**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:** Comparing and representing numbers in exponential form **(Lesson 1** |

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| 1. **CONCEPTS & SKILLS TO BE ACHIEVED:**   **By the end of the lesson, learners should know and be able to compare and represent whole numbers in an exponential form : for number of factors** |

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| 1. **RESOURCES:** | DBE workbook 1, Sasol-Inzalo book 1, Textbooks |
| 1. **PRIOR KNOWLEDGE:** | * expanding whole numbers * multiplication as repeated addition * factors and multiples * prime factorisation |
| 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. | |

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| 1. **INTRODUCTION** (Suggested time: 10 Minutes)   Work with learners in groups to answer the questions  **Activity 1**  Express as the product of two factors  **Activity 2**  Express the following as the product of one repeated factor  Guide learners in finding solutions to the activities without giving them answers |

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| 1. **LESSON PRESENTATION/DEVELOPMENT** (Suggested time: 20 minutes) | |
| **Teaching activities** | **Learning activities**  (Learners are expected to:) |
| **Activity 1**  Give the learners the following activity   1. Express the following as the product of one repeated factor      1. 32 2. 81 3. 125     Solution:          2 is a repeated factor of 32. It is repeated 5 times. Because 2 is repeated 5 times, 32 is called the fifth power of 2 or 2 to the power of 5.  Instead of writing “2 to the power of 5” we may write . This is called the exponential notation.  NB: A number that can be expressed as a product of one repeated factor is called a power of that number  Activity 2   1. Write the following numbers in the exponential notation. 2. 125 3. 100 4. 64 5. In this case write the number in exponential notation 6. The fifth power of 5 7. The third power of 4   NB: means . The repeating factor in a power is called | Work as group to answer questions  Write their own powers and discuss with group members |

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| 1. **CLASSWORK** (Suggested time: 15 minutes |
| Activity 1   * 1. Write the following in an exponential form   (b)  (c)    Activity 2  Copy and complete   |  |  |  |  |  | | --- | --- | --- | --- | --- | | Repeated  Multiplication | In an exponential form | In words | Explanation | The answer | |  |  | to the power | 3 multiplied by itself once |  | |  | ………………….. | to the power | …………. | ……………… | | ……………… |  | …………………… |  | 169 | |  | ………………….. | ………………….. |  | …………… | |

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| 1. **CONSOLIDATION/CONCLUSION & HOMEWORK (Suggested time: 5 minutes)** |
| 1. Emphasis that:  * not * not 1  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, workbooks and/or textbooks for learners’ homework. The selected activities should address different cognitive levels.  **Recommended Homework**: |

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| Sasol-Inzalo Book 1 | DBE Workbook 1 | Textbook |
| Pg 56; No. 3a, Pg 57 No 4i,6 (ab) Pg 58 No 7a,8b,11c | Pg 37 No. 5(ab),6f & 7 |  |