**MATHEMATICS LESSON PLAN**

**GRADE 8**

**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** establish general law of exponents limited to natural number exponent **=** |

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| 1. **RESOURCES:** | Textbooks, DBE Workbook 1, Sasol-Inzalo Book 1, Calculator, CAPS document |
| 1. **PRIOR KNOWLEDGE** |  |
| **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)  * **Do the activities below with the learners**   **Activity 1 [Mental Maths Activities]**  Simplify and express the answer in exponential form            **Activity 2:**  Write the following as product of powers: | |

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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 * Introduce laws of exponents through a range of numeric examples first, and then variables can be used. * Use the investigative approach as in the previous lessons to guide learners to establish =   **EXAMPLE**        since    **In general =**   * Ask probing questions during the presentation to assist learners to make appropriate conclusions * Do, together with the learners the activity below to reinforce the above presentation   **Activity**  Complete the following table: An example has been done for you.   |  |  |  | | --- | --- | --- | | **Product of powers** | **Power of power notation** | **Simplified form** | |  |  |  | |  |  |  | |  |  |  | |  |  |  | |  |  |  |  * Ask learners to present their observations and engage in a whole class discussion. | * work in small groups * state their observations in words * express their findings using variables * complete the table * respond to questions posed | |
| 1. **CLASSWORK** (Suggested time: 15 minutes) | | |
| * Sasol-Inzalo Book 1: page 64, No.5(a), (c), (f); & no. 9 * DBE Workbook 1: page 46, No. 2 (e) & (f) | | |

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| 1. **CONSOLIDATION/CONCLUSION & HOMEWORK** (Suggested time: 5 minutes) |
| 1. **Emphasise that:**  * where and are natural numbers and is not equal to zero * all the misconceptions identified, for example:  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**   * Sasol-Inzalo Book 1: page 64, No. 7 & 8 * DBE Workbook 1: page 47, No. 4 |