**MATHEMATICS LESSON PLAN**

**GRADE 8**

**TERM 1: January – March**

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

|  |
| --- |
| **1. TOPIC: ALGEBRAIC EQUATIONS:** Setting up equations **(Lesson 1)** |

|  |
| --- |
| **2. CONCEPTS & SKILLS TO BE ACHIEVED:**  **By the end of the lesson, learners should be able to:**   * set up equations to describe a problem situation * analyse and interpret equations that describe a given situation |

|  |  |  |
| --- | --- | --- |
| **3. RESOURCES:** | Textbooks, DBE workbook, Sasol-Inzalo book 1 | |
| **4. PRIOR KNOWLEDGE:** | * number sentences from the previous grade * algebraic expressions * solve simple equations * mathematics terminology: sum, product, quotient, difference, etc. | |
| **5. 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. | | |
| **6. INTRODUCTION** (Suggested time: 10 Minutes)  A closed number sentence is a true statement about numbers for example, . In this example all numbers are given  In an open number sentence, for example, , one or more numbers are unknown.  An open number sentence is also called an equation  The unknown in the equation is called a variable, for example in the above equation.  An equation is a mathematical sentence that is true for some numbers but false for other numbers. The following are examples of equations: and  is true if , but false if .  When we look for a number or numbers that make an equation true we say that we are solving the equation. For example, is the solution of because it makes true. (Check: )  ***Activity***  Write an equation to represent the following scenario***,*** solve the equation and check the solution***:***   1. Think of a number. Add 5 and multiply the answer by 3. The answer is 60. What is your number?   **Possible solution:**  Number + 5 x 3 60  + 5 x 3 60 Let number =” ” (they should know that “” is a variable  + 15 60 Use trial and improvement method to determine “”  **or** by inspection  45 + 15 60 The LHS must be equal to the RHS, check solution    Therefore the number is 45, that is, 45  **NB**: 60 – 15 45 (check the solution) | | |
| **7. LESSON PRESENTATION/DEVELOPMENT** (Suggested time: 20 minutes) | | |
| **Teaching activities** | | **Learning activities**  (Learners are expected to:) |
| **Activity 1**  Ask learners to explain in words what the following equation means?  3 – 4 32  Identify and clarify misconceptions from the learners responses, for example “3 times is 4 less than 32” | | discuss and come up with different interpretations of the same equation  **possible responses**   1. 3 times is 4 more than 32, or 2. 32 is 4 less than 3, or 3. 32 plus 4 is equal to 3 times , or 4. 3 times is 4 less than 32 |
| **Activity 2**   * Group learners in groups of 4 * Give each group its own question to analyse, interpret, write as an equation, solve and check the solution  1. A number plus 6 is 28. 2. When I divide a number by 9 the answer is 3. 3. The difference between 13 and the number is 15. 4. The difference between 4 times a number and 16 is 48.  * Allow groups to present to the whole class. | | * discuss, analyse, interpret, write equations, solve and check the solutions for the questions assigned to them * present their solutions to the class |

|  |
| --- |
| **8. CLASSWORK** (Suggested time: 15 minutes) |
| Sasol-Inzalo book 1, Page 121-122 No. 1 (a), (b) and (e) No. 2 (c) and (e) No 3 (b) and (f)  **Choose the letter corresponding to the correct answer**:  1 Martin bought a package of 15 chocolates for R27, 96. He used the equation  15 27, 96 to find the cost of one chocolate, . The equivalent to this equation is:  A 27,96 – 15  B (27,96) (15)  C 27,96 + 115  D  E 27,96 + 15 |
| 2 If 3 – 15 0, then is equal to    A 2  B 3  C 4  D 5  E 6 |
| **9. CONSOLIDATION/CONCLUSION & HOMEWORK** (Suggested time: 5 minutes) |
| 1. **Emphasise that**:     learners do the following:   1. understand the meaning of mathematical terminology and operations used. 2. ensure that the steps are mathematically correct 3. use trial and improvement or inspection to obtain the answer. 4. 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.   **Homework:** Sasol-Inzalo book 1, Page 121-122 No. 1 (c) No. 2 (g) No. 3 (d) |