**MATHEMATICS LESSON PLAN**

**GRADE 9**

**TERM 1: JANUARY – MARCH**

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

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| 1. **TOPIC: WHOLE NUMBERS:** Properties of numbers (Lesson 1) |
| 1. **CONCEPTS & SKILLS TO BE ACHIEVED:**   **Learners should know and be able to:-**  Describe the real number system by recognising, defining and distinguishing properties of:   * natural numbers * whole numbers * integers * rational numbers * irrational numbers      1. **RESOURCES: Textbooks, DBE Workbooks and Sasol Inzalo Books** 2. **PRIOR-KNOWLEDGE: Number knowledge for whole numbers done in grade 8** 3. **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) |
| Revise the number system (explain the development of number system) below:    Rational  Common and non/recurring decimal fractions  Real numbers  Non - terminating decimal fractions  Irrational  Integers  Whole numbers  Natural numbers  ;      Surds | | |
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| **7. LESSON PRESENTATION/DEVELOPMENT** (Suggested time: 20 minutes) | |
| **Teaching activities** | **Learning activities**  (Learners are expected to :) |
| Define the concept of rational number and irrational number (refer to page 119 in CAPS) giving examples in each case:  Examples:   * Rational numbers: 3; -7; ; ; ; ; 1,5;   0, 3333.... etc.   * Irrational numbers: ; 1,531..., etc   NOTE: Learners should recognize the following distinguishing features of the number system:   * integers extend the natural and whole number systems by including operations * rational numbers extend the set of integers by including the operation where * Since integers are subset of rational numbers, every integer, can be expressed as a rational number   NB! Pi ( ) is an irrational number even though we use or 3, 14 as rational number approximations for Pi in calculation done. | Give more examples of rational and irrational numbers. |

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| **8. CLASSWORK** (Suggested time: 15 minutes) |
| 1. Complete the table below by ticking the correct column. The first one has been done for you.   All the numbers are real.   |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | |  | **Real** | **Natural number** | **Whole number** | **Integers** | **Rational number** | **Irrational number** | | **(a)** | **9** | **🗸** | **🗸-** | **🗸** | **🗸** |  | | **(b)** | **1.25** |  |  |  |  |  | | **(c)** |  |  |  |  |  |  | | **(d)** | **0,** |  |  |  |  |  | | **(e)** |  |  |  |  |  |  | | **(f)** |  |  |  |  |  |  |  1. Between which two consecutive integers lie. 2. **Choose the correct answer.**   Which of the following numbers is irrational?   1. **0,5** 2. **Study the following numbers and answer the questions that follow:**   **7 ; ; ; ; ; ; ; ; ;**   * 1. List the natural numbers.   2. List all the rational numbers that are not natural numbers.   3. Classify |

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| **9. CONSOLIDATION/CONCLUSION & HOMEWORK** (Suggested time: 5 minutes) |
| 1. Emphasise the following:  * Rational numbers: Numbers that can be written in the form where *a* and *b* are integers and a b * Irrational numbers: Numbers are numbers that cannot be expressed as a rational number in the form  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.  HOMEWORK   |  |  |  | | --- | --- | --- | | Sasol Inzalo Books | DBE workbook | Textbook | |  | Page 4 No. 2 and 3 |  | |