

# NCERT Syllabus for Class IV Maths

## Geometry (16 hrs.)

### **SHAPES & SPATIAL UNDERSTANDING**

- Draws a circle free hand and with compass.
- Identifies centre, radius and diameter of a circle.
- Uses Tangrams to create different shapes.
- Tiles geometrical shapes: using one or two shapes.
- Chooses a tile among a given number of tiles that can tile a given region both intuitively and experimentally.
- Explores intuitively the area and perimeter of simple shapes.
- Makes 4-faced, 5-faced and 6- faced cubes from given nets especially designed for the same.
- Explores intuitively the reflections through inkblots, paper cutting and paper folding.
- Reads and draws 3-D objects, making use of the familiarity with the conventions used in this.
- Draws intuitively the plan, elevation and side view of simple objects.

## Numbers (40 hrs.)

### **NUMBERS AND OPERATIONS**

- Writes multiplication facts.
- Writes tables upto  $10 \times 10$ .
- Multiplies two and three digit numbers using lattice algorithm and the standard (column) algorithm.
- Divides a given number by another number in various ways such as:
  - by drawing dots.
  - by grouping.
  - by using multiplication facts.
  - by repeated subtraction.
- Applies the four operations to life situations.
- Frames word problems.
- Estimates sums, differences and products of given numbers.

### **MENTAL ARITHMETIC**

- Adds and subtracts multiples of 10 and 100, mentally.
- Completes multiplication facts by adding partial products, mentally (e.g.  $7 \times 6 = 5 \times 6 + 2 \times 6$ ).

### **FRACTIONAL NUMBERS**

- Identifies half, one fourth and three- fourths of a whole.
- Identifies the symbols,  $\frac{1}{2}$ ,  $\frac{1}{4}$ ,  $\frac{3}{4}$ .
- Explains the meaning of  $\frac{1}{2}$ ,  $\frac{1}{4}$  and  $\frac{3}{4}$ .
- Appreciates equivalence of  $\frac{2}{4}$  and  $\frac{1}{2}$ ; and of  $\frac{2}{2}$ ,  $\frac{3}{3}$ ,  $\frac{4}{4}$  and 1.

## Money (5 hrs.)

### **MONEY**

- Converts Rupees to Paise.

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- Adds and subtracts amounts using column addition and subtraction with regrouping.
- Uses operations to find totals, change, multiple costs and unit cost.
- Estimates roughly the totals and total cost.

### Measurement (21 hrs.)

#### **LENGTH**

- Relates metre with centimetre;
- Converts metre into centimetres and vice versa.
- Solves problems involving length and distances.
- Estimates length of an object and distance between two given locations.

#### **WEIGHT**

- Weighs objects using a balance and standard units.
- Determines sums and differences of weights.
- Estimates the weight of an object and verifies using a balance.

#### **VOLUME**

- Measures volumes of given liquid using containers marked with standard units.
- Determines sums and differences of volumes.
- Estimates the volume of a liquid contained in a vessel and verifies by measuring.

#### **TIME**

- Computes the number of weeks in a year.
- Correlates the number of days in a year with the number of days in each month.
- Justifies the reason for the need of a leap year.
- Reads clock time to the nearest hours and minutes.
- Expresses time, using the terms, 'a.m.' and 'p.m.'
- Estimates the duration of familiar events.
- Finds approximate time elapsed by (to the nearest hour) forward counting.
- Computes the number of days between two dates.

### Data Handling (6 hrs.)

- Collects data and represents in the form of bar graphs;
- Draws Inferences by discussing with the teacher.

### Patterns (6 hrs.)

- Identifies patterns in multiplication and division: multiples of 9,
- Casts out nines from a given number to check if it is a multiple of nine.
- Multiplies and divides by 10s, 100s.
- Identifies geometrical patterns based on symmetry.