**MATHEMATICS LESSON PLAN**

**GRADE 8**

**TERM 2: April – June**

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

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| 1. **TOPIC: ALGEBRAIC EQUATIONS:** Solving equations using additive and multiplicative inverses **(Lesson 2)** |

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| 1. **CONCEPTS & SKILLS TO BE ACHIEVED:**   **By the end of the lesson learners should know and be able** solve equations using additive and multiplicative inverses. |

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| 1. **RESOURCES:** | Textbooks, DBE workbook, Sasol-Inzalo book 1 |
| 1. **PRIOR KNOWLEDGE:** | * integers * expressions * substitution * flow diagrams (input and output values) * equations |
| 1. **REVIEW AND CORRECTION OF HOMEWORK** (Suggested time: 10 minutes)   Homework provides an opportunity for teachers to track learner’s 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)   Consider the equation  We can represent the equation in a flow diagram, where represents an  unknown number:    When you reverse the process in the flow diagram, you start with the output number  then subtract and then divide the answer by :    We can write all of the above reverse process as follows:  Subtract from both sides of the equation:    Divide both sides by : | |
| We say is the solution of because .  We say that makes the equation true.  **Note:**  The numbers and are **additive inverses** of each other. When we add a number and its additive inverse we always get 0.  The numbers 3 and 13 are **multiplicative** **inverses** of each other. When we multiply a number and its multiplicative inverse we always get 1, so 3 × 1 3 = 1  The additive and multiplicative inverses help us to isolate the unknown value or the input value.  Also remember:  • **The multiplicative property of 1:** theproduct of any numberand 1 is that number.  • **The additive property of 0:** the sum of any numberand 0 is that number. | |

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| 1. **LESSON PRESENTATION/DEVELOPMENT** (Suggested time: 20 minutes) | |
| Teaching activities | Learning activities (Learners are expected to: ) |
| **Activity 1**:  Let learners do the activities below:   1. write down the additive inverse of: 2. – 3 3. 5 4. Write down the multiplicative inverse of: 5. – 4   **Possible responses from the discussions:**   1. 3 2. – 5    **Activity 2**  Guide learners in solving for in the equation below      add the additive inverse of 10 on both sides    add like terms  multiply by the multiplicative inverse of 10 on both sides | * discuss in pairs and come up with additive inverses of given numbers * discuss in pairs and come up with multiplicative inverses of given numbers * work with the teacher in using the additive inverse to solve for * work with the teacher in using the multiplicative inverse to solve for |
| 1. **CLASSWORK ACTIVITIES (Suggested time: 15 minutes)** | | |
| Solve for by using the additive and multiplicative inverses where applicable: | | |
| 1. **CONSOLIDATION/CONCLUSION & HOMEWORK / WORKSHEET (Suggested time: 5 minutes)**   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.  **HOME WORK**  DBE workbook 1: page 81 - 82 No. 1 and 2, page 80-81 No. 7 and 8 | | |