**GRADE 4 –MATHEMATICS SCHEMES OF WORK TERM 2**

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| **W-K** | **L** | **STRAND** | **SUB-STRAND** | **SPECIFIC LEARNING OUTCOMES** | **LEARNING EXPERIENCES** | **K.I.Q** | **LEARNING RESOURCES** | | **ASSESSMENT** | **RELECTION** |
| **1** | - | Revision of content covered in previous term in preparation for term 2 work | | | | | | | |  |
| **2** | 1 | **SUBTRCTION** | Subtraction of up to 4-digit numbers with regrouping | By the end of the lesson the learner should be able to  -Subtract up to 4-digit numbers with regrouping in real life | Learners in pairs/groups/individually to subtract up to 4-  digit numbers with regrouping in  real life situations. | When do you use subtraction in real life? | | -Illustrations on chalk board  -Place value charts,  Kiburi O. et al (2019) ***KLB Visionary Mathematics Grade . 4 learners book*** pg. 35 | Written exercise  Observation |  |
| 2 | **SUBTRCTION** | Finding differences of up to 3-digit numbers | By the end of the lesson the learner should be able to  -estimate difference by rounding off numbers to the nearest ten in real life situations | Learners in pairs/groups to  estimate and work out difference  by rounding off the numbers to  the nearest ten in real life  situations. | How do you estimate difference of given numbers? | | -Illustrations on chalk board  -Place value charts  -learners bk pg. 36 | Written exercise  Observation |  |
| 3 | **SUBTRCTION** | Finding differences of up to 4-digit numbers | By the end of the lesson the learner should be able to  estimate difference by rounding off numbers to the nearest ten in real life situations | Learners in pairs/groups to  estimate and work out difference  by rounding off the numbers to  the nearest ten in real life  situations. | How do you estimate difference of given numbers? | | -Illustrations on chalk board  -Place value charts  -learners bk pg. 36 | Written exercise  Observation |  |
| 4 | **SUBTRCTION** | Number patterns | By the end of the lesson the learner should be able to  -create number patterns involving subtraction from up to 5000 | Learners in pairs/groups to create patterns involving subtraction of numbers from up to 10,000.  -learners work out difference by rounding off the numbers to the nearest ten in real life situation | How do you create number patterns involving subtraction? | | -Illustrations on chalk board  -Place value charts  -learners bk pg. 37 | Written exercise  Observation |  |
| 5 | **SUBTRCTION** | Number patterns | By the end of the lesson the learner should be able to  -create number patterns involving subtraction from up to 10000  **-**useit devices for learning and enjoyment | Learners in pairs/groups to create patterns involving subtraction of numbers from up to 10,000.  Learners in pairs/groups/  individually to play digital games involving subtraction. | How do you create number patterns involving subtraction? | | -Illustrations on chalk board  -Place value charts  -learners bk pg 37 | Written exercise  Observation |  |
| **3** | 1 | **MULTIPLICATION** | Multiplication up to 2-digit numbers by multiples of ten | By the end of the lesson the learner should be able to  -multiply up to 2-digit numbers by multiples of ten in different situations | Learners in pairs/groups to  multiply up to a 2-digit number  by multiples of 10 in different situations. | When do you use multiplication in real life? | | -Counters, multiplication tables  Kiburi O. et al (2019) ***KLB Visionary Mathematics Grade . 4 learners book***. pg40 | Written exercise  Observation |  |
| 2 | **MULTIPLICATION** | Multiplication up to 2-digit numbers by multiples of ten | By the end of the lesson the learner should be able to  -multiply one-digit number by multiples of 10 | Learners in pairs/groups/Individually to  multiply up to a 2-digit number  by multiples of 10 in different situations. | How do you multiply one-digit number by multiples of ten | | -Counters, multiplication tables  -learners bk pg. 41 | Written exercise  Observation |  |
| 3 | **MULTIPLICATION** | Multiplication of 2-digit numbers by 1-digit number without regrouping | By the end of the lesson learner should be able to:  -multiply up to a 2-digit number by a 2-digit number without and with regrouping in real life situations, | Leaners in pairs/groups to  multiply up to a 2-digit numbers  by a 2-digit number without and  with regrouping in real life situations. | How do you multiply the digit numbers by a single digit number? | | -Counters, multiplication tables  -learners bk pg 42-43 | Written exercise  Observation |  |
| 4 | **MULTIPLICATION** | Multiplication of a 2-digit number by multiples of ten | By the end of the sub strand, the learner should be able to multiply a 2-digit number by multiples of ten  -multiply one-digit number by multiples of 10 | Leaners in pairs/groups to  multiply up to a 2-digit numbers  by a 2-digit number without regrouping in real life situations.  -work out exercises | How can you multiply two- digit numbers without regrouping? | | -Counters, multiplication tables  -learners bk pg. 44 | Written exercise  Observation |  |
| 5 | **MULTIPLICATION** | multiplication of a 2-digit number by a 2-digit number without regrouping | By the end of the lesson the learner should be able to  -multiply a 2-digit number by a 2-digit number without regrouping  - | Leaners in pairs/groups to  multiply up to a 2-digit numbers  by a 2-digit number without regrouping in real life  situations.  -work out exercises | How can you multiply two-digit numbers without regrouping? | | -Counters, multiplication tables  -learners bk pg 45 | Written exercise  Observation |  |
| **4** | 1 | **MULTIPLICATION** | multiplication of a 2-digit number by a 2-digit number with regrouping | By the end of the lesson the learner should be able to  -multiply a 2-digit number by a 2-digit number without regrouping | Leaners in pairs/groups to  multiply up to a 2-digit numbers  by a 2-digit number with regrouping in real life situations.  -work out exercises | How can you multiply 2-digit number by a 2-digit number with regrouping? | | Multiplication tables  Kiburi O. et al (2019) ***KLB Visionary Mathematics Grade . 4 learners book pg***. 46 | Written exercise  Observation |  |
| 2 | **MULTIPLICATION** | -Estimating products by rounding off numbers to the nearest 10 | By the end of the lesson the learners should be able to  -estimate products by rounding off numbers to the nearest 10  -work out examples involving rounding off. | Learners pairs/groups/  individually to estimate and work out answers by rounding off numbers to the nearest ten with product not exceeding 1,000 in real life situations | How can you estimate products? | | Multiplication tables  -learners bk pg. 47 | Oral questions  Written exercise  Observation |  |
| 3 | **MULTIPLICATION** | Number patterns involving multiplication | By the end of the lesson the learner should be able to  -make and complete number patterns involving multiplication with product not exceeding 100  -identify missing numbers in a pattern | Learners in pairs/groups/individually to create patterns involving multiplication with product not exceeding 100 | How can you create patterns involving multiplication? | | Multiplication tables  -learners bk pg. 48 | Oral questions  Written exercise  Observation |  |
| 4 | **DIVISION** | Division as equal sharing and as equal grouping | By the end of the lesson the learners should be able to  -work out division as equal sharing and grouping | Learners in pairs/ groups to divide up to a 2-digit number by 1-digit number without remainder using counters. | When do you use division in real life? | | Multiplication Tables  learners bk pg. 50 | Written exercise  Observation |  |
| **5** | **DIVISION** | Division of a 2-digit Number by a 1-digit number without remainder | By the end of the lesson the learner should be able to  -divide a 2-digit number by a 1-digit number without remainder | Learners in pairs/ groups to divide up to a 2-digit number by 1-digit number without remainder using counters. | How do you use repeated subtraction to work out division? | | Multiplication Tables  -learners bk pg 50 | Oral questions  Written exercise  Observation |  |
| **5** | **1** | **DIVISION** | Division of up to a 2 digit number by a 1-digit number with remainder | By the end of the lesson the learner should be able to  -divide numbers involving multiplication facts  -, | Learners in pairs/groups to divide a 2-digit number by a 1-digit number with remainder using counters. | How do you work out division with remainder | | Kiburi O. et al (2019) ***KLB Visionary Mathematics Grade . 4 learners book*** pg. 53 | Oral questions  Written exercise  Observation |  |
| 2 | **DIVISION** | Division of up to a 2 digit number by a 1-digit number with remainder | By the end of the lesson the learner should be able to  -divide 2 –digit number by a 1-digit with remainder  -use IT devices to carry out divisions  - | Learners in pairs/groups to divide a 2-digit number by a 1-digit number with remainder using counters.  Learners pairs/groups/ individually to play digital games involving division. | How do you work out division with remainder? | | -IT devices  -learners bk pg. 53 | Written exercise  Observation |  |
| 3 | **DIVISION** | The long form division | By the end of the lesson the learner should be able to  -use the long form of division | Learners in pairs/groups to divide a 2-digit number by a 1- digit number using the long form of division.  Learners in pairs/groups to divide a 2-digit number by a 1-digit number using own strategies. | How do you use long division when dividing numbers? | | Multiplication Tables  -learners bk pg 54 | Written exercise  Observation |  |
| 4 | **DIVISION** | The long form division | By the end of the lesson the learner should be able to  -use different methods to work out division | Learners in pairs/groups to divide a 2-digit number by a 1- digit number using the long form of division.  Learners in pairs/groups to divide a 2-digit number by a 1-digit number using own strategies. | How do you use long division when dividing numbers? | | Multiplication Tables  -learners bk pg. 54-55 | Oral questions  Written exercise  Observation |  |
| 5 | **DIVISION** | Relationship between multiplication and division | By the end of the lesson the learner should be able to  -relate division and multiplication in real life situations | Learners in pairs/groups to use  relationship between multiplication and division in working out problems. | How can you relate multiplication and division? | | Multiplication Tables  -learners bk pg 56 | Written exercise  Observation |  |
| **6** | 1 | **FRACTIONS** | Finding the missing number | By the end of the lesson the learner should be able to  -find the missing number using relationship between multiplication and division | Learners in pairs or groups to find out the missing numbers  Work out examples in their exercise books | How do you relate multiplication and division? | | ***KLB Visionary Mathematics Grade . 4 learners book*** pg. 56 | Written exercise  Observation |  |
| 2 | **FRACTIONS** | Fraction as a whole | By the end of the lesson the learner should be able to  -represent a fraction as a part of a whole | Learners in pairs/groups to  represent fractions as part of a  whole and as part of a group using concrete objects | How do you represent a fraction? | | diagrams and pictures in pupils text book  -learners bk pg. 57 | Oral questions  Written exercise  Observation |  |
| 3 | **FRACTIONS** | Representing a fraction as part of a group | By the end of the lesson the learner should be able to  -represent a fraction as a part of a group  -use IT devices for learning and enjoyment,  -appreciate application of fractions in real life situations. | Learners in pairs/groups to  represent fractions as part of a  whole and as part of a group using concrete objects  Learners in pairs/groups  /individually to play digital games involving fractions. | How do you represent a fraction? | | diagrams and pictures in pupils text book  -learners bk pg. 58-59 | Oral questions  Written exercise  Observation |  |
| 4 | **FRACTIONS** | Identifying numerator and denominator | By the end of the lesson the learner should be able to  -identify numerator and denominator in a fraction in real situations  - | Learners in pairs/groups to discuss the top and bottom numbers in a fraction and share with other groups.  Learners in pairs/groups to write  fractions represented as part of whole or part of a group | . Which number represents a numerator in a fraction? | | diagrams and pictures in pupils text book  -learners bk pg. 60 | Oral questions  Written exercise  Observation |  |
| 5 | **FRACTIONS** | Types of fraction | By the end of the lesson the learner should be able to  -identify different types of fractions  -appreciate application of fractions in real life situations. | Learners in pairs/groups to represent fractions as part of a whole or part of a group using cut outs, counters or clock face.  Learners in pairs/groups/individually to represent proper, improper and mixed fractions as part of a whole or as part of a  group using paper cut outs or counters. | What are the different types of fractions? | | diagrams and pictures in pupils text book  -learners bk pg 61-62 | Oral questions  Written exercise  Observation |  |

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| **7** | 1 | **FRACTIONS** | Converting improper fractions to mixed fractions and vice versa | By the end of the lesson the learner should be able to convert:  -Improper fractions to mixed fractions  -Mixed fractions to improper fractions  -use IT devices for learning and enjoyment, | Learners in pairs/groups to convert improper fractions to mixed fractions.  Learners in pairs/groups to convert mixed fractions to improper fractions.  Learners in pairs/groups  /individually to play digital games involving fractions. | How can you convert improper fraction to mixed to mixed fraction? | diagrams and pictures in pupils text book  Kiburi O. et al (2019) ***KLB Visionary Mathematics Grade . 4 learners book*** pg. 63-64 | Oral questions  Written exercise  Observation |  |
| 2 | **DECIMALS** | Identifying Tenths and hundredths | By the end of the lesson the learner should be able to  -identify tenths and hundredths  - | Learners in pairs/groups to represent fractions as part of a whole or part of a group using cut outs, counters or clock face.  Learners in pairs/groups/ individually to represent proper, improper and mixed fractions as part of a whole or as part of a  group using paper cut outs or  counters. | How can you identify tenths and hundredths? | diagrams and pictures in pupils text book  -learners bk pg. 65 | Oral questions  Written exercise  Observation |  |

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|  | 3 | **DECIMALS** | Identifying Tenths and hundredths | By the end of the lesson the learner should be able to  -identify tenths and hundredths  situations. | Learners in pairs/groups to  represent fractions as part of a  whole or part of a group using cut outs, counters or clock face.  Learners in pairs/groups/ individually to represent proper, improper and mixed fractions as part of a whole or as part of a  group using paper cut outs or counters. | How can you identify tenths and hundredths? | place value charts  -learners bk pg. 65-66 | Oral questions  Written exercise  Observation |  |
| 4 | **DECIMALS** | Representing tenths and hundredths | By the end of the lesson the learner should be able to  -represent tenth in decimal notation digital literacy as learners play digital games | Learners in pairs/groups/ individually to represent proper,  improper and mixed fractions as  part of a whole or as part of a  group using paper cut outs or  counters. | How do you represent tenths and hundredths using decimal notation? | place value charts,  -learners bk pg. 67-68 | Written exercise  Observation |  |
| 5 | **DECIMALS** | Representing tenths and hundredths | By the end of the lesson the learner should be able to  -represent hundredths in decimal notation digital literacy as learners play digital games | Learners in pairs/groups/ individually to represent proper,  improper and mixed fractions as  part of a whole or as part of a  group using paper cut outs or counters. | How do you represent tenths and hundredths using decimal notation? | learners bk pg. 68-69 | Written exercise  Observation |  |
| **8** | **1** | **DECIMALS** | place values of  Tenths | By the end of the lesson the learner should be able to  -identify place values ofTenths  -Use place value in real life situations | Learners in pairs/groups to identify place value of up to tens of thousands using place value apparatus. | How do you identify place values of decimals up to hundredths? | , place value charts  ***KLB Visionary Mathematics Grade . 4 learners book*** pg. 70-72 | Oral questions  Written exercise  Observation |  |
| **2** | **DECIMALS** | Place value of decimals | By the end of the lesson the learner should be able to identify place values  - Hundredths  -Appreciate place value in real life situation  -Use place value in real life situations | Learners in pairs/groups to identify place value of up to tens of thousands using place value apparatus.  Learners in pairs/groups to visit mathematical sites in IT devices and play digital games. | How do you identify place values of decimals up to hundredths? | , place value charts  -learners bk pg 73-74 | Oral questions  Written exercise  Observation |  |
| **3** | **DECIMALS** | Ordering tenths | By the end of the lesson the learner should be able to :order tenths in ascending order  - | Learners in pairs/groups /individually to order given decimals in ascending and descending order. | How can you order decimals? | , place value charts  -learners bk pg 74-75 | Oral questions  Written exercise  Observation |  |
| **4** | **DECIMALS** | Ordering tenths | By the end of the lesson the learner should be able to  -order tenths in descending order | Learners in pairs/groups /individually to order given decimals in ascending and descending order. | How can you order decimals? | , place value charts  -learners bk pg. 75-76 | Written exercise  Observation |  |
| **5** | **DECIMALS** | Ordering Hundredths | By the end of the lesson the learner should be able to  -order hundredths in ascending order | Learners in pairs/groups/individually to order given decimals in ascending and  descending order. | How can you order decimals? | place value charts  -learners bk pg. 76 | Written exercise  Observation |  |
|  |  |  | Ordering Hundredths | By the end of the lesson the learner should be able to  -order hundredths in descending order  - | Learners in pairs/groups /individually to order given decimals in ascending and descending order. | How can you order decimals? | place value charts  ***KLB Visionary Mathematics Grade . 4 learners book*** pg. 77 | Oral questions  Written exercise  Observation |  |
| **9** | **1** | **MEASURMENT** | Length:Identifying the centimeter as a unit of Measuring Length | By the end of the lesson the learner should be able to  -identify the centimeter as a unit of measuring length | Learners in pairs/groups to identify the centimetre and mark out lengths of 1centimetre using a ruler.  Learners in pairs/groups to measure the length of a given object in centimetres using a metre ruler or a tape measure. | How do you measure small distances? | -Rulers,tape measure,marker  -learners bk pg. 78 | Oral questions  Written exercise  Observation |  |
| **2** | **MEASURMENT** | Measuring length in centimeters | By the end of the lesson the learner should be able to  -measure length in centimeters | Learners in pairs/groups to identify the centimetre and mark out lengths of 1centimetre using a ruler.  Learners in pairs/groups to measure the length of a given object in centimetres using a metre ruler or a tape measure. | How can you measure small lengths? | Rulers,tape measure, ,marker -learners bk pg 78- | Oral questions  Written exercise  Observation |  |
| **3** | **MEASURMENT** | Measuring length in centimeters | By the end of the lesson the learner should be able to  -measure length in centimeters  - | Learners in pairs/groups to identify the centimetre and mark out lengths of 1centimetre using a ruler.  Learners in pairs/groups to measure the length of a given object in centimetres using a metre ruler or a tape measure. | How can you measure small lengths? | Rulers,tape measure,marker -learners bk pg 79 | Oral questions  Written exercise  Observation |  |
| **4** | **MEASURMENT** | Estimating and Measuring Length in Centimeters | By the end of the lesson the learner should be able to :  -estimate and measure length in centimeters in real life | Learners in pairs/groups /  individually to estimate the length of a given object in centimetres.  Learners to measure actual length of the estimated length in centimetres. | Why do you measure distances in real life? | Rulers,tape measure,marker -learners bk pg 81-82 | Oral questions  Written exercise  Observation |  |
| **5** | **MEASURMENT** | Conversion of Meters to centimetres and centimetres to metres | By the end of the lesson the learner should be able to  -establish the relationship between a metre and centimeter  -convert metres to centimetres and vice versa in real life situation | Learners in pairs/groups to measure length in metres and centimetres and establish the relationship between the units.  Learners in pairs/groups use the relationship between centimetres and metres in real life situations.  Learners in pairs/groups/individually  to convert metres into centimetres and centimetres into metres in real life situations. | How do you convert metres to centimetres? | Rulers,tape measure,marker -learners bk pg. 82-83 | Oral questions  Written exercise  Observation |  |
| **10** | **1** | **MEASURMENT** | Perimeter of plain figures | By the end of the lesson the learner should be able to  -work out perimeter of plane figures  -work out examples in their exercise books | Learners in pairs/groups to work out perimeter of plane figures in different contexts. | Oral questions  Written exercise  Observation | -Illustrations on chalkboard  Kiburi O. et al (2019) ***KLB Visionary Mathematics Grade . 4 learners book*** pg. 84-85 | Written exercise  Observation |  |
| **2** | **MEASURMENT** | Addition involving Length in metre and centimetres | By the end of the lesson the learner should be able to  -add length in metres and centimetres  -appreciate measurement of plain figures in real life | Learners in pairs/groups to work out addition and subtraction involving metres and centimetres in real life situations. | Oral questions  Written exercise  Observation | -Illustrations on chalkboard  -learners bk pg. 85 | Written exercise  Observation |  |
| **3** | **MEASURMENT** | Subtraction involving Length in Metres and Centimetres | By the end of the lesson the learner should be able to  -work out subtraction involving metres and centimetres | Learners in pairs/groups to work out addition and subtraction involving metres and centimetres in real life situations. | Oral questions  Written exercise  Observation | -Illustrations on chalkboard  -learners bk pg 87-88 | Written exercise  Observation |  |
| **4** | **MEASURMENT** | Multiplication Involving Length in Metres and Centimetres | By the end of the lesson the learner should be able to  -work out multiplication involving length in metres and centimetres in real life situations | Learners in pairs/groups to work out multiplication involving metres and centimetres in real life situations.  Learners in pairs/groups to play  digital games involving length. | How do you work out multiplication involving length in metres and centimetres? | -Illustrations on chalkboard  -learners bk pg. 88-89 | Oral questions  Written exercise  Observation |  |
| **5** | **MEASURMENT** | Division involving length in Metres and centimetres | By the end of the lesson the learner should be able to  -work out division involving length in metres and centimetres in real life situations  -use IT devices for learning and enjoyment, | Learners in pairs/groups to work out division involving metres and centimetres in real life situations.  Learners in pairs/groups to play  digital games involving length. | How do you divide units of length? | -digital devices  Illustrations on chalkboard  -learners bk pg pg. 90 | Oral questions  Written exercise  Observation |  |
| 11 | **-** |  | **ASSESSMENTS** | | | | | |  |