

MATHEMATICS

YEAR 4

TOPIC & LEARNING AREA	LEARNING OBJECTIVES & LEARNING OUTCOMES
<p style="text-align: center;">1 WHOLE NUMBERS</p> <p>1. Numbers to 100 000</p> <p>2. Addition with the highest total of 100 000</p> <p>3. Subtraction within the range of 100 000</p> <p>4. Multiplication with the highest product of 100 000</p> <p>5. Division with the highest dividend of 100 00</p>	<p>Develop number sense involving numbers of up to 100 000.</p> <ul style="list-style-type: none"> <li>i. Name and write numbers up to 100 000.</li> <li>ii Determine the place value of digits in any whole number up to 100 000</li> <li>iii Compare value of numbers to 100 000</li> <li>iv Round off numbers to the nearest tens, hundreds and thousands.</li> </ul> <p>Add numbers to the total of 100 000</p> <ul style="list-style-type: none"> <li>i Add any two numbers to four numbers to 100 000</li> <li>ii Solve addition problems.</li> </ul> <p>Subtract numbers from a number less than 100 000</p> <ul style="list-style-type: none"> <li>i Subtract one or two numbers from a bigger numbers less than 100 000</li> <li>ii Solve subtraction problems.</li> </ul> <p>Multiply any two numbers with the highest product of 100 000</p> <ul style="list-style-type: none"> <li>i Multiply three-digit numbers with <ul style="list-style-type: none"> <li>a) 100</li> <li>b) two-digit numbers</li> </ul> </li> <li>ii Multiply four-digit numbers with <ul style="list-style-type: none"> <li>a) one-digit numbers</li> <li>b) 10</li> <li>c) two-digit numbers</li> </ul> </li> <li>iii Multiply two-digit numbers with 1 000</li> <li>iv Solve multiplication problems.</li> </ul> <p>Divide a number less than 100 000 by a two-digit numbers.</p> <ul style="list-style-type: none"> <li>i Divide four-digit numbers by <ul style="list-style-type: none"> <li>a) one-digit numbers</li> <li>b) 10, 100 and 1 000</li> <li>c) two-digit numbers</li> </ul> </li> <li>ii Divide five-digit numbers by <ul style="list-style-type: none"> <li>a) one-digit numbers</li> <li>b) 10, 100 and 1 000</li> <li>c) two-digit numbers</li> </ul> </li> <li>iii Solve division problems.</li> </ul>

<p>6. Mixed operations</p>	<p>Perform mixed operation involving addition and subtraction</p> <ul style="list-style-type: none"> <li>i Perform mixed operation involving addition and subtraction with numbers less than <ul style="list-style-type: none"> <li>a) 100</li> <li>b) 1 000</li> <li>c) 10 000</li> </ul> </li> <li>ii Solve mixed operation problems</li> </ul>
<p style="text-align: center;">2 FRACTIONS</p> <p>1. Proper Fractions</p> <p>2. Equivalent fractions</p> <p>3. Addition of fractions</p> <p>4. Subtraction of fractions</p>	<p>Name and write proper fractions with denominators up to 10.</p> <ul style="list-style-type: none"> <li>i Name and write proper fractions with denominators up to 10</li> <li>ii Compare the value of two proper fractions with <ul style="list-style-type: none"> <li>a) the same denominators</li> <li>b) the numerator of 1 and different denominators up to 10.</li> </ul> </li> </ul> <p>Express equivalent fractions for proper fractions.</p> <ul style="list-style-type: none"> <li>i Express and write equivalent fractions for proper fractions.</li> <li>ii Express equivalent fractions to its simplest form</li> </ul> <p>Add two proper fractions with denominators up to 10</p> <ul style="list-style-type: none"> <li>i Add two proper fractions with the same denominator up to 10 to its simplest form. <ul style="list-style-type: none"> <li>a) with 1 as the numerator for both fractions</li> <li>b) with different numerators</li> </ul> </li> <li>ii Add two proper fractions with different denominators up to 10 to its simplest form. <ul style="list-style-type: none"> <li>a) with 1 as the numerator for both fractions</li> <li>b) with different numerators</li> </ul> </li> <li>iii Solve problems involving addition of proper fractions.</li> </ul> <p>Subtract proper fractions with denominators up to 10</p> <ul style="list-style-type: none"> <li>i Subtract two proper fractions with the same denominator up to 10 to its simplest form. <ul style="list-style-type: none"> <li>a) with 1 as the numerator for both fractions</li> <li>b) with different numerators</li> </ul> </li> <li>ii Subtract two proper fractions with different denominators up to 10 to its simplest form. <ul style="list-style-type: none"> <li>a) with 1 as the numerator for both fractions</li> <li>b) with different numerators</li> </ul> </li> <li>iii Solve problems involving subtraction of proper fractions.</li> </ul>

3  
DECIMALS

1. Decimal numbers

Understand decimal numbers

- i Name and write decimals with
  - a) one decimal place
  - b) two decimal places
- ii Recognise the place value of
  - a) tenths
  - b) hundredths
  - c) tenths and hundredths
- iii Convert fraction to decimals of
  - a) tenths
  - b) hundredths
  - c) tenths and hundredths, and vice versa

2. Addition of decimal numbers

Add decimals up to two places

- i Add any two to four decimals of one decimal place involving
  - a) decimals only
  - b) whole numbers and decimals
  - c) mixed decimals
- ii Add any two to four decimals of two decimal place involving
  - a) decimals only
  - b) whole numbers and decimals
  - c) mixed decimals
- iii Solve problems involving addition of decimal numbers.

3. Subtraction of decimal numbers

Subtract decimals up to two decimal places

- i Subtract one to two decimals from decimal of one decimal place involving
  - a) decimals only
  - b) mixed decimals
  - c) whole numbers and decimals ( mixed decimals )
- ii Subtract one to two decimals of one or two decimal places
- iii Solve problems involving subtraction of decimals

4. Multiplication of decimal numbers

Multiply decimals up to two decimal places with a whole number.

- i Multiply any decimals of one decimal place with
  - a) one-digit number
  - b) 10, 100 and 1000
- ii Multiply any decimals of two decimal places with
  - a) one-digit number
  - b) 10, 100 and 1000
- iii Solve problems involving multiplication of decimals

5. Division of decimal numbers	<p>Divide decimals up to two decimal places by a whole number.</p> <ul style="list-style-type: none"> <li>i Divide any decimals of one decimal place with <ul style="list-style-type: none"> <li>a) one-digit number</li> <li>b) 10</li> </ul> </li> <li>ii Divide decimals of two decimal places by one-digit number</li> <li>iii Divide decimals by a whole number with the dividend value of up to two decimal places</li> <li>iii Solve problems involving division of decimals</li> </ul>
<p style="text-align: center;">4 MONEY</p> <p>1. Money up to RM10 000</p>	<p>Understand and use vocabulary related to money</p> <ul style="list-style-type: none"> <li>i Read and write the value of money up to RM10 000</li> <li>ii Add money up to RM10 000</li> <li>iii Subtract money from up to RM10 000</li> <li>iv Multiply money to the highest product of RM10 000</li> <li>v Divide money with dividend not more than RM10 000</li> <li>vi Perform mixed operation involving addition and subtraction involving money up to RM10 000</li> <li>vii Round off money to the nearest “ringgit”</li> <li>viii Solve problems involving of up to RM10 000</li> </ul>
<p style="text-align: center;">5 TIME</p> <p>1. Reading and writing time</p> <p>2. Time schedule</p> <p>3. Relationship between units of time</p>	<p>Understand, read and write time in hours and minutes</p> <ul style="list-style-type: none"> <li>i Read time in hours and minutes according to the 12-hours system.</li> <li>ii Write time in hours and minutes according to the 12-hours system</li> </ul> <p>Construct a simple schedule</p> <ul style="list-style-type: none"> <li>i Construct, read and extract information from a simple schedule</li> <li>ii Extract information from a calendar</li> <li>iii Solve simple real life problems involving reading the calendar</li> </ul> <p>Understand the relationship between units of time</p> <ul style="list-style-type: none"> <li>i State the relationship between units of time <ul style="list-style-type: none"> <li>a) 1 day = 24 hours</li> <li>b) 1 year = 365 / 366 days</li> <li>c) 1 decade = 10 years</li> </ul> </li> </ul>



6  
LENGTH

1. Measuring length

Measure lengths using standard units

- i Read measurement of length using units of millimetre
- ii Write measurement of length to the nearest scales of tenth division for :
  - a) centimetre
  - b) metre
- iii Measure and record lengths of objects using units of
  - a) millimetre
  - b) centimetre and millimetre
  - c) metre and centimetre
- iv Estimate the lengths of objects in
  - a) millimetre
  - b) metre and millimetre
  - c) centimetre and millimetre

2. Relationship between units of length

Understand the relationship between unit of length

- i State the relationship between centimetre and millimetre
- ii Convert units of length from
  - a) millimetre to centimetre and vice versa
  - b) compound units to a single unit

3. Basic operation involving length

Add and subtract length

- i Add units of length, involving conversion of units in:
  - a) millimetre
  - b) metre and millimetre
  - c) centimetre and millimetre
- ii Subtract units of length involving conversion of units in:
  - a) millimetre
  - b) metre and millimetre
  - c) centimetre and millimetre

Multiply and divide length

- i Multiply units of length involving conversion of units by:
  - a) a one-digit number
  - b) 10, 100, 1000
- ii Divide units of length, involving conversion of units by:
  - a) a one-digit number
  - b) 10, 100, 1000
- iii Solve problems involving basic operation on length

<p style="text-align: center;">7 MASS</p> <p>1. Measuring Mass</p> <p>2. Relationship between units of mass</p> <p>3. Basic operations involving mass</p>	<p>Measure mass using standard units</p> <ul style="list-style-type: none"> <li>i Measure of masses using units of kilogram and gram</li> <li>ii Read measurement of masses to the nearest scales division of kilograms and grams</li> <li>iii Estimate the masses of objects using kilograms and grams</li> </ul> <p>Understands the relationship between units of mass</p> <ul style="list-style-type: none"> <li>i Convert units of mass from <ul style="list-style-type: none"> <li>a) kilograms to grams</li> <li>b) kilograms and grams to grams</li> <li>c) kilograms and grams to kilograms</li> </ul> </li> </ul> <p>Add and subtract involving units of mass.</p> <ul style="list-style-type: none"> <li>i Add mass involving units of mass in: <ul style="list-style-type: none"> <li>a) kilograms</li> <li>b) grams</li> <li>c) kilograms and grams</li> </ul> </li> <li>ii Subtract mass involving units of mass in: <ul style="list-style-type: none"> <li>a) kilograms</li> <li>b) grams</li> <li>c) kilograms and grams</li> </ul> </li> </ul> <p>Multiply and divide units of mass</p> <ul style="list-style-type: none"> <li>iii Multiply mass involving conversion of units with <ul style="list-style-type: none"> <li>a) a one-digit number</li> <li>b) 10, 100, 1000</li> </ul> </li> <li>iv Divide mass involving conversion of units <ul style="list-style-type: none"> <li>a) a one-digit number</li> <li>b) 10, 100, 1000</li> </ul> </li> <li>v Solve problems involving basic operations with mass</li> </ul>
<p style="text-align: center;">8 VOLUME OF LIQUID</p> <p>1. Measuring volume of liquid</p>	<p>Measure and compare volume of liquid using standard units</p> <ul style="list-style-type: none"> <li>i Read measurement of volume of liquid in litres and millilitres</li> <li>ii Write measurement of volume of liquid to the nearest scales of tenth division for <ul style="list-style-type: none"> <li>a) litre</li> <li>b) millilitre</li> </ul> </li> <li>iii Measure and record the volume of liquid in litres and millilitres</li> <li>iv Estimate the volume of liquid in litres and millilitres</li> </ul>

<p>2. Relationship between units of volume of liquid</p> <p>3. Basic operation involving volume of liquid</p>	<p>Understand the relationship between units of volume of liquid</p> <ul style="list-style-type: none"> <li>i Convert units of volume from: <ul style="list-style-type: none"> <li>a) litres to millilitres</li> <li>b) millilitres to litres</li> <li>c) litres and millilitres to litres</li> <li>d) litres and millilitres to millilitres</li> </ul> </li> </ul> <p>Add and subtract units of volume</p> <ul style="list-style-type: none"> <li>i Add volume of liquid involving conversion of units in: <ul style="list-style-type: none"> <li>a) litre</li> <li>b) millilitre</li> <li>c) litre and millilitre</li> </ul> </li> <li>ii Subtract volume of liquid involving conversion of units in: <ul style="list-style-type: none"> <li>a) litre</li> <li>b) millilitre</li> <li>c) litre and millilitre</li> </ul> </li> </ul> <p>Multiply and divide units of volume</p> <ul style="list-style-type: none"> <li>i Multiply volume of liquid involving conversion of units in: <ul style="list-style-type: none"> <li>a) one-digit number</li> <li>b) 10, 100, 1000</li> </ul> </li> <li>ii Divide volume of liquid involving conversion of units by: <ul style="list-style-type: none"> <li>a) one-digit number</li> <li>b) 10, 100, 1000</li> </ul> </li> <li>iii Solve problems involving volume of liquids</li> </ul>
<p style="text-align: center;">9 SHAPE AND SPACE</p> <p>1. Two-Dimensional shapes</p>	<p>Understand the perimeter of a two-dimensional shape</p> <ul style="list-style-type: none"> <li>i Identify the sides of a <ul style="list-style-type: none"> <li>a) square</li> <li>b) rectangle</li> <li>c) triangle</li> </ul> </li> <li>ii Measure and resord the perimeter of a <ul style="list-style-type: none"> <li>a) square</li> <li>b) rectangle</li> <li>c) triangle</li> </ul> </li> </ul> <p>Understand the area of a two-dimensional shape</p> <ul style="list-style-type: none"> <li>i Identify the dimension of a <ul style="list-style-type: none"> <li>a) square</li> <li>b) rectangle</li> </ul> </li> <li>ii Compare with unit squares the size of a <ul style="list-style-type: none"> <li>a) square</li> <li>b) rectangle</li> </ul> </li> <li>iii Measure and record the dimensional of squares and rectangles</li> </ul>

<p>2. Three-Dimensional Shapes</p>	<p>Find the area and perimeter two-dimensional shapes</p> <ul style="list-style-type: none"> <li>i Calculate the area of squares and rectangles</li> <li>ii Solve problems involving perimeter and area of two-dimensional shape</li> </ul> <p>Understand the volume for cubes and cuboids</p> <ul style="list-style-type: none"> <li>i Identify the dimensions of cubes and cuboids</li> <li>ii Compare with a unit cube <ul style="list-style-type: none"> <li>a) Cuboid</li> <li>b) Cube</li> </ul> </li> <li>iii Measure and record the dimension of cubes and cuboids</li> </ul> <p>Find the volume for cubes and cuboids</p> <ul style="list-style-type: none"> <li>i Calculate the volume of cubes and cuboids</li> <li>ii Solve problems involving of cubes and cuboids</li> </ul>
<p style="text-align: center;">10 DATA HANDLING</p> <p>1. Pictograph</p> <p>2. Bar Graph</p>	<p>Use a pictograph to read and display data</p> <ul style="list-style-type: none"> <li>i Describe a pictograph featuring <ul style="list-style-type: none"> <li>a) the picture used to represent data,</li> <li>b) the title of the graph</li> <li>c) what the axes represent</li> <li>d) what one unit of picture represent</li> </ul> </li> <li>ii Extract and interpret information from pictographs</li> <li>iii Construct pictographs to illustrate given information</li> <li>iv Solve a given problem by organising and interpreting numerical data in pictographs</li> </ul> <p>Use bar graph to read and display data</p> <ul style="list-style-type: none"> <li>i Describe a bar graph featuring <ul style="list-style-type: none"> <li>a) the title of the graph</li> <li>b) what the axes represent</li> </ul> </li> <li>ii Extract and interpret information from bar graphs</li> <li>iii Construct bar graphs to illustrate given information</li> <li>iv Solve a given problem by organising and interpreting numerical data in bar graphs</li> </ul>