**GRADE 4 KLB VISIONARY MATHEMATICS ACTIVITIES**

**SCHEMES OF WORK TERM 2**

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| **School** | **Grade** | **Learning Area** | **Term** | **Year** |
|  | **4** | **Mathematics** | **2** |  |

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| **Week** | **Lesson** | **Strand** | **Sub Strand** | **Specific Learning Outcomes** | **Key Inquiry Questions** | **Learning Experiences** | **Learning Resources** | **Assessment** | **Remarks** |
| **1** | **1** | **Measure ment** | **Length** | By the end of the sub strand, the learner should be able to:  work out division involving metres and centimetres in real life situations | Why do we measure distance in real life | Learners in pairs/groups to work out multiplication involving metres and centimetres in real life situations.  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 | KLB  Visionary Mathematics pg 78  Metre rule, 1metre sticks, tape measure | Asking question Drawing questionnaires |  |
|  | **2** | **Measure ment** | **Length** | By the end of the sub strand, the learner should be able to:  work out division involving metres and  centimetres in real life | Why do we measure distance in real life | Learners in pairs/groups to work out multiplication involving metres and centimetres in real life situations. | KLB  Visionary Mathematics pg 78  Metre rule, | Asking question Drawing questionnaires |  |

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|  |  |  |  | situations |  | 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 | 1metre sticks, tape measure |  |  |
|  | **3** | **Measure ment** | **Length** | By the end of the sub strand, the learner should be able to:  use IT devices for learning and enjoyment, appreciate use of  metres and centimetres  in measuring distance in real life. | Why do we measure distance in real life | 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 | KLB  Visionary Mathematics pg 78  Metre rule, 1metre sticks, tape measure | Asking question Drawing questionnaires |  |
|  | **4** | **Measure ment** | **Length** | By the end of the sub strand, the learner should be able to:  use IT devices for learning and enjoyment, | Why do we measure distance in real life | 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 | KLB  Visionary Mathematics pg 78  Metre rule, 1metre sticks, tape measure | Asking question Drawing questionnaires |  |
|  | **5** | **Measure ment** | **Length** | By the end of the sub strand, the learner should be able to appreciate use of | Why do we measure distance in real life | Learners in pairs/groups to work out division involving metres and centimetres in real life | KLB  Visionary Mathematics pg 80-82 | Asking question Drawing questionnaires |  |

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|  |  |  |  | metres and centimetres in measuring distance in real life. |  | Situations.  Learners in pairs/groups to play  digital games involving length | Metre rule, 1metre sticks, tape measure |  |  |
| **2** | **1** | **Measure ment** | **Area** | By the end of the sub strand, the learner should be able to:  compare area of given surfaces by direct comparison | How can you work out area of different surfaces? | Learners in pairs/groups to compare area of two surfaces directly by placing one surface on the other | KLB  Visionary Mathematics pg 91  Square cut outs, paper  cut outs | Asking question Drawing questionnaires |  |
|  | **2** | **Measure ment** | **Area** | By the end of the sub strand, the learner should be able to:  compare area of given surfaces by direct comparison | How can you work out area of different surfaces? | Learners in pairs/groups to compare area of two surfaces directly by placing one surface on the other | KLB  Visionary Mathematics pg 91  Square cut  outs, paper cut outs | Asking question Drawing questionnaires |  |
|  | **3** | **Measure ment** | **Area** | By the end of the sub strand, the learner should be able to:  calculate area of squares and rectangles by counting unit squares | How can you work out area of different surfaces? | Learners in pairs/groups to use different unit square cut outs to cover a given surface | KLB  Visionary Mathematics pg 93-96  Square cut outs, paper cut outs | Asking question Drawing questionnaires |  |
|  | **4** | **Measure ment** | **Area** | By the end of the sub strand, the learner should be able to: calculate area of | How can you work out area of different | Learners in pairs/groups to count the number of unit square cut outs  used to cover the | KLB  Visionary Mathematics | Asking question Drawing questionnaires |  |

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|  |  |  |  | squares and rectangles as a product of number of rows and columns | surfaces? | Surface.  Learners in pairs  /groups to establish that area of a rectangle or a square is same as number of rows multiplied by number of columns. | Pg 97-99  Square cut outs, paper cut outs |  |  |
|  | **5** | **Measure ment** | **Area** | By the end of the sub strand, the learner should be able to:  calculate area of squares and rectangles as a product of number of rows and columns | How can you work out area of different surfaces? | Learners in pairs/groups to count the number of unit square cut outs used to cover the surface.  Learners in pairs  /groups to establish that area of a rectangle or a square is same as number of rows multiplied by number of columns. | KLB  Visionary Mathematics pg 99-101  Square cut outs, paper cut outs | Asking question Drawing questionnaires |  |
| **3** | **1** | **Measure ment** | **Area** | By the end of the sub strand, the learner should be able to:  calculate area of squares and rectangles as a product of number of rows and columns | How can you work out area of different surfaces? | Learners in pairs/groups to work out area of squares and rectangles by multiplying number of rows by number of columns. | KLB  Visionary Mathematics pg 99-101  Square cut  outs, paper cut outs | Asking question Drawing questionnaires |  |

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|  | **2** | **Measure ment** | **Area** | By the end of the sub strand, the learner should be able to: use IT devices  for learning and  enjoyment,  appreciate use of rows and columns in calculating area of  squares and rectangles in real life situations. | How can you work out area of different surfaces? | Learners in pairs/groups play digital games involving area of rectangles and squares | KLB  Visionary Mathematics pg 99-101  Square cut outs, paper cut outs | Asking question Drawing questionnaires |  |
|  | **3** | **Measure ment** | **Mass** | By the end of the sub strand, the learner should be able to:  use a kilogram mass to measure masses of different objects practically, | How can you measure mass in kg? | Learners in pairs/groups to use one kilogram masses to measure masses of given objects using a beam balance | KLB  Visionary Mathematics pg 102-103  1kg mass, soil or sand, manual/electr onic weighing machine, beam balance | Asking question Drawing questionnaires |  |
|  | **4** | **Measure ment** | **Mass** | By the end of the sub strand, the learner should be able to:  use a kilogram mass to measure masses of different objects practically, | How can you measure mass in kg? | Learners in pairs/groups to use one kilogram masses to measure masses of given objects using a beam balance | KLB  Visionary Mathematics pg 102-103  1kg mass, soil or sand, manual/electr  onic | Asking question Drawing questionnaires |  |

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|  |  |  |  |  |  |  | weighing machine, beam balance |  |  |
|  | **5** | **Measure ment** | **Mass** | By the end of the sub strand, the learner should be able to:  use ½ kg and ¼ kg masses to measure masses of different objects practically | How can you measure mass in kg? | Learners in pairs/groups make a ½ kg mass and use it to measure mass of given objects using a beam balance | KLB  Visionary Mathematics pg 103-104  1kg mass, soil or sand, manual/electr onic weighing machine, beam balance | Asking question Drawing questionnaires |  |
| **4** | **1** | **Measure ment** | **Mass** | By the end of the sub strand, the learner should be able to:  use ½ kg and ¼ kg masses to measure masses of different objects practically | How can you measure mass in kg? | Learners in pairs/groups make a ½ kg mass and use it to measure mass of given objects using a beam balance | KLB  Visionary Mathematics pg 103-104  1kg mass, soil or sand, manual/electr onic weighing machine, beam balance | Asking question Drawing questionnaires |  |
|  | **2** | **Measure ment** | **Mass** | By the end of the sub strand, the learner  should be able to add mass involving | How can you measure | Learners in pairs/groups make a ¼  kg mass and use it to measure mass of given | KLB  Visionary Mathematics | Asking question Drawing questionnaires |  |

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|  |  |  |  | kilograms in real life situations | mass in kg? | objects using a beam balance and an electronic balance | pg 105-106  1kg mass, soil or sand, manual/electr onic weighing machine,  beam balance |  |  |
|  | **3** | **Measure ment** | **Mass** | By the end of the sub strand, the learner should be able to:  subtract mass involving kilograms in real life situations, | How can you measure mass in kg? | Learners in pairs/groups add mass involving kilograms (kg) in real life situations  Learners in pairs/groups subtract mass involving kilograms (kg) in real life situations | KLB  Visionary Mathematics pg 105-106  1kg mass, soil or sand, manual/electr onic weighing machine, beam balance | Asking question Drawing questionnaires |  |
|  | **4** | **Measure ment** | **Mass** | By the end of the sub strand, the learner should be able to:  subtract mass involving kilograms in real life situations, | How can you measure mass in kg? | Learners in pairs/groups add mass involving kilograms (kg) in real life situations  Learners in pairs/groups subtract mass involving kilograms (kg) in real life situations | KLB  Visionary Mathematics pg 105-106  1kg mass, soil or sand, manual/electr onic weighing  machine, |  |  |

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|  |  |  |  |  |  |  | beam balance |  |  |
|  | **5** | **Measure ment** | **Mass** | By the end of the sub strand, the learner should be able to: use IT devices  for learning and  enjoyment, appreciate measuring mass of different objects | How can you measure mass in kg? | Learners in pairs/groups play digital games involving mass | KLB  Visionary Mathematics pg 105-106  1kg mass, soil or sand, manual/electr onic weighing machine, beam balance |  |  |

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| **5** | **1** |  | **Volume** | By the end of the sub strand, the learner should be able to:  work out volume of cubes and cuboids in real life situations | How can you work out volume of cubes and cuboids? | Learners in pairs/groups/indivi dually to pile cubes.  Learners in pairs/groups/ndividual lly to count the piles  of cubes to determine the volume. | KLB  Visionary Mathematics pg 107-110  Cubes, cuboids |  |  |
|  | **2** |  | **Volume** | By the end of the sub strand, the learner should be able to:  work out volume of cubes and cuboids in real | How can you work out volume of cubes and  cuboids? | Learners in pairs/groups to pile cuboids.  Learners in pairs/groups/individua | KLB  Visionary Mathematics pg 107-110 |  |  |

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|  |  |  |  | life situations |  | lly to count the piles of cuboids to determine the volume | Cubes, cuboids |  |  |
|  | **3** |  | **Volume** | By the end of the sub strand, the learner should be able to use IT devices for learning and enjoyment,  appreciate use of pilling method in working out volume in real life | How can you work out volume of cubes and cuboids? | Learners in pairs/groups  /individuals to use IT devices to play games. | KLB  Visionary Mathematics pg 107-111  Cubes, cuboids |  |  |
|  | **4** |  | **Capacity** | By the end of the sub strand, the learner should be able to:  measure capacity in litres in real life situations | How can you measure capacity in real life situations? | Learners in  pairs/groups to measure capacity of containers using a 1 litre container in real life situations. | KLB  Visionary Mathematics pg 113-114  1 liter containers, containers of different sizes, water,  sand ,soil |  |  |
|  | **5** |  | **Capacity** | By the end of the sub strand, the learner should be able to:  measure capacity in litres in real life situations | How can you measure capacity in real life situations? | Learners in  pairs/groups to measure capacity of containers using a 1 litre container in real life situations. | KLB  Visionary Mathematics pg 113-114  1 liter containers, containers of different  sizes, water, sand ,soil |  |  |

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| **6** | **1** |  | **Capacity** | By the end of the sub strand, the learner should be able to measure capacity in  ½ litres and ¼ litres in real life situations, | How can you measure capacity in real life situations? | Learners in pairs/groups/ndividual lly to make ½ litre and  ¼ litre containers through filling and emptying using a 1 litre container | KLB  Visionary Mathematics pg 115-116  1 liter containers, containers of different sizes, water, sand ,soil |  |  |
|  | **2** |  | **Capacity** | By the end of the sub strand, the learner should be able to measure capacity in  ½ litres and ¼ litres in real life situations, | How can you measure capacity in real life situations? | Learners in pairs/groups/ndividual lly to make ½ litre and  ¼ litre containers through filling and emptying using a 1 litre container | KLB  Visionary Mathematics pg 115-116  1 liter containers, containers of different sizes, water, sand ,soil |  |  |
|  | **3** |  | **Capacity** | By the end of the sub strand, the learner should be able to Add and subtract capacity involving litres in real life situations, | How can you measure capacity in real life situations? | Learners in pairs/groups to use ½ litre and ¼ litre containers to measure capacity of other containers.  Learners in pairs/groups to add capacity involving  litres in real life | KLB  Visionary Mathematics pg 115-116  1 liter containers, containers of different |  |  |

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|  |  |  |  |  |  | situations | sizes, water, sand ,soil |  |  |
|  | **4** |  | **Capacity** | By the end of the sub strand, the learner should be able to Add and subtract capacity involving litres in real life situations, | How can you measure capacity in real life situations? | .  Learners in pairs/groups to add capacity involving litres in real life situations | KLB  Visionary Mathematics pg 117-118  1 liter containers, containers of different sizes, water, sand ,soil |  |  |
|  | **5** |  | **Capacity** | By the end of the sub strand, the learner should be able to use IT device for learning and enjoyment,  appreciate use of the litre as a unit of measuring capacity in real life situations | How can you measure capacity in real life situations? | Learners in  pairs/groups to subtract capacity involving litres in real life situations. Learner in pairs/groups to play digital games involving capacity. | KLB  Visionary Mathematics pg 117-118  1 liter containers, containers of different  sizes, water, sand ,soil |  |  |
| **7** | **1** |  | **Time** | By the end of the sub strand, the learner should be able to:  read and tell time in a.m. and p.m. in real life situations | How can you tell time? | Learners in pairs/groups to read and tell time in a.m. and p.m. using digital and analogue clocks in real life situations. | KLB  Visionary Mathematics pg 119-121  Analogue and digital  clocks, |  |  |

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|  |  |  |  |  |  |  | digital watches, am  /pm chart |  |  |
|  | **2** |  | **Time** | By the end of the sub strand, the learner should be able to estimate time using a.m and p.m. in real life situations, | How can you tell time? | Learners in pairs/groups to estimate time of the day using the shadow. | KLB  Visionary Mathematics pg 119-121  Analogue and digital clocks, digital watches, am  /pm chart |  |  |
|  | **3** |  | **Time** | By the end of the sub strand, the learner should be able to estimate time using a.m and p.m. in real life situations, | How can you tell time? | Learners in pairs/groups to estimate time of the day using the shadow. | KLB  Visionary Mathematics pg 119-121  Analogue and digital clocks, digital watches, am  /pm chart |  |  |
|  | **4** |  | **Time** | By the end of the sub strand, the learner should be able to convert units of time in real life situations | How can you find out time taken to do an activity? | Learners in pairs/groups to convert hours to minutes and minutes to hours in  real life situations. | KLB  Visionary Mathematics pg 122-123  Analogue and |  |  |

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|  |  |  |  |  |  | Learners in pairs/groups to convert hours to days and days to hours in real life  situations | digital clocks, digital watches, am  /pm chart |  |  |
|  | **5** |  | **Time** | By the end of the sub strand, the learner should be able to convert units of time in real life situations | How can you find out time taken to do an activity? | Learners in pairs/groups to convert hours to minutes and minutes to hours in real life situations.  Learners in pairs/groups to convert hours to days and days to hours in real life  situations | KLB  Visionary Mathematics pg 122-123  Analogue and digital clocks, digital watches, am  /pm chart |  |  |
| 8 |  |  |  | Half term |  |  |  |  |  |
| **9** | **1** |  | **Time** | By the end of the sub strand, the learner should be able to record time durations in hours and minutes in real life situations, | How can you find out time taken to do an activity? | Learners in pairs/groups to convert hours to minutes and minutes to hours in real life situations.  Learners in pairs/groups to convert hours to days and days to hours in real life  situations | KLB  Visionary Mathematics pg 122-123  Analogue and digital clocks, digital watches, am  /pm chart |  |  |
|  | **2** |  | **Time** | By the end of the sub strand, the learner should be able to record time durations in hours and minutes in real life situations, | How can you find out time taken to do an activity? | Learners in pairs/groups to convert hours to minutes and minutes to hours in real life situations.  Learners in pairs/groups to convert | KLB  Visionary Mathematics pg 122-123  Analogue and digital  clocks, |  |  |

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|  |  |  |  |  |  | hours to days and days to hours in real life situations | digital watches, am  /pm chart |  |  |
|  | **3** |  | **Time** | By the end of the sub strand, the learner should be able to work out time duration in real life situations | How can you find out time taken to do an activity? | Learners in pairs/groups to measure and record duration of events in hours and minutes using digital and analogue clocks.  Learners in pairs/groups to work out addition involving units of time in real  life situations | KLB  Visionary Mathematics pg 122-123  Analogue and digital clocks, digital watches, am  /pm chart |  |  |
|  | **4** |  | **Time** | By the end of the sub strand, the learner should be able to work out time duration in real life situations | How can you find out time taken to do an activity? | Learners in pairs/groups to measure and record duration of events in hours and minutes using digital and analogue clocks.  Learners in pairs/groups to work out addition involving units of time in real  life situations | KLB  Visionary Mathematics pg 122-125  Analogue and digital clocks, digital watches, am  /pm chart |  |  |
|  | **5** |  | **Time** | By the end of the sub strand, the learner should be able to use IT devices for learning and enjoyment, appreciate time in real | How can you find out time taken to do an activity? | Learners in pairs/groups to work out subtraction involving units of time in real life situations. | KLB  Visionary Mathematics pg 122-125  Analogue and |  |  |

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|  |  |  |  | life situations. |  | Learners in pairs/groups/individua lly to play digital games involving time. | digital clocks, digital watches, am  /pm chart |  |  |
| **10** | **1** |  | **Money** | By the end of the sub strand, the learner should be able to:  convert shillings into cents and cents  into shillings in different contexts, | How can you save money? | Learners in pairs/groups/individua lly to convert shillings into cents and cents into shillings using real/ imitation money in different contexts | KLB  Visionary Mathematics pg 130-131  Real / imitation money, price list |  |  |
|  | **2** |  | **Money** | By the end of the sub strand, the learner should be able to:  convert shillings into cents and cents  into shillings in different contexts, | How can you save money? | Learners in pairs/group to role play shopping activities involving giving change and balance using real/ imitation money | KLB  Visionary Mathematics pg 130-131  Real / imitation money, price  list |  |  |
|  | **3** |  | **Money** | By the end of the sub strand, the learner should be able to participate in shopping activities involving money practically | How can you save money? | Learners in pairs/groups to discuss and prioritize needs and wants | KLB  Visionary Mathematics pg 130-131  Real / imitation  money, price list |  |  |

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|  | **4** |  | **Money** | By the end of the sub strand, the learner should be able to practice savings in real life, work out questions involving money in real life situations | How can you save money? | Learners in pairs/groups to discuss meaning of saving.  Learners in pairs/groups to discuss savings at home | KLB  Visionary Mathematics pg 132-134  Real / imitation  money, price list |  |  |
|  | **5** |  | **Money** | By the end of the sub strand, the learner should be able to practice savings in real life, work out questions involving money in real life situations | How can you save money? | Learners in pairs/groups to discuss meaning of saving.  Learners in pairs/groups to discuss savings at home | KLB  Visionary Mathematics pg 132-134  Real / imitation money, price  list |  |  |
| **12-13** | **REVISION AND END OF TERM ASSESSMENT AND CLOSING** | | | | | | | | |