



basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

MATHEMATICS LESSON PLAN

GRADE 9

TERM 2: April – June

PROVINCE:	
DISTRICT:	
SCHOOL:	
TEACHER'S NAME:	
DATE:	
DURATION:	1 hour

1. TOPIC: GEOMETRY OF 2D SHAPES: Classifying 2D shapes (Lesson 3)

2. CONCEPTS & SKILLS TO BE ACHIEVED:

By the end of the lesson learners should know and be able to:

- revise properties and definitions of triangles in terms of their sides and angles, distinguishing between:
 - equilateral triangles.
 - isosceles triangles.
 - right-angled triangle.

3. RESOURCES:	DBE Workbook 1, Sasol-Inzalo Book 1, textbooks, ruler, protractor, pencil, (mathematical set), calculator
4. PRIOR KNOWLEDGE:	<ul style="list-style-type: none"> • types of triangles • properties of triangles • constructions
5. REVIEW AND CORRECTION OF HOMEWORK (suggested time: 10 minutes)	
<p>Homework provides an opportunity for teachers to track learner's progress in the mastery of mathematics concepts and to identify the problematic areas which require immediate attention. Therefore it is recommended that you place more focus on addressing errors from learner responses that may later become misconceptions.</p>	
6. INTRODUCTION (Suggested time: 10 Minutes)	
<p>Prepare the following questions on a chart in order to give learners to respond.</p> <ol style="list-style-type: none"> 1. The sum of the interior angles of triangles is equal to _____ 2. The equilateral triangle has all sides equal in length and all angles equal to _____ 3. An _____ triangle has at least two equal sides opposite equal angles 4. A _____ triangle has one angle that is a right angle 5. The side opposite the right angle in a right-angled triangle, is called the _____ 6. In a right-angled triangle, the square of the hypotenuse is equal to the sum of the _____. 	

7. LESSON PRESENTATION/DEVELOPMENT (Suggested time: 30 minutes)	
Teaching activities	Learning activities (learners are expected to:)
<p>Complete the following activities with the learners:</p> <p>Activity 1</p> <ul style="list-style-type: none"> • Let learners draw 3 different sized triangles and measure the interior angles using a protractor. • Have them add all the interior angles of their triangles and discuss their answers. • Learners should discover that the sum of the interior angles of a triangle is equal to 180° 	<ul style="list-style-type: none"> • complete the activities given by the teacher



<p>Activity 2</p> <p>2.1 Allow learners to construct any triangle which has all sides equal.</p> <ul style="list-style-type: none"> • Let learners measure all the angles of the drawn triangle and write their observation <p>2.2 Allow learners to draw any triangle with all angles equal to 60°</p> <ul style="list-style-type: none"> • Let learners measure all the sides of the drawn triangle and write their observation <p>Possible responses</p> <ul style="list-style-type: none"> • Learners observed that each interior angle of the triangle measures 60°. • Learners observed that all sides of the triangle are equal in length 	<ul style="list-style-type: none"> • draw, measure and write observations on given activities
<p>Activity 3</p> <p>3.1 Allow learners to construct a triangle with 2 sides equal in length (the triangle must not extend beyond the A4 page).</p> <ul style="list-style-type: none"> • Let learners measure all interior angles and write their observations <p>3.2. Allow learners to construct a triangle with 2 angles equal.</p> <ul style="list-style-type: none"> • Let learners measure all the sides and write their observations <p>Possible responses</p> <ul style="list-style-type: none"> • Learners observe that two angles opposite the equal sides are equal. • Learners observe that two sides opposite equal angles are equal. 	<ul style="list-style-type: none"> • draw, measure and write observations on given activities



8. CLASSWORK (Suggested time: 20 minutes)

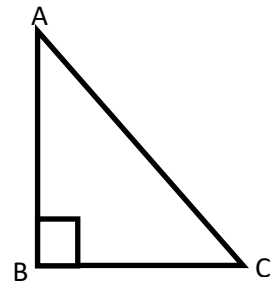
Activity 1

- Construct a 90° angle in order to draw a right angled-triangle.
- Measure the other 2 angles and the 3 sides of the triangle.
- Add all the interior angles of your triangle. What can you conclude?
- Make a summary of your findings.

Activity 2

In the right-angled triangle given below, not drawn to scale, $\hat{B} = 90^\circ$, $\hat{A} = 43^\circ$. $AB = 8\text{cm}$, $BC = 6\text{cm}$ and $AC = 10\text{cm}$

- What do you notice about the sides of the $\triangle ABC$?
- What is the relationship between AC and $\angle ABC$?



a) Emphasise that:

- The sum of interior angles of a triangle is 180° .
 - An equilateral has all sides equal and each interior angles = 60° .
 - Isosceles triangle has at least two equal sides opposite the equal angles.
 - Right – angled triangle has one angle that is a right angle and the side opposite it called hypotenuse which is always the longest side.
- b) The primary purpose of Homework is to give each learner an opportunity to demonstrate mastery of mathematics skills taught in class. Therefore Homework should be purposeful and the principle of 'Less is more' is recommended, i.e. give learners few high quality activities that address variety of skills than many activities that do not enhance learners' conceptual understanding.
Carefully select appropriate activities from the Sasol-Inzalo books, DBE workbooks and/or textbooks for learners' homework. The selected activities should address different cognitive levels.

Homework

Sasol–Inzalo Book 1 page 199 - 200 no. 1 - 4

