**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 2)** |

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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:** | * real number system: counting numbers, whole numbers * negative whole numbers in the context of time zone * number line and placement of whole numbers on the 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)   Ask learners to give practical examples where integers can be experienced in real life situation.  Provide learners with a worksheet on classifying examples of real life situations as negative or positive  **Activity**  For each situation, tick whether it is positive or negative:   |  |  |  | | --- | --- | --- | | **Situation** | **Positive** | **Negative** | | Positive charged electricity | 🗸 |  | | Temperature below zero |  | 🗸 | | Below sea level |  | 🗸 | | Earning money | 🗸 |  | | Having debt |  | 🗸 | | Floors above ground level | 🗸 |  | | Win | 🗸 |  | | Loss or decrease |  | 🗸 | | Deposit | 🗸 |  | | Down |  | 🗸 |   **Note:** Allow learners to exchange the worksheets and have a whole class discussion. | |
| 1. **LESSON PRESENTATION/DEVELOPMENT** (Suggested time: 20 minutes) | |
| **Teaching activities** | **Learning activities**  (Learners are expected to:) |
| Explain the meaning of the readings on the thermometer. Copies of thermometer could be projected or photocopied so that learners have an idea of what a thermometer looks like.   * This is what a thermometer will show when it is put in water that is boiling. It shows a temperature of 100 degrees Celsius, which is written as 100 °C.      * On the diagram below, you can see what a thermometer will show if it is in water that is starting to freeze. It shows a temperature of 0 °C.      * On the next diagram you can see what a thermometer will show when the temperature is −40 °C, which is colder than any winter night you may have experienced.     **Note:** If the resources are available, it is recommended that a short practical investigation can be conducted to show readings on the thermometer under different settings, e.g.containers with   * Warm water * Ice cold water * Boiling water * Water at room temperature   **Activity 1**   1. Arrange the temperature readings of the thermometers above in descending and ascending order.   Ascending order: *40*°C*; 0*°C; *100*°C  Descending order: *100*°C*; 0*°C; *40*°C   1. List multiples of 2 that are less than 16.   *(2; 4; 6; 8; 10; 12; 14)*   1. List multiples of 3 between 6 and 24 in descending order.   *(21; 18; 15; 12; 9)*   1. List integers between 5 and 4 in ascending order.   *( 4; 3; 2; 1; 0; 1; 2; 3)*   1. List integers that are greater than 4 but less than or equal to 4 in ascending order.   *(3; 2; 1; 0; 1; 2; 3; 4)*  **Note**: it is important to highlight the inequalities in terms of which numbers must be included or excluded in the list e.g. greater than; less than or equal to. Learners must read the questions carefully in order not to make mistakes.  **Activity 2**  Minimum temperature readings for a certain city over a period of one week temperature ( )  Use the given information alongside to answer the questions below:  Sunday: 1  Monday: 7  Tuesday: 8  Wednesday: 0  Thursday: 9  Friday: 4  Saturday: 3   1. Which day was the coldest?   *Tuesday*   1. Which day was the warmest?   *Thursday*   1. Arrange the above temperatures on a number line   8; 3; 1; 0; 4; 7; 9   1. Which day was colder between Sunday, Tuesday and Saturday?   *Tuesday*   1. Which day was colder between Monday, Wednesday, Thursday and Friday?   *Wednesday*   1. Which day was colder between Monday and Thursday?   *Monday*   1. Which day was colder between Sunday and Saturday?   *Saturday* | * listen to teachers’ presentation * answer questions on each activity through group discussion. |

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| 1. **CLASSWORK** (Suggested time: 15 minutes) |
| 1. Write down integers from the list of numbers below:   1,26; -9; -356; 0; ; -5; ; ; 0,41   1. On a certain day the following minimum temperatures were provided by the weather bureau:   Bethlehem −4 °C Bloemfontein −6 °C  Cape Town 7 °C Dordrecht −9 C  Durban 12 °C Johannesburg 0 °C  Pretoria 4 °C Queenstown −1 °C   1. Arrange the temperatures from the coldest to the warmest. 2. Arrange the temperatures from the warmest to the coldest. |

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| 1. **CONSOLIDATION/CONCLUSION & HOMEWORK (Suggested time: 5 minutes)** |
| 1. Emphasise that:  * positive numbers are always greater than negative numbers * negative numbers are always less than positive numbers * when using a number line, numbers increase as you move to the right and decrease as you move to the left * the number zero is neutral. It is neither negative nor positive  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 120 no 1(a) to (f), page 121 no 2(a) to (c), |