## **Grade Four**

## **Mathematics Activities Schemes Of Work**

| Term | One | Year _ | School |
|------|-----|--------|--------|
|------|-----|--------|--------|

| W | Ls                    | Strand/     | Sub strand    | Specific learning   | Key inquiry   | Learning experiences  | Learning  | Assessme   | Refl |
|---|-----------------------|-------------|---------------|---|---|---|---|--|------|
| k | n                     | Theme       |               | outcomes  | Questions   |   | Resources   | nt   |      |
|   |                       |             |               |   |   |   |   | methods  |      |
| 1 | 1<br>2<br>3<br>4<br>5 |             | Whole Numbers | By the end of the sub strand, the learner should be able to: a) use place value and total value of digits up to tens of thousands in daily life situations, b) read and write numbers up to 10,000 in symbols in real life situations, c) read and write numbers up to 1,000 in words in day to day activities, | <ol> <li>What do you consider when writing numbers in words?</li> <li>How can you find the place value of a digit in a number?</li> <li>How can you find the total value of a digit in a number?</li> </ol> | <ul> <li>Learners in pairs/groups to identify place value of up to tens of thousands using place value apparatus.</li> <li>Learners in pairs/groups to identify total values of digits up to ten thousand.</li> <li>Learners in pairs/groups/individually to read numbers up to 10,000 in symbols in real life situations.</li> </ul>   | Place value apparatus, Number charts, Number cards, Multiplicatio         | Oral Written Observati on Oral Written Observati |      |
|   |                       |             |               |   | number?   | situations.   | n table   | on   |      |
| 2 | 1<br>2<br>3<br>4<br>5 | Numbe<br>rs | Whole Numbers | By the end of the sub strand, the learner should be able to: d) order numbers up to 1,000 in different situations, e) round off numbers up to 1,000 to the nearest ten in different situations, f) identify factors/divisors of numbers up to 50 in different contexts,   | 1. What do you consider when writing numbers in words? 2. How can you find the place value of a digit in a number? 3. How can you find the total value of a digit in a number?                              | Learners in pairs/groups/     individually to read and write     numbers up to 1,000 in words from     a number chart.     Learners in pairs to arrange numbers     up to 1,000 in order from smallest to     largest and largest to smallest using     number cards and share with other     groups.     Learners in     pairs/groups/individually round off     numbers up to 1,000 to the nearest     ten and share with other groups. | Place value apparatus, Number charts, Number cards, Multiplicatio n table | Oral Written Observati on                        |      |
| 3 | 1<br>2<br>3<br>4      |             | Whole Numbers | By the end of the sub strand,<br>the learner should be able<br>to:  |   | <ul> <li>Learners in pairs/groups/individually to identify factors/divisors of numbers up to 50 and share with other groups.</li> <li>Learners in pairs/groups to identify multiples of numbers up to 100 and share with other groups.</li> <li>Learners in pairs/groups to identify</li> </ul>   | Place value<br>apparatus,<br>Number<br>charts,                            | Oral<br>Written<br>Observati<br>on               |      |

|   | 5                     |   |               | g) identify multiples of numbers up to 100 in different situations, h) use even and odd numbers up to 100 in different situations, i) represent Hindu Arabic numerals using Roman numerals up to 'X' in different situations,  |          | What do you consider when writing numbers in words? How can you find the place value of a digit in a number? How can you find the total value of a digit in a number? |   | even and odd numbers up to 100<br>and share with other groups.   | Number<br>cards,<br>Multiplicatio<br>n table   | Oral Written Observati on  |  |
|---|-----------------------|---|---------------|--|----------|---|---|--|--|--|--|
| 4 | 1<br>2<br>3<br>4<br>5 | - | Whole Numbers | By the end of the sub strand, the learner should be able to: j) make patterns involving even and odd numbers in day to day life experiences, k) use IT devices for learning and leisure, l) appreciate use of numbers in real life situations.   | 1. 2. 3. | consider when writing numbers in words? How can you finc the place value of a digit in a number?  |   | Learners in pairs/groups to represent Hindu Arabic numerals using Roman numerals up to 'X' using number charts.  Learners in pairs/groups to make patterns involving even and odd numbers and share with other groups.  Learners in pairs/groups to visit mathematical sites in IT devices and play digital games. | Place value<br>apparatus,<br>Number<br>charts,<br>Number<br>cards,<br>Multiplicatio<br>n table | Oral Written Observati on Oral Written Observati on  |  |
| 5 | 2                     |   | Addition      | By the end of the sub strand, the learner should be able to: a) add up to two 4-digit numbers with single regrouping up to a sum of 10,000 in different situations, b) add up to two 4-digit numbers with double regrouping up to a sum of 10,000 in real life situations, c) estimate sum by rounding off numbers to the nearest ten in different situations, | 2.       | When do you use addition in real life? What do you consider when estimating answers in addition? How do you form number patterns in addition?                         | • | Learners in pairs/groups to add up to two 4-digit numbers with single regrouping up to a sum of 10,000 in different situations.  Learners in pairs/groups add up to two 4-digit numbers with double regrouping up to a sum of 10,000 in real life situations.  | Place value charts, abacus  Place value charts, abacus  Place value charts, abacus             | Oral Written Observati on Oral Written Observati on Oral Written Observati on Oral Written |  |

|   | 5 |             | By the end of the sub strand, the learner should be able to: a) add up to two 4-digit numbers with single regrouping up to a sum of 10,000 in different situations, b) add up to two 4-digit numbers with double regrouping up to a sum of 10,000 in real life situations, c) estimate sum by rounding off numbers to the nearest ten in different situations, | 1. 2. 3. | addition in real<br>life?<br>What do you<br>consider when<br>estimating answers<br>in addition? | •  | Learners in pairs/groups to add up to two 4-digit numbers with single regrouping up to a sum of 10,000 in different situations.  Learners in pairs/groups add up to two 4-digit numbers with double regrouping up to a sum of 10,000 in real life situations. | Place value charts, abacus  Place value charts, abacus | Observati on Oral Written Observati on Oral Written Observati on |  |
|---|---|-------------|--|----------|---|--|---|--|--|--|
|   | 1 |             | By the end of the sub<br>strand, the learner should  |          |   |  | Learners in pairs/groups to estimate  | Place value<br>charts,<br>abacus                       | Oral Written Observati on  |  |
| 6 | 2 | Addition    | e) use IT devices for learning and enjoyment,     appreciate application of addition of  |          |   | situations.  • Learners in pairs/group patterns involving addissum of 10,000.  • Learners in pairs/group | Learners in pairs/groups to create patterns involving addition up to a  | Place value<br>charts,<br>abacus                       | Oral Written Observati on  |  |
|   | 3 |             | numbers in real life situations.   |          |   |  | digital games involving addition.   | Place value<br>charts,<br>abacus                       | Oral<br>Written<br>Observati<br>on                               |  |
|   | 4 | Subtraction |  |          |   |  |   | Place value charts, abacus                             | Oral<br>Written  |  |

|   | By the end of the sub strand, the learner should be able to:  • subtract up to 4-digit numbers without  |   | Learners in pairs/groups to<br>subtract numbers up to 4-digit  |   | Observati<br>on            |
|---|---|---|--|---|----------------------------|
| 5 | regrouping in real life situations,  subtract up to 4-digit numbers with regrouping in real life situations,  estimate difference by rounding off numbers to the nearest ten in real life situations,  1. W | •   | numbers without regrouping in real life situations.  • Learners in pairs/groups/ individually to subtract up to 4-digit numbers with regrouping in real life situations.   | Place value<br>charts,<br>abacus  | Oral Written Observati on  |
| 1 | By the end of the sub strand, the learner should be able to:  • subtract up to 4-digit numbers without regrouping in real life situations,  | subtraction in real life?  2. How do you estimate the difference of given numbers?  3. How do you create patterns involving subtraction?  1. When do you use subtraction in real life?  2. How do you estimate the difference of given numbers?  3. How do you create patterns involving subtraction? | Learners in pairs/groups to subtract numbers up to 4-digit numbers without regrouping in real life situations.     Learners in pairs/groups/ individually to subtract up to 4-digit numbers with regrouping 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 | Place value<br>charts,<br>abacus  | Oral Written Observati on  |
| 2 | <ul> <li>subtract up to 4-digit numbers with<br/>regrouping in real life situations,</li> <li>estimate difference by rounding off<br/>numbers to the nearest ten in real life<br/>situations,</li> </ul>    |   |  | Place value<br>charts,<br>abacus  | Oral Written Observati on  |
| 3 | By the end of the sub strand, the learner should be able to: create patterns involving subtraction  |   |  | Place value<br>charts,<br>abacus  | Oral Written Observati on  |
| 4 | from up to 10,000,  use IT devices for learning and enjoyment,  appreciate application of subtraction of numbers in real life situations.   |   | patterns involving subtraction?  | 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. | Place value charts, abacus |
| 5 | By the end of the sub strand,<br>the learner should be able<br>to:  |   |  | Place value<br>charts,<br>abacus  | Oral Written Observati on  |

|   | 1 | Subtraction    | create patterns involving subtraction from up to 10,000,     use IT devices for learning and enjoyment,     appreciate application of subtraction of numbers in real life situations.             |  | <ul> <li>Learners in pairs/groups to         estimate and work out difference         by rounding off the numbers to         the nearest ten in real life         situations.</li> <li>Learners in pairs/groups to create         patterns involving subtraction of         numbers from up to 10,000.</li> <li>Learners in pairs/groups/         individually to play digital games         involving subtraction.</li> </ul> | Place value<br>charts,<br>abacus | Oral<br>Written<br>Observati<br>on |  |
|---|---|----------------|---|--|--|----------------------------------|------------------------------------|--|
|   | 2 |                | By the end of the sub strand,   |  |  |                                  | Oral                               |  |
| 8 | 3 |                | to:  a) multiply up to a 2-digit number by multiples of 10 in different situations, b) multiply up to a 2-digit number by a 2-digit number without and with regrouping in real life situations,   |  | Learners in pairs/groups to<br>multiply up to a 2-digit number<br>by multiples of 10 in different  |                                  | Written Observati on               |  |
|   | 4 |                | By the end of the sub strand,   | 2. How do you create                               | Leaners in pairs/groups to   |                                  |                                    |  |
|   | 5 |                | the learner should be able  | patterns involving multiplication?                 | multiply up to a 2-digit numbers<br>by a 2-digit number without and  |                                  |                                    |  |
|   | 1 | Multiplication | to:  c) estimate products by rounding off numbers to the nearest ten in real life situations, d) Create patterns involving multiplication with product not exceeding 100 in real life situations, | When do you use<br>multiplication in<br>real life? | with regrouping in real life situations.  • 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.  | Multiplicatio<br>n Tables        |                                    |  |
|   | 2 |                | By the end of the sub strand,   |  |  |                                  |                                    |  |
| 9 | 3 |                | the learner should be able  |  | Learners in pairs/groups to create  patterns involving multiplication  |                                  |                                    |  |
|   | 4 |                | to:  e) use IT devices for learning and enjoyment, f) appreciate application of multiplication of numbers in real life.   |  | patterns involving multiplication with product not exceeding 100.  • Learners pairs/groups/ individually to play digital games on multiplication.  |                                  |                                    |  |
|   | 5 | Division       |   |  |  |                                  | Oral                               |  |

|    | Ι.       |           | By the end of the sub strand, the   |   |                                       |   | Learners in pairs/ groups to divide up  |              |           |   |
|----|----------|-----------|---|---|---------------------------------------|---|---|--------------|-----------|---|
|    | 1        |           | learner should be able to:  |   |                                       |   | to a 2-digit number by 1-digit number   |              | Written   |   |
|    | 2        |           | a) divide up to a 2-digit number by a     1-digit number without remainder                        |   |                                       |   | without remainder using counters.  • Learners in pairs/groups to divide a     |              | Observati |   |
|    | 3        |           | in different situations,  |   |                                       |   | 2-digit number by a 1-digit number  |              | on        |   |
| 10 |          |           | <ul> <li>b) divide up to a 2-digit number by a<br/>1-digit number with remainder in</li> </ul>    |   |                                       | with remainder using counters.  Learners in pairs/groups to divide a  |   |              |           |   |
|    |          |           | real life situations,   | 1.  | When do you use                       |   | 2-digit number by a 1- digit number   |              |           |   |
|    | 4        |           | By the end of the sub strand,   |   | division in real<br>life?             | Learners in pairs/groups to divide a                                  | Multiplicatio   |              |           |   |
|    | 5        |           | the learner should be able  | 2.  | How can you                           |   | 2-digit number by a 1-digit number  | n Tables     |           |   |
|    | 1        |           | to:   |   | estimate<br>quotient?                 |   | using own strategies.   | ii rabies    |           |   |
|    |          |           | c) use relationship between   |   | quotient.                             | •   | Learners in pairs/groups to use relationship between multiplication           |              |           |   |
|    | 2        |           | multiplication and division to<br>work out problems in real life                                  |   |                                       |   | and division in working out   |              |           |   |
|    |          |           | situations, d) use IT devices for learning and  |   |                                       |   | problems.   |              |           |   |
|    |          |           | leisure, e) appreciate application of division  |   |                                       | •   | Learners pairs/groups/ individually to play digital games involving division. |              |           |   |
|    |          |           | of numbers in real life situations.   |   |                                       |   |   |              |           |   |
|    | 3        |           | denominators not exceeding 12 as<br>part of a whole and as part of a group                        |   |                                       | •   | Learners in pairs/groups to represent fractions as part of a                  |              | Oral      |   |
| 11 | 4        |           |   | When do you use fractions in real life?     How can you represent |                                       | whole and as part of a group using                                    |   | Written      |           |   |
|    |          |           |   |   |                                       |   | concrete objects.  Learners in pairs/groups to discuss                        |              |           |   |
|    |          |           |   |   | the top and bottom numbers in a       |   |   | Observati    |           |   |
|    |          |           |   |   | fraction and share with other groups. | Equivalent  | on  |              |           |   |
|    |          |           |   | fractions?  |                                       | Learners in pairs/groups to write<br>fractions represented as part of |   | fraction     |           |   |
|    | <u> </u> |           |   |   |                                       |   |   | board,       |           |   |
|    | 5        |           | By the end of the sub strand,   |   |                                       |   | mhala ar nart of a group  | *            |           |   |
|    | 1        | Fractions | the learner should be able  |   |                                       | •   | whole or part of a group.<br>Learners in pairs/groups to                      | circular and |           |   |
|    |          |           | to:   | 1.  | When do you use                       |   | represent fractions as part of a<br>whole or part of a group using cut        | rectangular  |           |   |
|    |          |           | c) identify the enumerator  |   | fractions in real<br>life?            |   | outs, counters or clock face.   | cut outs,    |           |   |
|    |          |           | and the denominator in a  | 2.  | How can you                           | •   | Learners in pairs/groups/<br>individually to represent proper,                | counters,    |           |   |
| 12 |          |           | fraction in real life situations  |   | represent<br>fractions?               |   | improper and mixed fractions as   | ·            |           |   |
|    |          |           | d) identify different types of fractions in   | fractions?  | nactions:                             |   | part of a whole or as part of a<br>group using paper cut outs or              | clock face   |           |   |
|    |          |           | real life,  |   |                                       |   | counters.   |              |           |   |
|    |          |           | <ul> <li>e) convert improper fractions to mixed<br/>fractions in different situations,</li> </ul> |   |                                       |   |   |              |           |   |
|    | 2        |           |   |   |                                       |   |   |              |           |   |
|    | ~        |           |   | 1   |                                       | 1   |   |              | 1         | 1 |

|    | 3 |           | By the end of the sub strand, the learner should be able to: f) convert mixed fractions to improper fractions in different contexts, g) use IT devices for learning and enjoyment, h) appreciate application of fractions in real life situations. | <ol> <li>When do you use fractions in real life?</li> <li>How can you represent fractions?</li> </ol> | <ul> <li>Learners in pairs/groups to convert improper fractions to mixed fractions.</li> <li>Learners in pairs/groups to convert mixed fractions to improper fractions.</li> <li>Learners in pairs/groups /individually to play digital games involving fractions.</li> </ul> |  | Oral Written Observati on |
|----|---|-----------|--|---|---|--|---------------------------|
|    | 5 | Decimals  | By the end of the sub strand,<br>the learner should be able<br>to:   | How can you use   | Learners in pairs/group to discuss where tenths and hundredths are used in real life situations.  |  | Oral Written              |
|    |   | D command | identify a tenth and a hundredth in real life situations,     represent decimals using decimal notation in given situations,   | situations?   | Learners in pairs/groups to<br>represent decimals using place<br>value charts.  | 100 square                                 | Observati<br>on           |
|    | 1 |           | By the end of the sub strand,  | How can you use   |   | grid,                                      |                           |
| 13 | 2 |           | to:  a) identify a tenth and a hundredth in real life situations, b) represent decimals using decimal notation in given situations,  | decimals in real life<br>situations?  | <ul> <li>Learners in pairs/ groups to represent tenths and hundredths using place value charts.</li> <li>Learners in pairs/groups / individually to write tenths and hundredths using decimal notation on a place value chart.</li> </ul>                                     | rectangular<br>paper strip,<br>place value |                           |
|    | 3 |           | By the end of the sub strand,  |   |   | charts                                     |                           |
|    | 4 |           | the learner should be able   |   |   |  |                           |
|    | 5 |           | to: c) identify place value of decimals up to hundredths in real life, d) order decimals up to hundredths in computation   |   |   |  |                           |

## **END TERM EXAMS/CLOSING**