**MATHEMATICS LESSON PLAN**

**GRADE 7**

**TERM 2: April – June**

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

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| 1. **TOPIC: SURFACE AREA AND VOLUME OF 3D OBJECTS:** Calculations and solving problems **(Lesson 5)** |

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| 1. **CONCEPTS & SKILLS TO BE ACHIEVED:**   **By the end of the lesson learners should know and be able to** solve problems involving surface area, volume and capacity |

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| 1. **RESOURCES:** | Sasol-Inzalo Book 1, DBE workbook 1, textbook. |
| 1. **PRIOR KNOWLEDGE:** | * formulae for surface area of a cube and rectangular prism * formulae for volume of a cube and rectangular prism |
| 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)   Revise the following formulae for calculating the surface area and volume of the 3D objects on the  table below:  (Ask learners to name each 3D object and gives its formulae)   |  |  |  | | --- | --- | --- | | NAME OF 3D OBJECT | SURFACE AREA / VLOLUME | FORMULAE | | **CUBE**  s  s  s | Surface area |  | | Volume |  | | **RECTANGULAR PRISM**  *h*    *b* | Surface area |  | | Volume |  |   **NOTE:**   * The surface area of any 3D object is the sum of the areas of all its faces. * The volume of any 3D object is given by area of the base heght. | |

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| 1. **LESSON PRESENTATION/DEVELOPMENT** (Suggested time: 20 minutes) | |
| **Teaching activities** | **Learning activities**  (Learners are expected to: ) |
| Activity: Worked examples    Example 1: Consider the following rectangular prism with inside  measurements as shown:     1. Calculate its surface area. 2. Calculate its volume. 3. What is the capacity of rectangular prism in ?   Solutions:   1. Surface area            1. Volume        1. Capacity     Example 2: Consider the following cube:     1. Calculate its surface area. 2. Calculate its volume.   Solutions:   1. Surface area | respond to questions posed by the teacher  engage with responses of their peers |
| 1. Volume |  |

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| 1. **CLASSWORK** (Suggested time: 15 minutes)   DBE workbook 1: page 129 no. 1(a) and 2(a) , (b)  DBE workbook 1: page 135 no. 1(d) and (f) |

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| 1. **CONSOLIDATION/CONCLUSION & HOMEWORK (Suggested time: 5 minutes)** |
| 1. **Emphasise that**:  * the volume of prism area of the base height * the surface area of the prism the sum of the area of all its faces * the volume of a cube or * the volume of a rectangular prism  1. **Homework**:   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 Book 1, DBE workbook 1 and/or textbooks for learners’ homework. The selected activities should address different cognitive levels.  DBE workbook 1: page 141 no. 2(a) and (c), page 143 no. 2(a) and (d) |