**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: INTEGERS: Solve problems (Lesson 9)** |

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| 1. **CONCEPTS & SKILLS TO BE ACHIEVED:**   **By the end of the lesson learners should know and be able to solve problems in**  **the contexts involving multiple operations with integers** |

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| 1. **RESOURCES:** | Textbooks, DBE workbook 1, Sasol-Inzalo Book 1 |
| 1. **PRIOR KNOWLEDGE:** | calculations with integers.  order of operation |
| 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)   Discuss this following scenario with your learners: Do you ever wonder where all of your money goes? Well, let’s find out! As a teenager, you have many things you would like to own. You also have numerous activities that you engage in on a weekly basis. All these cost money.  Do you ever consider if your parents can afford some of your expenses? Brown Family BudgetMonthly Income: R20 000  |  |  |  | | --- | --- | --- | | **Expenses** | **Amount** | **Total** | | Home   * Mortgage * Maintenance * Property taxes | R 4 300  R 300  R 1 500 | R 6 100 | | Car   * Payments * Insurance * Petrol * Maintenance | R 2 500  R 1 500  R 1 750  R 500 | R 6 250 | | Utilities   * Electric bill * Water bill * Cell phone bill * Internet | R 4000  R 900  R 600  R 600 | R 6 100 | | |

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| 1. **LESSON PRESENTATION/DEVELOPMENT** (Suggested time: 20 minutes) | |
| **Teaching activities** | **Learning activities**  **(Learners are expected to:)** |
| Activity 1  Discuss this activity below and have a class discussion on how to get answers.  The budget on the previous page indicates the total monthly Income and Expenditure of the Brown household. Make use of the information given to answer the questions that follow:   1. Make use of a number sentence containing Integers to show how you will calculate the total monthly expenditure for the family. 2. Make use of a number sentence containing integers to show how you will indicate the money left after all expenses are paid. 3. Make use of the commutative law to show expenditure for the house and utilities is the same.   Activity 2  Write each of the following as an integer(s):   1. A temperature of five degrees below freezing. 2. An island has a mountain which is high. The surrounding ocean has a depth of . What is the difference in height? 3. Twenty thousand rand credit in savings account. | workout problems (a) to (c) and the possible solutions are as follows   1. 2 (R 6 100) + R6 250 = R18 450 2. R 20 000 – R18 450 = R1 550 3. Home:           Utilities  do activity 2 in groups and share their solutions with the whole class. |
| SOLUTIONS: |  |

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| 1. **CLASSWORK** (Suggested time: 15 minutes)   **Sasol-Inzalo Book 1 p 39 no. 2 to 6** |
| 1. **CONSOLIDATION/CONCLUSION & HOMEWORK** (Suggested time: 5 minutes) 2. **Emphasize that**:  * Learners should develop problem solving skills needed to deal with integers. * These problem will offer learners to learn analytical skills, interpretation skills and of course problem solving skills. * Group work is always recommended as learners verbalize their thinking processes in order to formulate their equations and then work out their answers. .  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.   1. Darcy, Egmont and Hilda each have a box. Darcy`s box is 12 cm long, 8 cm wide and 5cm high. Egmont`s box is 8 cm wide, but it is a 12 cm deep, and it is also 5 cm high. Hilda`s box is only 5 cm wide, but it is eight cm wide, and it is the tallest box-a full 12cm high. They are arguing about which box will hold the most. Which box has the largest volume? V = ℓ x b x h 2. When 242 is divided by a certain divisor the remainder obtained is 8. When 698 is divided by the same divisor the remainder obtained is 9. However, when the sum of the two numbers 242 and 698 is divided by the divisor, the remainder obtained is 4. What is the value of the divisor? 3. Plan a weekly budget for the group that will include all necessary expenses as well as the luxuries they want. You are however not allowed to owe anyone money at the end of the month.   Budget Requirements:  You will receive a weekly allowance of R 100,00.  include the option of working a job for minimum wage. ( paid on a weekly basis)  You must choose at least 5 activities per week that involve spending your budget.    Examples:   * You purchase a cool drink and snack at lunch each day for R10,00. * You go to the movies on Friday or Saturday night with friends. Ticket price : * You purchase a cell phone plan. Determine the weekly fees. * You go to the mall and buy new clothes/shoes. You can choose the amount you spend. * You buy a new CD or download songs from the Internet. Research the total cost of your purchases.   **List of Expenses**   |  |  | | --- | --- | | **Category** | **Expenses** | |  |  | |  |  | |  |  | |  |  | |  |  | |  |  |  Budget Weekly Income:   |  |  |  | | --- | --- | --- | | **Expenses** | **Amount** | **Total** | |  |  |  | |  |  |  | |  |  |  | |  |  |  | |