**MATHEMATICS LESSON PLAN**

**GRADE 7**

**TERM 4: October – December**

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

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| 1. **TOPIC: FUNCTIONS & RELATIONSHIPS:** Input and output values (Lesson 2) |
| 1. **CONCEPTS & SKILLS TO BE ACHIEVED:**   **By the end of the lesson, learners should know and be able to** **determine the input values, output values or rules for patterns and relationships using tables.** |

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| 1. **RESOURCES:** | Textbooks, DBE Workbook 2, Sasol-Inzalo book 2 | |
| 1. **PRIOR KNOWLEDGE:** | * functions and relationships * patterns * integers | |
| 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**)   Let learners work in groups.  **Activity**   * 1. Match the rule with the tables   2. Explain how you made your decision.   The rule:   |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | |  |  |  |  |  |  |  |  | |  |  |  |  |  |  | |  |  |  |  |  |  | |  |  |  |  |  |  | |  |  |  |  |  |  | |  |  |  |  |  |  | |  |  |  |  |  |  | |  |  |  |  |  |  |   Table 2  Table 3  Table 1 | | |
| 1. **LESSON PRESENTATION/DEVELOPMENT** (Suggested time: 20 minutes) | | |
| **Teaching activities** | | **Learning activities**  (Learners are expected to:) |
| **Activity 1**  NB: Input and output values usingtables – input, output or rules can be integers.  In each case below, predict which of the different expressions will produce the same results. You will test your predictions later, and then make your own answers for this question.  (a)  (b)  (c) | | Learners work in pairs and guided by the teacher.  Learners work individually to complete the table using the given formula and given x values( input) |
| **Activity 2**  NB:The aim of this activity is to help learners to understand substitution and calculations involving integers.  2.1. Complete the table below and then use the results to carefully check your answers to question 5.   |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | |  | -2 | -1 | 0 | 1 | 5 | 10 | 100 | |  |  |  |  |  |  |  |  | | 5x − 20 |  |  |  |  |  |  |  | | (−5x) + 20 |  |  |  |  |  |  |  | | 20 + (−5x) |  |  |  |  |  |  |  | | 20 + 5x |  |  |  |  |  |  |  | | 5x + 20 |  |  |  |  |  |  |  | | 20x + 5 |  |  |  |  |  |  |  | | 20 − (−5x) |  |  |  |  |  |  |  | | 5(x + 4) |  |  |  |  |  |  |  | | 20x − 5 |  |  |  |  |  |  |  | | (−20) − (−5x) |  |  |  |  |  |  |  | | −((−5x) + 20) |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |   2.2. Find the rule   |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Input () | 1 | 2 | 3 | 4 | 5 | 6 | 7 |  | 9 | | Output () | 4 | 11 | 18 | 25 | 32 |  |  |  |  |   **Activity 3**  Give learners a similar activity and let them do it individually and then share their answers with the group.  3.1. Use the given formula to complete the tables below.  y 6 5   |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Input () | 1 | 2 | 3 | 4 | 5 | 6 | 7 |  | 9 | | Output () |  |  |  |  |  |  |  |  |  |   2.2. = 30 + 1   |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Input () | 0,1 | 0,2 | 0,3 | 0,4 | 0,5 | 0,6 | 0,7 |  |  | | Output () |  |  |  |  |  |  |  |  |  |   . | |  |

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| 1. **CLASSWORK** (Suggested time: 15 minutes) | | |
| DBE workbook 2, page 123 number 2(a) – (e). | | |
| 1. **CONSOLIDATION/CONCLUSION & HOMEWORK (Suggested time:5 minutes)** 2. Emphasise that:  * the multiplication sign ) in a rule may be omitted e.g. instead of writing the learners may   write only.   * the input, output values or rules for patterns and relationships can be represented,   calculated or described using tables.   * Focus is on integers in term 4.  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. The selected activities should address different cognitive levels. | | |
| **Homework:** | | |
| Sasol-Inzalo book 2 | DBE Workbook 2 | Textbook |
| Pg 145 no. 2 | Pg 123 no 2(f) |  |