**MATHEMATICS LESSON PLAN**

**GRADE 7**

**TERM 3: July – September**

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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  - formulae. |

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| 1. **RESOURCES:** | Textbooks, DBE Workbook 2, Sasol-Inzalo book 2, Clock | |
| 1. **PRIOR KNOWLEDGE:** | * functions and relationships * patterns | |
| 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 do the following activity in groups.    **Activity**   1. How many minutes are there in an hour? 2. How many minutes are there in 2 hours? 3. How many minutes are there in 3 hours? 4. Explain how you determined the answers for questions (b) and (c). 5. Express your explanation in (d) as a formula. 6. Complete the table.  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | Number of hours | 1 | 2 | 3 | 4 | 5 | 15 | 24 | | Number of minutes | 60 | 120 | 180 |  |  |  |  | | | |
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| 1. **LESSON PRESENTATION/DEVELOPMENT** (Suggested time: 20 minutes) | | |
| **Teaching activities** | | **Learning activities**  (Learners are expected to :) |
| Let learners work in pairs.  **Activity 1**   * 1. Find the output values() by substituting with the following input values(): in   2. Draw a table to represent your input and output values.   : | | * Work in pairs to complete the table. * Share with the whole group their solutions. |
| Give the following activities to learners  **Activity 2**  2.1. Use the given formula to complete the tables below.  5   |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Input () | 1 | 2 | 3 | 4 | 5 | 6 | 7 |  | 9 | | Output () |  |  |  |  |  |  |  |  |  |   **NB**: The teacher consolidates by working the solutions with the whole class with the emphasis on substitution (input values on ) so as to get output values. | | * work individually to complete the table using the given formula and given values(input) * compare their answers with the teacher’s answers. |
| **Activity 3**  Choose the correct formula for each of the tables below.  A.B. C. + 2  D. H. y = 2 × x – 1   |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | Input () | 1 | 2 | 3 | 4 | 5 | 6 | 7 | | Output () | 1 | 3 | 5 | 7 | 9 |  |  |   Formula: ……………………………………..  (b)   |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | Input () | 1 | 2 | 3 | 4 | 5 | 6 | 7 | | Output () | 4 | 7 | 10 | 13 | 16 |  |  |   Formula: ……………………………………..  (c)   |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | Input () | 1 | 2 | 3 | 4 | 5 | 6 | 7 | | Output () | 8 | 13 | 18 | 23 | 28 |  |  |   Formula: ……………………………………..  (d)   |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | Input () | 1 | 2 | 3 | 4 | 5 | 6 | 7 | | Output () | 5 | 8 | 11 | 14 | 18 |  |  |   Formula: ……………………………………..  (e)   |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | Input () | 1 | 2 | 3 | 4 | 5 | 6 | 7 | | Output () | 3 | 6 | 9 | 12 | 15 |  |  |   Formula: ……………………………………..  . | | do the activity in groups.  Groups share their results with the whole class. |

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| 1. **CLASSWORK** (Suggested time: 15 minutes) | | |
| 1. The area of the rectangle is length  breadth. Complete the table below by calculating the values of all the unknowns using the formula for the area of the rectangle.  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | Length (m) | 16 |  | 12 |  |  | | Breadth (m) | 3 | 6 |  | 1 | 2 | | Area (m2) |  | 48 | 48 | 48 | 48 | | | |
| 1. **CONSOLIDATION/CONCLUSION & HOMEWORK (Suggested time:5 minutes)** 2. **Emphasise that**:  * the input, output values or rules for patterns and relationships can be represented, calculated or described using tables.  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. The selected activities should address different cognitive levels. | | |
| **Homework:** | | |
| Sasol-Inzalo book 2 | DBE Workbook | Textbook |
| Pg 23 no. 2(a)-(,b) | Pg. 20 no 1(a)-(d), 2(a)-(b). |  |