**SCHEMES OF WORK**

**SCHOOL: ………………………………………………………………………………………………………………**

**GRADE: GRADE EIGHT**

**LEARNING AREA: MATHEMATICS**

**TERM 1 YEAR: 2024**

**TEACHER’S NAME: ……………………………………………….… TSC NO……………………………………**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Week | Lesson | Strand | Sub-strand | Specific-Learning outcomes | Learning Experience | Key Inquiry Question(S) | Learning  Resources | Assessment Methods | Reflection |
| 1 | **OPENING AND RECEIVING LEARNERS** | | | | | | | | |
| 2 | **1** | **NUMBERS** | **Integers** | ***By the end of the lesson, the learner should be able to:***   1. Define integers 2. Identify integers on a number line 3. Have fun and enjoy generating integer’s numbers lines in their classroom. | **In groups, learners are guided to**   1. Define integers 2. Define number line 3. Carry out activities involving positive and negative numbers and zero.   For example climbing upstairs (positive), climbing down (negative).  Others may include standing at a point, the zero point, and count the number of steps moved either forward or backward.  In groups, learners are guided to draw and represent integers on number lines on learning materials   1. Learners to be involved in. 2. Discussions about integers 3. Reading numbers on a number line 4. Showing numbers on a number line 5. Solving problems involving integers and the number line | When do we use integers in real life situation? | Number line  Stairways  Natural numbers  Whole Numbers *EAEP; SMART MINDS Mathematics*  *Learner’s Book Grade 8 pg. 1-2* | Class activities  Class written tests  Extended activities  Project  observations |  |
|  | **2** | **NUMBERS** | **Operations of integers** | **By the end of the lesson, the learner should be able to:**   1. Define a number line 2. Perform the four basic operations on integers using the number line 3. Enjoy Performing the four basic operations on integers using the number line | **In groups leaners are guided to:**   1. Draw and represent integers on a number line 2. Illustrating and solving problems involving four basic operations on integers 3. Explanations how to solve problems involving four basic operations on integers 4. Discussing exercises given by the teacher on integers | When do we use integers in real life situation? | Charts showing integers  Number line  Stair case  Ladder  Thermometer  Real life situations *EAEP; SMART MINDS Mathematics*  *Learner’s Book Grade 8 pg3.* | Class activities  Class written tests  Extended activities  Project  observations |  |
|  | **3** | **NUMBERS** | **Operations of integers** | **By the end of the lesson, the learner should be able to:**   1. Define a number line 2. Perform the four basic operations on integers using the number line 3. Enjoy Performing the four basic operations on integers using the number line | **In groups leaners are guided to:**   1. Draw and represent integers on a number line 2. Illustrating and solving problems involving four basic operations on integers 3. Explanations how to solve problems involving four basic operations on integers 4. Discussing exercises given by the teacher on integers | When do we use integers in real life situation? | Charts showing integers  Number line  Stair case  Ladder  Thermometer  Real life situations  *EAEP; SMART MINDS Mathematics*  *Learner’s Book Grade 8 pg.4* | Class activities  Class written tests  Extended activities  Project  observations |  |
|  | **4** | **NUMBERS** | **Combined operations** | **By the end of the lesson, the learner should be able to:**   1. Define a number line 2. Work out problems involving combined operations on integers in the correct order 3. Enjoy Working out problems involving combined operations on integers in the correct order | **In groups leaners are guided to:**   1. to perform operations on integers on correct order 2. Solving problems involving combined operations on integers | How do we carry out operations of integers? | Number line  Stair case  Ladder  Thermometer *EAEP; SMART MINDS Mathematics*  *Learner’s Book Grade 8 pg.5* | Class activities  Class written tests  Extended activities  Project  observations |  |
|  | **5** | **NUMBERS** | **Combined operations** | **By the end of the lesson, the learner should be able to:**   1. Define a number line 2. Work out problems involving combined operations on integers in the correct order 3. Enjoy Working out problems involving combined operations on integers in the correct order | **In groups leaners are guided to:**   1. to perform operations on integers on correct order 2. Solving problems involving combined operations on integers 3. Play creative games that involves number lines, for example jumping steps. | Where are integers operations applicable? | Number line  Stair case  Ladder  Thermometer *EAEP; SMART MINDS Mathematics*  *Learner’s Book Grade 8 pg.6-8* | Class activities  Class written tests  Extended activities  Project  observations |  |
| 3 | **1** | **NUMBERS** | **Fractions**  **The meaning of fractions** | **By the end of the lesson, the learner should be able to:**   1. Define fractions 2. Identify and write fractions in figures (proper and improper) 3. Enjoy sharing equally the materials given. | **In groups learners are guided to**   1. Make proper Definitions of fractions 2. Discussions on the various types of fractions 3. Solving problems involving fractions | How do we use fractions in real life situations? | Charts  Illustrating operations on fractions  *EAEP; SMART MINDS Mathematics*  *Learner’s Book Grade 8 pg.8-9* | Class activities  Class written tests  Extended activities  Project  observations |  |
|  | **2** | **NUMBERS** | **Equivalent fractions** | **By the end of the lesson, the learner should be able to:**   1. Define equivalent fractions 2. Identify and write equivalent fractions 3. Enjoy sharing equally the materials given. | **In pairs leaners are guided to**   1. Discuss about the types of fractions 2. Dividing equally a given item like a piece of paper or sticks. 3. Measuring the items given 4. Weighing the items given 5. Solving problems involving equivalent fractions | How do we use fractions in real life situations? | Sticks  Pieces of paper  Ruler  Real life - situation Charts  Illustrating operations on fractions | Class activities  Class written tests  Extended activities  Project  observations |  |
|  | **3** | **NUMBERS** | **Naming fractions** | **By the end of the lesson, the learner should be able to:**   1. Name fractions correctly 2. convert an improper fraction to a mixed number and vice versa 3. Enjoy converting fractions | **In pairs leaners are guided to**   1. Discussing about naming fractions 2. Sharing equally the items given 3. Solving problems involving fractions 4. Converting fractions 5. Doing excesses on fractions |  | Counters such as seeds, bottle tops, stones  Pieces of paper  Sticks *EAEP; SMART MINDS Mathematics*  *Learner’s Book Grade 8 pg.10-11* | Class activities  Class written tests  Extended activities  Project  observations |  |
|  | **4** | **NUMBERS** | **Adding and subtracting fractions** | **By the end of the lesson, the learner should be able to:**   1. Name fractions correctly 2. Add and subtract fractions 3. Enjoy adding and subtracting fractions | **In pairs leaners are guided to**   1. Show how to add and subtract fractions. 2. Discussions about adding and subtracting fractions. 3. Converting Fractions | How do we use fractions in real life situations? | Oranges  Sticks  Pieces of paper  Counters  *EAEP; SMART MINDS Mathematics*  *Learner’s Book Grade 8 pg.12-13* | Class activities  Class written tests  Extended activities  Project  observations |  |
|  | **5** | **NUMBERS** | **Multiplication and division of fractions** | **By the end of the lesson, the learner should be able to:**   1. Outline types of fractions 2. Perform multiplication and division of fractions 3. Appreciate the role of fractions in our da to da activities | **In pairs leaners are guided to**   1. Discuss about types of fractions and how they can be multiplied together. 2. Multiply fractions 3. Divide fractions 4. Convert fraction 5. Showing the learner how to manipulate fractions | How do we use fractions in real life situations? | Sticks  Stones  Seeds  Pieces of paper  *EAEP; SMART MINDS Mathematics*  *Learner’s Book Grade 8 pg.14-15* | Class activities  Class written tests  Extended activities  Project  observations |  |
| 4 |  |  |  | **CAT ONE** | **ASSESSMENT** | TEST |  |  |  |
| 5 | **1** | **Fractions** | **Order of operations** | **By the end of the lesson, the learner should be able to:**   1. Carry out combined operations on fractions on the correct order 2. Promote use of fractions in real life. | **Learners are guided to :**   1. Discuss and use the correct order of operations in fractions 2. Add fractions 3. Subtract fractions 4. Multiply fractions 5. Divide fractions 6. Convert of fractions | How do we use fractions in real life situations? | Multiplication tables  Conversion tables  Real objects  *EAEP; SMART MINDS Mathematics*  *Learner’s Book Grade 8 pg.16* | Class activities  Class written tests  Extended activities  Project  observations |  |
|  | **2** | **Fractions** | **Application of fractions in a real life situation** | **By the end of the lesson, the learner should be able to:**   1. State types of fractions 2. Solve world problems involving fractions in real life situations 3. Promote the use of fractions in real life situations | **In groups Learners are guided to :**   1. Discuss and use the correct order of operations in fractions 2. Add fractions 3. Subtract fractions 4. Multiply fractions 5. Divide fractions   Convert of fractions | How do we use fractions in real life situations? | Multiplication tables  Conversion tables  Real objects  Counters  *EAEP; SMART MINDS Mathematics*  *Learner’s Book Grade 8 pg.17-18* | Class activities  Class written tests  Extended activities  Project  observations |  |
|  | **3** | **NUMBERS** | **Fractions**  **Revision** | **By the end of the lesson, the learner should be able to:**   1. State types of fractions 2. Solve world problems involving fractions in real life situations 3. Promote the use of fractions in real life situations 4. Answer the questions in the student’s book.   Further exercises | **Learners are guided to :**   1. Discuss and use the correct order of operations in fractions 2. Add fractions 3. Subtract fractions 4. Multiply fractions 5. Divide fractions 6. Convert of fractions | How do we use fractions in real life situations? | Multiplication tables  Conversion tables  Real objects  Counters  *EAEP; SMART MINDS Mathematics*  *Learner’s Book Grade 8 pg.19-21* | Class activities  Class written tests  Extended activities  Project  observations |  |
|  | **2** | **NUMBERS** | **Decimals**  **Fractions and decimals** | **By the end of the lesson, the learner should be able to:**   1. Define decimals 2. Convert fractions into decimals 3. Promote use of decimals in real life situations | **LEARNERS ARE GUIDED TO**   1. Define fractions 2. Practice concerting fractions to decimals | How do we use fractions in real life situations? | Equivalent fractions  Multiplication tables  Real life situations *EAEP; SMART MINDS Mathematics*  *Learner’s Book Grade 8 pg.22-23* | Class activities  Class written tests  Extended activities  Project  observations |  |
|  | **3** | **NUMBERS** | **Recurring decimals** | **By the end of the lesson, the learner should be able to:**   1. Define recurring decimal 2. Identify and write recurring decimals 3. write recurring decimals | **Learners are guided to:**   1. Define fractions 2. Practice concerting fractions to decimals 3. Discuss and classify non-recurring and recurring decimals 4. Indicate the recurring digits Multiplying | How do we use fractions in real life situations? | Equivalent fractions  Multiplication tables  Real life situations  *EAEP; SMART MINDS Mathematics*  *Learner’s Book Grade 8 pg.24* | Class activities  Class written tests  Extended activities  Project  observations |  |
|  | **4** | **NUMBERS** | **Recurring decimals and fractions** | **By the end of the lesson, the learner should be able to:**   1. Identify recurring decimals 2. Convert recurring decimals into fractions | **In groups learners are guided to:**   1. Guiding learner to identify recurring decimals 2. Discussion on recurring decimals 3. Doing exercises on recurring decimals 4. Conversion 5. illustrations | How do we use decimals in real life situations? | Equivalent fractions  Multiplication tables  Real life situations  *EAEP; SMART MINDS Mathematics*  *Learner’s Book Grade 8 pg.25* | Class activities  Class written tests  Extended activities  Project  observations |  |
|  | **5** | **NUMBERS** | **Rounding off decimals** | **By the end of the lesson, the learner should be able to:**  Round off a decimal number to the required number of decimal places | **In groups Learners are guided to;**   1. Discuss and classify non-recurring and recurring decimals 2. Indicate the recurring digits 3. Practice converting the recurring decimals to fractions 4. Discuss and round off decimal numbers t a required number of decimal places. 5. Write decimals and whole numbers to given significant figures. | How do we use decimals in real life situations? | Place value charts  Ruler  Tape measure  Objects *EAEP; SMART MINDS Mathematics*  *Learner’s Book Grade 8 pg.26-27* | Class activities  Class written tests  Extended activities  Project  observations |  |
| 6 | MIDTERM EXAMINATION | | | | | | | | |
| 7 | **HALFTERM** | | | | | | | | |
| 8 | **REVISION OF MIDTERM EXAMINATION** | | | | | | | | |
| 9 | **1** | **NUMBERS** | **Standard form** | **By the end of the lesson, the learner should be able to:**   1. Define standard form 2. Write numbers in standard form and apply in real life situations 3. Enjoy writing numbers in standard forms | **In groups Learners are guided to:**   1. Write numbers in standard form in learning materials such as cards or charts. 2. Work out combined operations on decimals in the correct order. | How do we use decimals in real life situations? | place value charts  measuring instruments  objects  *EAEP; SMART MINDS Mathematics*  *Learner’s Book Grade 8 pg.28-32* | Class activities  Class written tests  Extended activities  Project  observations |  |
|  | **2** | **NUMBERS** | **Addition and subtraction of decimals** | **By the end of the lesson, the learner should be able to:**   1. Add decimals 2. Subtract decimals 3. Enjoy adding and subtracting decimals | **In groups, learners are involved in**   1. Discussions about decimals 2. Demonstrations on how to operate decimals 3. Multiplying decimals 4. Correcting errors caused by failure to manipulate decimal point correctly   Doing exercises on decimals | How do we use decimals in real life situations? | Place value charts  Measuring instruments such as tape measure, ruler, meter rule  Regular shaped objects *EAEP; SMART MINDS Mathematics*  *Learner’s Book Grade 8 pg.33* | Class activities  Class written tests  Extended activities  Project  observations |  |
|  | **3** | **NUMBERS** | **Multiplication and division** | **By the end of the lesson, the learner should be able to:**   1. Multiply decimals 2. Divide decimals 3. Play games of operations of decimals using it or other materials | **In groups, learners are involved in**   1. Discussions about decimals 2. Demonstrations on how to operate decimals 3. Multiplying decimals 4. Correcting errors caused by failure to manipulate decimal point correctly 5. Doing exercises on decimals | How do we use decimals in real life situations? | Mathematical table  Multiplication table  Place value chart  Measuring instruments  Regular shaped objects *EAEP; SMART MINDS Mathematics*  *Learner’s Book Grade 8 pg.34-35* | Class activities  Class written tests  Extended activities  Project  observations |  |
|  | **4** | **NUMBERS** | **Combined operation on decimals** | **By the end of the lesson, the learner should be able to:**   1. Carry out operations in the correct order 2. Apply the knowledge of decimals to real life situations 3. Play games of operations of decimals using it or other materials | **In pairs learners are involved in :**  Discussions on   1. Application of decimals to real life situations 2. Adding decimals 3. Multiplying decimals 4. Dividing decimals 5. Subtracting decimals 6. Solving puzzles in decimals 7. Playing games involving decimals using devices | How do we use decimals in real life situations? | Place value charts  Multiplication tables  Mathematical tables  Tape measure  Meter rule  Ruler  Strings  Regular shaped objects  *EAEP; SMART MINDS Mathematics*  *Learner’s Book Grade 8 pg.36-37* | Class activities  Class written tests  Extended activities  Project  observations |  |
|  | **5** | **NUMBERS** | **Squares of numbers** | **By the end of the lesson, the learner should be able to:**   1. Define the term square 2. Find squares of numbers by multiplication and factorization 3. Enjoy using squires of numbers | I**n pairs, learners are guided to:**   1. Define a square 2. Find squires of given numbers. 3. Work out the squares of numbers from tables in different situations. 4. Multiplication of squares. 5. Memorizing squares of numbers 6. Doing short test on squares of numbers 7. Solving puzzles on squares. | Where do we apply squares and square roots in real life situations? | Multiplication tables  Mathematical tables  Calculators (scientific) *EAEP; SMART MINDS Mathematics*  *Learner’s Book Grade 8 pg.38-40* | Squares Class activities  Class written tests  Extended activities  Project  observations |  |
| 10 | **1** | **NUMBERS** | **Squares of numbers greater than 1 and less than 10** | **By the end of the lesson, the learner should be able to:**   1. read the mathematical table 2. find the squares of numbers from the mathematical table 3. Enjoy finding the squares of numbers. | **Learners are guided to**  Define a square   1. Find squires of given numbers. 2. Work out the squares of numbers from tables in different situations. 3. Multiplication of squares. 4. Memorizing squares of numbers 5. Doing short test on squares of numbers 6. Solving puzzles on squares. 7. Reading the mathematical table 8. Emphasizing standard form 9. Doing short tests on squares 10. Playing games on squares of numbers | Where do we apply squares and square roots in real life situations? | Mathematical tables  Multiplication tables  Calculators (scientific)  *EAEP; SMART MINDS Mathematics*  *Learner’s Book Grade 8 pg.41* | Class activities  Class written tests  Extended activities  Project  observations |  |
|  | **2** | **NUMBERS** | **Squares of numbers greater than 10** | **By the end of the lesson, the learner should be able to:**   1. Read mathematical tables 2. Find the square of numbers greater than 10 from the mathematical table. 3. Enjoy finding the squares of numbers. | I**n pairs, learners are guided to:**   1. Define a square 2. Find squires of given numbers. 3. Work out the squares of numbers from tables in different situations. 4. Multiplication of squares. 5. Memorizing squares of numbers 6. Doing short test on squares of numbers   Solving puzzles on squares. | Where do we apply squares and square roots in real life situations? | Mathematical tables  Multiplication tables  Calculators (Scientific)  *EAEP; SMART MINDS Mathematics*  *Learner’s Book Grade 8 pg.42* | Class activities  Class written tests  Extended activities  Project  observations |  |
|  | **3** | **NUMBERS** | **Squares of numbers less than 1** | **By the end of the lesson, the learner should be able to:**   1. Read mathematical tables 2. Find the squares of numbers less than 1 from mathematical tables 3. Enjoy finding the squares of numbers. | I**n pairs, learners are guided to:**   1. Define a square 2. Find squires of given numbers. 3. Work out the squares of numbers from tables in different situations. 4. Multiplication of squares. 5. Memorizing squares of numbers 6. Doing short test on squares of numbers   Solving puzzles on squares. | Where do we apply squares and square roots in real life situations? | Mathematical tables  Multiplication tables  Calculators (Scientific)  *EAEP; SMART MINDS Mathematics*  *Learner’s Book Grade 8 pg.43-45* | Class activities  Class written tests  Extended activities  Project  observations |  |
|  | **4** | **NUMBERS** | **Finding square roots by factorization** | **By the end of the lesson, the learner should be able to:**   1. Define square roots 2. Find square roots of numbers by factorization 3. Enjoy finding square roots of numbers | I**n pairs, learners are guided to:**   1. Define a square 2. Find squires of given numbers. 3. Work out the squares of numbers from tables in different situations. 4. Multiplication of squares. 5. Memorizing squares of numbers 6. Doing short test on squares of numbers   Solving puzzles on squares. | Where do we apply squares and square roots in real life situations? | Mathematical tables  Multiplication tables *EAEP; SMART MINDS Mathematics*  *Learner’s Book Grade 8 pg.46* | Class activities  Class written tests  Extended activities  Project  observations |  |
|  | **5** | **NUMBERS** | **Square root tables** | **By the end of the lesson, the learner should be able to:**   1. Read the square root table 2. Read square roots of numbers 1< A <10 from mathematical tables 3. Enjoy finding square roots of numbers using tables | **Guiding the learner to read square roots from tables**   1. Discussing how to find square roots of numbers 2. Doing exercises on square roots of numbers | Where do we apply squares and square roots in real life situations? | Mathematical tables  Multiplication tables *EAEP; SMART MINDS Mathematics*  *Learner’s Book Grade 8 pg.47-48* | Class activities  Class written tests  Extended activities  Project  observations |  |
| 11 | **1** | **NUMBERS** | **Square roots of numbers less than one and greater than 100** | **By the end of the lesson, the learner should be able to:**   1. Get the Square roots of numbers less than one and greater than 100 form their mathematical tables 2. Enjoy finding square roots of numbers using tables | I**n pairs, learners are guided to:**   1. Define a squares and square roots 2. Find squires of given numbers. 3. Work out the squares of numbers from tables in different situations. 4. Multiplication of squares. 5. Memorizing squares of numbers 6. Doing short test on squares of numbers 7. Solving puzzles on squares. |  | Mathematical tables  Multiplication tables *EAEP; SMART MINDS Mathematics*  *Learner’s Book Grade 8 pg.49-50* | Class activities  Class written tests  Extended activities  Project  observations |  |
|  | **2** | **NUMBERS** | **Revision** | **By the end of the lesson, the learner should be able to:**   1. Solve problems involving squares and square roots 2. Enjoy finding squares and square roots of numbers using tables | I**n pairs, learners are guided to:**   1. Define a squares and square roots. 2. Find squires of given numbers. 3. Work out the squares of numbers from tables in different situations. 4. Multiplication of squares. 5. Memorizing squares of numbers 6. Doing short test on squares of numbers 7. Solving puzzles on squares and square roots. Practice |  | Mathematical table  Charts *EAEP; SMART MINDS Mathematics*  *Learner’s Book Grade 8 pg.51-53* | Class activities  Class written tests  Extended activities  Project  observations |  |
| 12 |  |  |  | **REVISION FOR ENDTERM** |  |  |  |  |  |
| 13 | **ENDTERM EXAMINATION** | | | | | | | | |
| 14 | **CLOSING OF THE SCHOOL** | | | | | | | | |