**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 8)** |
| 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:** | * line geometry * 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) | |
| **Baseline Assessment:**  Ask learners to explain why the two triangles in the figure below are equal in size and have the same shape using the conditions that they have learnt. Specify equal parts, with reasons.    **Note:** Learners are expected to be able to:   * identify with reasons equal angles in the diagram. * use SSS and S∠ conditions to justify their arguments. | |

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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.   **Instructions for constructions**   * 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 55⁰ * Locate the third vertex of the triangle by constructing the second line segment along the other arm of the angle constructed. * Draw the third side of the triangle   The first construction should look as follows if instructions have been correctly followed:    Facilitate a discussion through the following questions:   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 lesson by making learners write down their observations and writing the third condition for triangles to be of the same shape and same size. | * follow instructions * share ideas in groups * do constructions * write down observations and draw conclusions |
| **Activity 2**   1. Construct with , and . 2. Trace the triangle that you have constructed on a loose sheet of paper. 3. Neatly cut out the traced triangle.   Facilitate a discussion through the following questions:   1. How do the cut out triangle compare to those of your classmates? 2. What minimum information were you given to come up with the triangles?   Conclude the lesson by making learners write down their observations.  **Note:**  Focus learners’ attention on the 2 possible triangles that could have been drawn from activity 2. A triangle having an obtuse angle and one having an acute angles only could be drawn with the same conditions.  Hence complete the table.   |  |  | | --- | --- | | Conditions | Congruent (Yes or No) | | 2 sides and an angle not between the sides (SSA) |  | | 2 sides and an angle between the sides (SAS) |  | |  |

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| **8. CLASSWORK** (Suggested time: 15 minutes) |
| Sasol-Inzalo Book 1, no. (d) and (e), page 189. |
| **9. CONSOLIDATION/CONCLUSION & HOMEWORK** (Suggested time: 5 minutes) |
| 1. **Notes for the teacher**:  * The term congruency may now be formalised. * Conditions for congruency should be listed and illustrated diagrammatically.  1. **Homework** 2. DBE workbook, no. 4, page 108 |
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