

What kind of triangle is shown? What must be the length of \overline{AC} and \overline{BC} ? which sides have equal measurements.

Worked Example Answers:

- a. equilateral; isosceles; scalene
- b. isosceles; 9 units
- c. equilateral; 6cm

Lesson Activity Answers:

- 1. equilateral
- 2. scalene
- 3. isosceles
- 4. isosceles
- 5. equilateral
- 6. scalene

DAY 2

The teacher may provide trivia in this part. For example, the pictures shown are example of equiangular triangle. It has three equal angles.



Worked Example Answers:

- a. right
- b. acute
- c. obtuse
- d. acute
- e. acute/equiangular; 60 degrees; 60 degrees

Let learners share other objects that they think are classified as equiangular triangles.

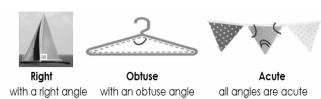
DAY 2 SUB-TOPIC 2: Kinds of Triangles According to Angles

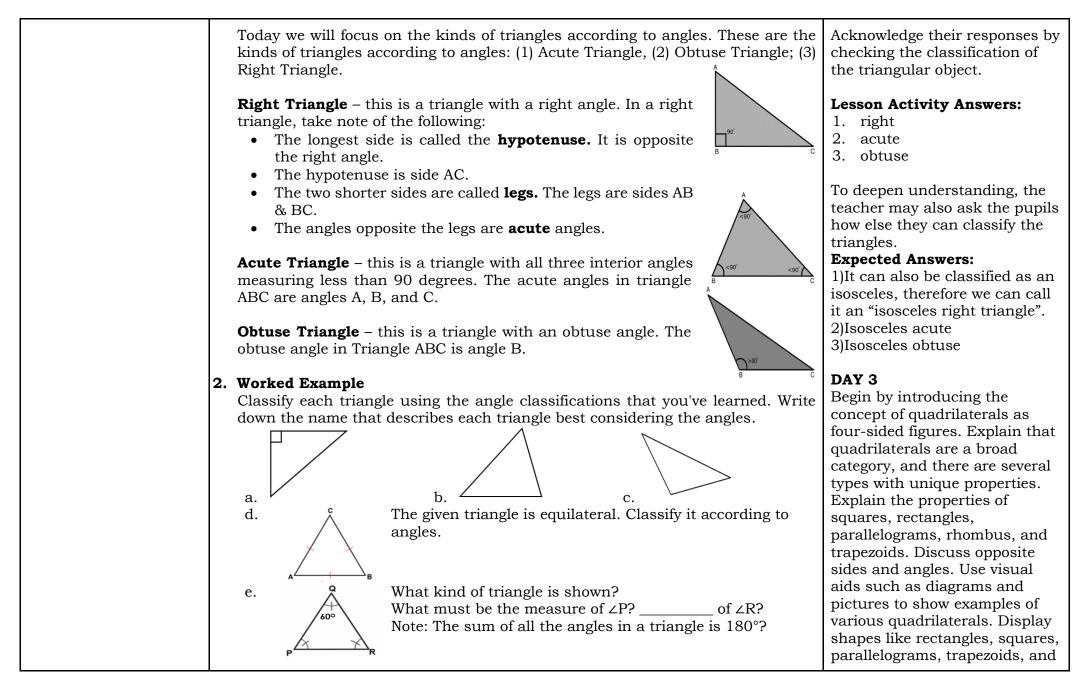
See Worksheet Activity No. 1

1. Explicitation

3. Lesson Activity

Study each angle.





angles. Describe the parallelogram.

BA = CD and BC = ADc. Each pair of opposite angles are equal. $\angle A = \angle C$ and $\angle B = \angle D$

MATH or ATHM or THMA or HMAT or DMHTA or DHTAM or DTAMH or DAMHT Alternative Activities: Group Discussion: Divide the

class into small groups. In their groups, students should discuss their observations and collaborate to identify the type of each quadrilateral example. Encourage them to share their initial thoughts.

Everyday Quadrilaterals: Think about objects you encounter daily. Choose one object and describe which type of quadrilateral it resembles the most. Explain why you think it's a good match for that specific type.

Drawing Quadrilaterals: Draw a picture of your dream house. Make sure to include at least two different types of quadrilaterals in your drawing. Label the shapes you've used and explain why you chose each shape for a particular part of the house.

rhombuses. Visuals will help learners grasp the differences in their shapes.





SUB-TOPIC 3: Quadrilaterals (Parallelograms, Rectangle, and Square)

1. Explicitation

DAY 3

3. Lesson Activity

What do you notice about the pictures below?



See Worksheet Activity No. 2



A **quadrilateral** is a four-sided polygon. It has 4 vertices and 4 angles. It can be named using its vertices in a clockwise or counterclockwise direction starting from any vertex.

 \angle H and \angle A are opposite angles. $\angle T$ and $\angle M$ are opposite angles.

HM and TA are opposite sides. MA and HT are opposite sides.

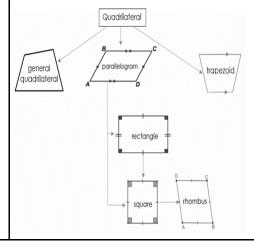
A **diagonal** is a segment joining two opposite vertices of a polygon. It divides a quadrilateral into two triangles.

We learned that the sum of all the angles in a triangle is 180 degrees. Each

triangle formed by the diagonal has a total angle measurement of 180 degrees. Therefore, the sum of all the angles in a quadrilateral is **360 degrees.**

parallel to each other.

8



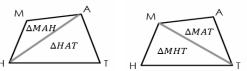
These are the classifications of quadrilaterals:

vertices, sides, and angles. Identify the two pairs

of opposite sides and the two pairs of opposite

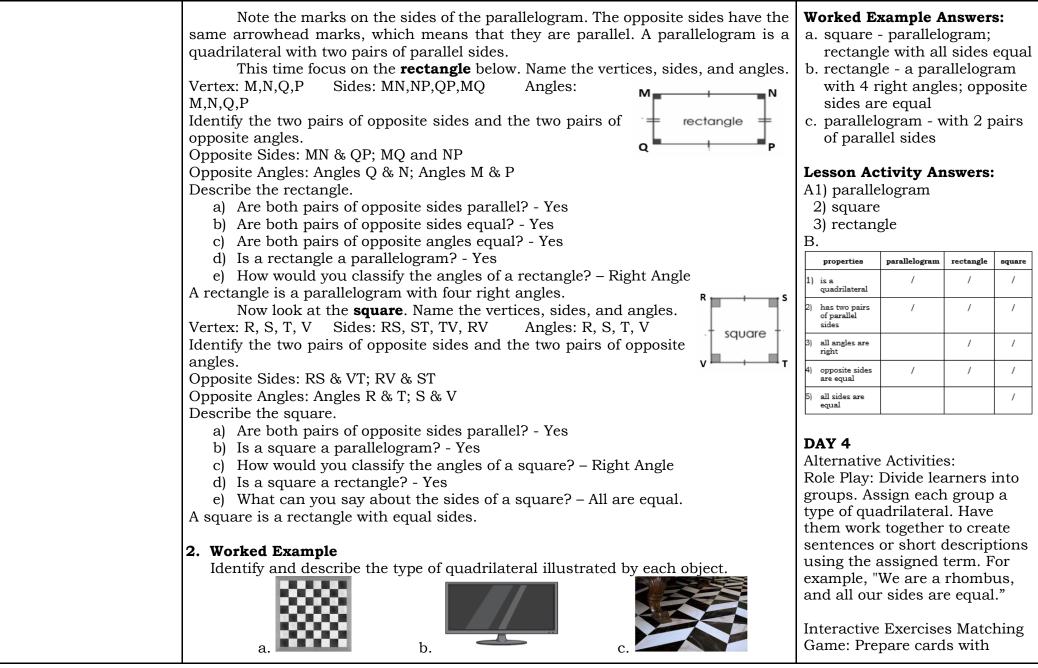
a. It has two pairs of opposite sides that are

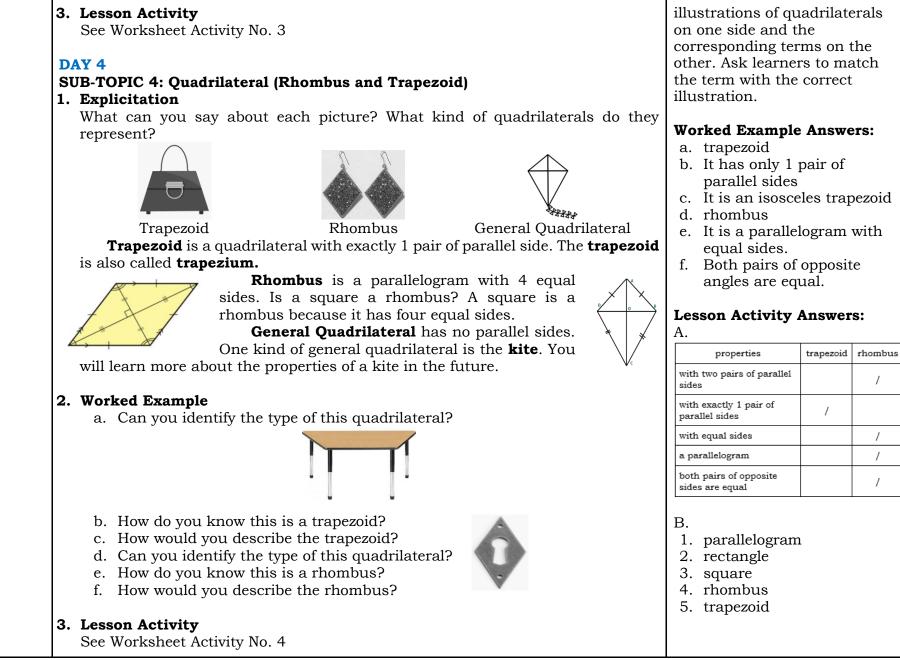
BA || *CD* and *BC* || *AD*



The diagonal is \overline{MT} . The diagonal is \overline{HA} .

Focus on the **parallelogram**. Name the





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SUB-TOPIC 5: Performanc 1. Explicitation	Explicitation Answers:parallelogram - roof	
-	. Give actual objects or structures that represent each	
Туре	Properties	 rhombus - diamond suit ir
Parallelogram	 Opposite sides are equal and parallel. Opposite angles are equal.	playing cards • trapezoid - wings of airplan
Rectangle	Opposite sides are equal and parallel.All angles are right angles (90°).	
Square	 Opposite sides are parallel. All sides are equal. All angles are right angles (90°). 	
Rhombus	 Opposite sides are parallel. All sides are equal. Opposite angles are equal. Diagonals bisect each other at right angles (90°). 	
Trapezoid	One pair of opposite sides are parallel.	

2. Worked Example

As performance task, you are going to create a structure like the ones shown.



3. Lesson Activity

Imagine that all of you are architects or engineers. You are going to construct a structure with triangles and quadrilaterals using popsicle sticks or the like. Be creative in showing the different triangles and quadrilaterals that you have learned. Please be guided by the rubrics given below.

	Criteria	10	7			
	Use of geometric concepts	Used triangles and quadrilaterals	Used triangles only or quadrilaterals only			
		5	3	2	1	
	Creativity	The output showed utmost creativity; appealing	Output showed less creativity; not so appealing or dull; very common			
	Neatness		Neatly done	Not so neatly done; crumpled		
	Punctuality			Submitted early or on time	Submitted late	
Generalizations	List down 2 things that you learned and one question you want to ask. 2. Reflection on Learning 1. What is the relevance of learning about triangle in real life? 2. In particular, in what areas or fields of work can you use it? DAY 2 1. Learners' Takeaways Ask learners to summarize the properties of each type of triangle. Strategy. Ask as many students Strategy. Strategy					Strategy. Ask as many students as you can and focus on discussing the things they want
 2. Reflection on Learning What is the importance of learning about triangles? DAY 3 Learners' Takeaways Have learners share what they have learned about triangles and quadrilaterals. Reflection on Learning Which do you often see in your surroundings, triangles or quadrilaterals? Why do you think so? 						

 DAY 4 1. Learners' Takeaways Ask learners to describe the differences between rhombus and trapezoid. 2. Reflection on Learning Doors and chalkboards are normally rectangular in shape. Chess boards are square-shaped. Why do you think objects are shaped the way they are? 	
 DAY 5 1. Learners' Takeaways Ask 1 question about triangles and quadrilaterals which you still have in mind. 2. Reflection on Learning Notice that in constructions, the triangle is widely and commonly used. Why do you think so? 	

V. EVALUATING LEAD	NOTES TO TEACHERS	
A. Evaluating Learning	 DAY 1 1. Formative Assessment Distribute a worksheet with triangle images. Learners should classify and label them according to their sides. 1. Is an equilateral triangle isosceles? 2. Is an isosceles triangle equilateral? 3. Draw an object, scene, view, or structure showing the use of triangles. You may color your drawing. DAY 2 1. Can a right triangle have an obtuse angle? 2. Can an obtuse triangle have two obtuse angles? DAY 3 Illustrate the following: a. parallelogram b. rectangle c. square 	Alternative Activities: Encourage learners to discuss with their peers while categorizing and labeling. Encourage students to carefully analyze each triangle before making a classification. Emphasize that providing clear explanations is essential to demonstrate understanding. Encourage learners to create their own drawings of each type of quadrilateral and label the angles. Notes for the Facilitator: Be prepared to address any questions or doubts learners may have during the assessment. Mill around the

	 DAY 4 Provide a worksheet with quadrilateral images. Learners should classify and label them. Illustrate the following: a. rhombus b. right trapezoid c. isosceles trapezoid 2. Homework (Optional) 			class as the learners work on the assessment to ensure they understand the instructions. Work with struggling learners in a small group for remediation to reinforce the concept. Provide encouragement to struggling learners. Offer extension activities for learners who grasp the concept quickly.
B. Teacher's Remarks	Note observations on any of the following areas:	Effective Practices	Problems Encountered	The teacher may take note of some observations related to
	strategies explored			the effective practices and problems encountered after utilizing the different strategies,
	materials used			materials used, learner engagement, and other related
	learner engagement/ interaction			stuff. Teachers may also suggest ways to improve the different activities explored/lesson exemplar.
	others			
C. Teacher's Reflection	 Reflection guide or prompt can be on: <u>principles behind the teaching</u> What principles and beliefs informed my lesson? Why did I teach the lesson the way I did? <u>students</u> What roles did my students play in my lesson? What did my students learn? How did they learn? <u>ways forward</u> What could I have done differently? What can I explore in the next lesson? 			Teacher's reflection in every lesson conducted/facilitated is essential and necessary to improve practice. You may also consider this as an input for the LAC/Collab sessions.