**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:** COUNTING, ORDERING AND COMPARING INTEGERS **(Lesson 3)** |

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| 1. **CONCEPTS & SKILLS TO BE ACHIEVED:**   **By the end of the lesson, learners should be able to :**   * count forwards and backwards in integers for any interval * recognise, order and compare integers |

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| 1. **RESOURCES:** | DBE workbook 2, Sasol-Inzalo book 2, Textbooks |
| 1. **PRIOR KNOWLEDGE:** | * symbols to compare and contrast numbers * natural numbers and whole numbers * compare integers * count in 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. | |

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| 1. **INTRODUCTION** (Suggested time: 10 Minutes)   Give learners the following activity to do. Rough sketches of the figures in the following activity may be drawn on the board should the resources be limited.  **Activity**  Give a reasonable estimate of the integer that represents each figure’s positions. Sea level represents 0 metres. Choose from the ones given in the block below:  2m 4m 10m 6m 6m  1m 0m  1.  C:\Documents and Settings\labamber\Local Settings\Temporary Internet Files\Content.IE5\MKIO25FJ\MC900352103[1].wmf C:\Documents and Settings\labamber\Local Settings\Temporary Internet Files\Content.IE5\MKIO25FJ\MC900030485[1].wmf  2.  4.2  4.1  C:\Documents and Settings\labamber\Local Settings\Temporary Internet Files\Content.IE5\MKIO25FJ\MC900021339[1].wmf C:\Documents and Settings\labamber\Local Settings\Temporary Internet Files\Content.IE5\GYFGLHXE\MC900057631[1].wmf  3 0  3.  *Responses:*   1. 6m 2) 10m 3) 2m 4.1) 4m 4.2) 6m   **Note**: It is important for learners to see that the positions below sea level will be negative and positive above sea level. |

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| 1. **LESSON PRESENTATION/DEVELOPMENT** (Suggested time: 20 minutes) | |
| **Teaching activities** | **Learning activities**  (Learners are expected to:) |
| Allow learners to work in pairs.  **Activity 1**  Which of these numbers is greater than 7 but less than 4?  8; 10; 5; 4; 0  Solution   * Start by finding all the numbers that are less than 7. * This gets rid of 8 and 10 (to the left of 7 on the number line). * Get rid of any number that is greater (not less) than 4. * This means 5 is out leaving 4 and 0 as the solution.   **Note:** If you wanted to compare the integers -4 and 2, you would draw and label a number line and put a “point” at the integer location.  http://www.learningwave.com/chapters/integers/graphics/numberline2.gif  https://www.eduplace.com/math/mw/background/5/01/graphics/ts_5_1_wi-7.gif  Because 2 is further to the right than -4, 2 is greater than -4. So, we can say 2 > 4.  **Activity 2**   1. Place the following numbers on the number line as accurately as you can: 50; −2; −23; 5; −36 2. Place the following numbers in the boxes provided: 125 000;   -178 000; -100 900 and 180 500     1. Insert one of the symbols or to indicate which number is bigger or smaller:   (i) 28 \* 40  (ii) 978 543 \* 978 534  (iii) 864 026 \* 864 169  (iv) 710 742 \* 710 741  5. Complete the following:  (a)  (b)  (c)  **Solution**   1. −9 °C; −6 °C; −4 °C; −1 °C; 0 °C; 4 °C; 7 °C; 12 °C     3.    4(a) 28 40  4(b) 978 543 978 534  4(c) 864 026 864 169  4(d) 710 742 710 741 | Work in groups and respond to the questions when it is time to give feedback. |

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| 1. **CLASSWORK** (Suggested time: 15 minutes) |
| Write the integer in the box that best represents the situation described.   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | 1. You found R5 | | 2. You dove 7 meters | | 3. 10° above zero | | |  |  |  |  |  |  | |  | | | | | | | 4. Your temperature is 3 degrees above normal | | 5. 20m below sea level | | 6. 12 steps backwards | | |  |  |  |  |  |  | |  | | | | | | | 7. The elevator went down 4 floors | | 8. A withdrawal of R15 | | 9. A loss of 8 cows | | |  |  |  |  |  |  |   2) Label each integer on the number line. Then list them in order from least to greatest.   |  |  | | --- | --- | | -1, -6  number-line.gif | 2, -9, 8  number-line.gif | | -2, 9, 0, -5  number-line.gif | 3, -7, 10, -6, 0, 6  number-line.gif | |

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| 1. **CONSOLIDATION/CONCLUSION & HOMEWORK (Suggested time: 5 minutes)** |
| 1. Emphasise that:  * negative integers are on the left of zero and less than zero * positive integers are on the right of zero and greater than zero  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**:  DBE Workbook 2 - page 94 2(a) to (c), page 95 no 2(d) to (f) and no 3 |