**MATHEMATICS LESSON PLAN**

**GRADE 7**

**TERM 1: January – March**

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

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| 1. **TOPIC: EXPONENTS:** Calculations using numbers in exponential form **(Lesson 5)** |
| 1. **CONCEPTS & SKILLS TO BE ACHIEVED:**   **By the end of the lesson learners should know and be able to recognise and use the appropriate laws of operations with numbers involving exponents and square and cube roots** |

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| 1. **RESOURCES:** | Textbooks, DBE Workbook 1, Sasol-Inzalo Book 1 |
| 1. **PRIOR KNOWLEDGE** | * Exponetial form * order of operations * factors * prime factors |
| 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)   Allow learners to quickly work out solutions to the activity below.Thereafter facilitate the discussion of solutions:  **Activity 1**   1. Expand the following exponents: 2. Write the following in an exponential form: | |

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| 1. **LESSON PRESENTATION/DEVELOPMENT** (Suggested time: 20 minutes) | |
| **Teaching activities** | **Learning activities**  **Learners are expected to:** |
| * Divide learners into small groups * Present the following activities to learners * Instruct learners to work as pairs in a group to answer the questions and compare their answers with the other pairs of the group.   **Activity 1**    **Answer the following question below**  1.1 What number can you cube to get 27?   * 1. What number can you cube to get 125?     NB: A number that can be cubed to give 64 is 4. Therefore 4 is the cube root of 64. We write it like:    1.3 Repeat for 8 and 216 as in the case of 64.  NB: The sign stands for the cube root of a number. We read as “the cube root of 64 is equal to 4”  **Activity 2**  Say whether the number sentences below are TRUE or FALSE. If FALSE correct the statement.       **Activity 3**  Simplify the following | * do each activity either as individuals or small groups * participate in discussions * write summary of conlusions drawn during the activities |
| 1. **CLASSWORK** (Suggested time: 15 minutes) | |
| **Activity 1**  Copy and complete the table below;the first row has been filled in for you.     |  |  |  |  | | --- | --- | --- | --- | | **Say** | **write** | **Repeated multiplication** | **Value** | | The cube root of |  |  | 4 | |  |  |  |  | |  |  |  |  | |  |  |  | 1 |   **Activity 2**  Determine the cube root | |

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| 1. **CONSOLIDATION/ CONCLUSION & HOMEWORK** (Suggested time: 5 minutes) |
| 1. Emphasise that:  * a cubic number is formed when a number is multiplied by itself twice * the sign stands for the cube root of a number * finding cube root of a number is the inverse of cubing  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 Books, DBE workbooks and/or textbooks for learners’ homework. The selected activities should address different cognitive  levels.  **Recommended Homework**   |  |  |  | | --- | --- | --- | | Sasol-Inzalo Book | DBE workbook | Textbook | | Pg 65;No.1a - i & Pg 66; No 5a – b, d | Pg 33 No.8 and 9  Pg 34 No 11 – 14 |  | |