**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 3)** |
| 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** | * exponential form * order of operations * squares and square roots * cubes and cube roots |
| 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 and thereafter facilitate the  discussion of solutions.  **Activities**   1. Expand the following exponents:      1. Simplify the following: | |

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| 1. **LESSON PRESENTATION/DEVELOPMENT** (Suggested time: 20 minutes) | |
| **Teaching activities** | **Learning activities**  **Learners are expected to:** |
| Use simple examples as suggested in the activities below for better  understanding:  **Activity 1**  Calculate       |  |  | | --- | --- | | Steps | Calculations | | Write down the problem |  | | Do calculation inside the brackets |  | | Expand the powers |  | | Do calculation in brackets |  | | Multiply first |  | | Work from left to right and write  Final answer |  |   Give this activity to learners to complete in small groups and allow them to discuss their answers.  **Activity 2**   * 1. Simplify:   2. Which operations are first carried out in the above calculations? | * do each activity either as individuals or small groups * participate in discussions * make conjectures * write summary of conlusions drawn during the activities   complete the activity and discuss the answers |
| 1. **CLASSWORK** (Suggested time: 15 minutes) | |
| Simplify the following:   1. 52 2. )22 3. 3 | |

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| 1. **CONSOLIDATION/ CONCLUSION & HOMEWORK** (Suggested time: 5 minutes) |
| 1. **Emphasise:**  * the difference between squares and cube * manipulations of squares and cubes in the context of order of operations * misconceptions as they arise  1. 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**       |  |  |  | | --- | --- | --- | | Saol-inzalo Book 1 | DBE workbook 1 | Textbook | | Pg 62 No 5 | Pg 31 No 18 and 19 |  | |