**MATHEMATICS LESSON PLAN**

**GRADE 7**

**TERM 2: April – June**

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

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| 1. **TOPIC: FUNCTIONS AND RELATIONSHIPS:** Equivalent forms **(Lesson 3)** |
| 1. **CONCEPTS & SKILLS TO BE ACHIEVED:**   **By the end of the lesson, learners should know and be able to :**  determine, interpret and justify equivalence of different descriptions of the same relationship or rule presented   * verbally * in flow diagrams * in tables * by formulae * by number sentences |

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| 1. **RESOURCES:** | Textbooks, DBE Workbook 1, Sasol-Inzalo book1 |
| 1. **PRIOR KNOWLEDGE:** | * flow diagram * tables * 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)   **Activity**  In a grade 7 class learners are divided into 5 groups, each group has 7 learners. Let us find the relationship between the number of groups and the number of learners, using number sentences.     * 1x7 = 7 * 2x7 = 14 * 3x7 = 21 * 4x7 = 28 * 5X7 = 35 * z x7 = 7 x z   NB: expected learner responses   * In 1 group, there are 1 x 7 learners = 7 learners. * In 2 groups, there are 2 x 7 learners = 14 learners * In 3 groups, there are 3 x 7 learners = 21 learners * In 4 groups, there are…………………………….. * In 5 groups, there are…………………………….. * In groups, there are……………………………..   **Note:**   * Remind learners that number sentences are also used to represent the relationship between the input and output values. | |

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| 1. **LESSON PRESENTATION/DEVELOPMENT** (Suggested time: 20 minutes) | |
| **Teaching activities** | **Learning activities**  (Learners are expected to :) |
| Let learners work individually  **Activity 1**  This activity is based on the activity that we did during the introduction:  Ask learners the following questions:   * 1. What are other equivalent forms of representing the relationship between the input and the output values, other than the number sentences?   2. List all the input values and all output values from the previous activity.   3. What is the rule in words for determining the output values? | Answer questions |
| **Activity 2**  2.1. Complete the flow diagram below with the relevant output values.  1  3  2  7  5  2.2. Complete the table below which is also showing the relationship between the number of groups and the number of learners.   |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | No. of groups() | 1 | 2 | 3 | 4 | 5 | 6 |  | | No. of learners() | 7 | 14 | 21 |  |  |  |  |   2.3. Determine the value of 7 if is equal to 4, 5 and 6.  2.4. What do you observe on your answers from 2.1 to 2.3?  **NB:** Consolidate by stating that the input and output values can be represented in different equivalent forms which are: verbal descriptions(words)**,** number sentences**,** flow diagrams**,** tablesand formulae | * complete the flow diagram with the teacher (class discussion) |

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| 1. **CLASSWORK** (Suggested time: 15 minutes) | | |
| 1. Study the given table. Complete it where the items are missing. Describe the relationship between the input and output values in:  * Words * A number sentence * A flow diagram  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | Input() | 1 | 2 | 3 | 4 |  | 10 |  | | Output) | 3 | 5 | 7 | 9 |  |  |  |  1. (a) Use the given rule to complete the flow diagram below.   Output  Input  1    7  2  Rule    3  2 +3  4  13  (b) Write down the number sentences that you used to calculate the unknown values.  (c) Describe the relationship between the input and output values in words.  (d) Represent the input and output values in a table. | | |
| 1. **CONSOLIDATION/CONCLUSION & HOMEWORK** (Suggested time: 5 minutes) | | |
| 1. **Emphasise that:**   the input and output values can be represented in different equivalent forms which are:   * Verbal descriptions(words) * Number sentences * Flow diagrams * Tables * Formulae  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 teachers discuss common errors and misconceptions picked up during the classwork and highlight the correct procedures. E. g. learners might have made errors and mistakes in the process of substituting values especially the substitution of negative numbers. | | |
| Sasol-Inzalo book | DBE Workbook 1 | Textbook |
| Pg. 210 No. 3 | Pg. 114 No. 1a, b |  |