

**CLASS 3**  
**YEARLY LEARNING OUTCOMES FOR MATHS**  
**YEAR 20 2022-23**

By the end of the year, students should be able to-

**Number System:**

**M1. Use place value understanding and properties of operations to perform multi-digit arithmetic (Algorithms may be used).**

- M 1.1 Count in thousands, hundreds, tens and ones (0 to 9,999)
- M 1.2 State the place value of a digit in a 4 digit number (from 10-9999) by expanding and also converting expanded form to a 4 digit number
- M 1.3 Write thousands as hundreds, hundreds as tens and tens as ones
- M 1.4 Distinguish between place value and face value of the digit
- M 1.5 Compare the numbers from 1000 to 9999 using  $<$ ,  $>$  and  $=$
- M 1.6 Identify the numbers before, after or between (1000 to 9999)
- M 1.7 Identify the greatest or least from a set of 4-digit numerals
- M 1.8 Arrange 3 digit, 4 digit numerals in ascending and descending order
- M 1.9 Demonstrate the understanding of odd and even numbers, using patterns
- M 1.10 Understand the properties of addition (order property, grouping property, zero property)
- M 1.11 Know the properties of subtraction (subtracting zero from any number, subtracting a number from the number itself)
- M 1.12 Add and Subtract upto 4 digit numbers with and without regrouping , vertically & horizontally
- M 1.13 Represent problems, involving both addition and subtraction, as mathematical statements OR interpret mathematical statements and create real life situations appropriately and use computing skills learnt to solve them.

**M2. Multiply and divide within 100.**

- M 2.1 Multiply a multi digit numeral by a single digit numeral, with or without regrouping.
- M2.2 Divide a multi digit numeral by a single digit numeral

**M3. Understand properties of multiplication and the relationship between multiplication and division.**

- M 3.1 Memorise multiplication tables for 1 to 10 through multiplication drill
- M 3.2 Understand the relationship between multiplication and division and write connected facts

**M4. Represent and solve problems involving multiplication and division.**

- M 4.1 Solve problems involving multiplication and division using the skills learnt.
- M 4.2 Solve shopping problems on money using the 3 operations of addition, subtraction, multiplication

## **Algebra:**

### **M5. Identify and explain patterns in arithmetic.**

- M 5.1 Recognize the simple and complex number patterns
- M 5.2 Create own number patterns using knowledge of skip counting
- M 5.3 Choose a correct operation (+,-) and write an equation to solve a story problem

## **Geometry:**

### **M6. Understand concepts of perimeter and area and relate area to multiplication and to addition (Geometric measurement).**

- M 6.1 Have the experience for covering a square or a rectangle with small equilateral triangles, circles and squares (tessellation)
- M6.2 Recognise that a boundary (a perimeter) is required to create a shape
- M6.3 Distinguish between linear and area measures

### **M7. Reason with shapes and their attributes.**

- M 7.1 Identify a point, line, line segment and note their characteristics; Draw a line segment
- M 7.2 Measure the distance between two points
- M 7.3 Recognize and identify the figures like square, rectangle, triangle, circle, identify the corners, edges, and region enclosed
- M 7.4 Relate 2D shapes and 3D solids to drawings of them
- M 7.5 Classify 3D shapes according to the number and shape of faces, number of vertices and edges (cube, cuboid, cylinder, cone, sphere)
- M 7.6 Understand that solids occupy space
- M 7.7 Predict how shapes can be changed by combining or dividing them
- M 7.8 Recognize circular shapes, the region enclosed by a circle and between circles
- M 7.9 Use the language of position, direction and movement, including clockwise and anti clockwise
- M 7.10 Make ink devils, recognize symmetry and find lines of symmetry by paper folding; draw the lines of symmetry of a square, a rectangle and an equilateral triangle
- M 7.11 Identify uses of triangular, square and rectangular shapes

## **Measurement:**

### **M8. Solve problems involving measurement and estimation of length, weight and capacity and lapsed intervals of time (on the clock and the calendar).**

#### **Time**

- M 8.1 Name the days of the week and months of the year in sequence (Revision from Class 1)
- M 8.2 Read the time (i) as quarter to, quarter past, half past (ii) in 5 minute intervals (ii) the exact minute (on analogue and digital clocks)
- M 8.3 Read the time in 3 ways and solve daily life problems on time involving addition and subtraction in minutes, hours and hours-minutes

### **Length**

- M 8.4 Use a centimeter ruler and understand the need for the units metre and kilo metre
- M8.5 Awareness that the unit for measures of distances is the kilometre.
- M 8.6 Express metres in centimeters and centimeters in metres and centimetres
- M 8.7 Compare, add and subtract, lengths in mixed units namely m-cm

### **Weight (Mass)**

- M 8.8 Measure in kg and g and have awareness that the unit for measures of weight is the kilogram
- M 8.9 Compare, add and subtract in kg and g with or without regrouping and solve problems

### **Capacity**

- M 8.10 Understand the relation between litre and millilitre
- M 8.11 Use litre and millilitre in addition, subtraction, and word problems

### **Money**

- M 8.12 Use the dot to separate rupees and paise and express money in words and figures
- M 8.13 Convert rupees to paise and paise to rupees.

## **Data Handling:**

### **M9. Represent and interpret data.**

- M 9.1 Prepare a pictograph for the given information
- M 9.2 Read and interpret information from a pictograph
- M 9.3 Compare and contrast using Venn diagram to sort data / objects using two criteria (through practical experiences)
- M 9.4 Read and prepare a Tally chart for recording, interpreting and visualising data

## **Mathematical Reasoning:**

### **M10. Make decisions about how to approach problems**

- M 10.1 Analyse problems by identifying relationships, distinguishing relevant from irrelevant information, sequencing and prioritizing information and observing patterns
- M 10.2 Determine when and how to break a problem into simpler parts

### **M11. Use strategies, skills and concepts in finding solution**

- M 11.1 Apply strategies and results from simpler problems to more complex problems.
- M 11.2 Use a variety of methods, such as words, numbers, symbols, charts, graphs, tables, diagrams, and models to explain mathematical reasoning

### **M12. Move beyond a particular problem by generalizing to other solutions**

- M12.1 Develop generalisations of the results obtained and apply them in other circumstances