**MATHEMATICS LESSON PLAN**

**GRADE 9**

**TERM 2: April – June**

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| PROVINCE: |  |
| DISTRICT: |  |
| SCHOOL: |  |
| TEACHER’S NAME: |  |
| DATE: |  |
| DURATION: | 1 Hour |

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| 1. **TOPIC: CONSTRUCTION OF GEOMETRIC FIGURES:** Investigating properties of geometric figures **(Lesson 7)** |
| 1. **CONCEPTS & SKILLS TO BE ACHIEVED:**   **By the end of the lesson, learners should know and be able to** by construction, explore the minimum conditions for two triangles to be congruent. |

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| 1. **RESOURCES:** | DBE workbook, Sasol-Inzalo Book 1, textbook, ruler, protractor, pair of compasses, pencil, and eraser. |
| 1. **PRIOR KNOWLEDGE:** | triangles |
| 1. **REVIEW AND CORRECTION OF HOMEWORK** (suggested time: 10 minutes) | |
| Homework provides an opportunity for teachers to track learners’ 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. | |
| 1. **INTRODUCTION** (Suggested time: 10 Minutes) | |
| Ask learners to analyse the figure and answer the questions below:     * name all triangles that are in the diagram. * which of these triangles have the same size and the same shape? Give reasons for your answer.   **Note:** Learners are expected to:   * identify ∆ ABD, ∆ ACD and ∆ ABC. * specify that ∆ABD and ∆ACD have the same size and shape because 3 sides of one triangle are equal to 3 sides of another triangle. | |

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| 1. **LESSON PRESENTATION/DEVELOPMENT** (Suggested time: 20 minutes) | |
| **Teaching activities** | **Learning activities**  (Learners are expected to :) |
| Ask learners to do the following activities:  **Activity 1**   1. Construct with , and . 2. Construct with , and . 3. Trace the two triangles that you have constructed on a loose sheet of paper. 4. Neatly cut out the traced triangles. |  |
| Provide learners with the following instruction guidelines:   * draw a rough sketch of the triangle. * construct one of the given line segments. * at one end of the line segment construct an angle of 60⁰ * on the other end construct an angle of 70⁰. * the intersection of the angle arms gives the third vertex of the triangle * name the vertices of the triangles   If instructions have been adhered to, the first construction should look as follows:    Ask learners the following questions to consolidate the activity:   1. How do the cut out triangles compare? 2. How do they compare to those of your classmates? 3. What minimum information were you given to come up with the triangles?   Conclude the activity by writing, together with the learners, the second condition for triangles to be of the same size and shape.  **Activity 2**  Construct with and . The 3rd dimension needs to be decided upon by the learner to complete the triangle.   1. Trace the triangle that you have constructed on a loose sheet of paper. 2. Neatly cut out the traced triangle.   Ask learners the following questions to consolidate the activity:   1. How does the cut out triangle compare to those of your classmates? 2. What minimum information were you given to come up with the triangles?   Hence complete the table.   |  |  | | --- | --- | | Conditions | Congruent (Yes or No) | | 2 angles and a side (SAA) |  | | 2 sides (SS) |  | | * follow instructions * share ideas in groups * do constructions * draw conclusions from observations |
| 1. **CLASSWORK** (Suggested time: 15 minutes) | |
| Sasol-Inzalo Book 1, no. 1 (c), page 189 | |
| 1. **CONSOLIDATION/CONCLUSION & HOMEWORK** (Suggested time: 5 minutes) | |
| 1. **Emphasize** the second minimum condition for two triangles to be of the same shape and same size.   **Notes for the teacher:**   * Learners should paste the cut out triangles in their books and write below the pasted triangles a summary of equal parts of the triangles and conclusion made from observations. * Draw learner attention to the two conditions discovered thus far (sss and ∠s∠). * Advise them to construct and compare more pairs of triangle with information similar to the one given during this lesson and in the previous lesson.  1. **Homework** 2. DBE workbook, no. 6, page 108. 3. Give reasons why the following pair of triangles are congruent   K  P  A  R | |