**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: INTEGERS:** CALCULATIONS WITH INTEGERS **(Lesson 5)** |

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| 1. **CONCEPTS & SKILLS TO BE ACHIEVED:**   **By the end of the lesson, learners should be able to :**   * Add and subtract with integers |

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| 1. **RESOURCES:** | DBE workbook 2, Sasol-Inzalo book 2, Textbooks, different coloured bi – colour discs |
| 1. **PRIOR KNOWLEDGE:** | * count forwards and backwards in integers for any interval * recognise, order and compare integers * representing integers on a number line |
| 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. | |

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| 1. **INTRODUCTION** (Suggested time: 10 Minutes)   **Activity**  Using a number line state where you would end up with each movement:   1. Start at 8 and move 3 (5) 2. Start at 8 and move 3 ( 11) 3. Start at and move 3 (3) 4. Start at 4 and move 4 (0) 5. Start at 9 and move 5 (4) 6. Start at 3 and move 19 (22) |

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| 1. **LESSON PRESENTATION/DEVELOPMENT** (Suggested time: 20 minutes) | |
| **Teaching activities** | **Learning activities**  (Learners are expected to:) |
| Divide learners into small groups. Any two different objects may be used should there be not enough or no coloured discs to use. A second method maybe used on the board for demonstration.  **Activity 1**  Adding integers using different coloured discs  Example: 3 (5)   * Assign one colour of the disc positive one (1) and the other colour negative one (1). For the activity not to be limited, it is recommended that you have enough discs on each side. * When you combine one red disc (1) and one yellow disc (1) you end up with zero. * Use the discs to represent the problem, then group the discs in pairs of one red disc and yellow disc  |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  |  |  | **0** | |  |  |  |  | **0** | |  |  |  |  | **0** | |  |  |  |  |  | |  |  |  |  |  | | **3** |  | **5**) |  | **2** |   **Or**  **therefore** 3 (5) 2  Remember: if there is **no sign** in front of a number then the number is **positive**.  **Note:** it is important to highlight the concept of **additive inverses**.   |  |  | | --- | --- | | Additive Inverse | What you add to a number to get zero.  The negative of a number. **Example:**  The additive inverse of −5 is 5, because 550.The additive inverse of 5 is 5 as well. |   **Note:** the rule for adding integers states that when the signs are the same, you add (find the sum) of the "raw numbers" (absolute values) and use the same sign for your answer. If the signs are different, you find the difference and use the sign of the one which has the bigger absolute value. **Do not** tell the learners this information but probe them to give you the same conclusion after engaging with a number of activities, for example , the one that follow:  Divide learners into small groups.  **Activity**  Use the different coloured discs to solve the following:   1. 3 3 2. 2 3 3. 7 8 4. 8 (3) 5. 18 (7) 6. (11) 7. (19)   **Note:** it is obvious that learners may not have enough coloured discs and would have to come up with rules that will enable them to get the answer without using them or number line as it is shown below.  http://mrsloving.weebly.com/uploads/3/1/8/5/31853083/3623767_orig.png | * play the game along with the teacher while in their groups * take down some notes * work out solutions to the items in the activity |

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| 1. **CLASSWORK** (Suggested time: 15 minutes) |
| Calculate:   1. 9 (11) 2. 6 (9) 3. 3 (16) 4. 19 8 5. 9 (5) 6. (4) (3) ( 9) 7. 3 6 (7) |

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| 1. **CONSOLIDATION/CONCLUSION & HOMEWORK (Suggested time: 5 minutes)** |
| 1. Emphasise that:  * When you add a number to its additive inverse (opposite), the answer is zero. * adding two positive whole numbers is the same as normal addition learnt in whole numbers * adding a negative number to a positive number to is the same as subtracting. * addition is commutative  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.   Carefully select appropriate activities from the Sasol-Inzalo books, workbooks and/or textbooks for learners’ homework. The selected activities should address different cognitive levels.  **Recommended Homework**:  Sasol – Inzalo Book 2 – page no 8(b) |