

Mathematics Syllabus

Class V

Geometry (16 hrs.)

SHAPES & SPATIAL UNDERSTANDING

- Draws the side view, top view, front view of simple objects/ plans.
- Makes the shapes of cubes, cuboid using nets especially designed for this purpose.
- Uses shapes to create different shapes (tangram) and different patterns
- Identifies the shadows of the different given objects.
- Identifies appropriate nets for cube and cuboid
- Explores intuitively line symmetry in familiar 3-D objects expressed as 2 D shapes.
- Explores intuitively rotations and reflections of familiar 2-D shapes.
- Explores intuitively the perimeter and area of simple shapes.
- Estimates area
- Gets the feel of an angle through observation and paper folding.
- Identifies right angles in the environment.
- Identifies right angle and angles more than and less than right angles.
- Draws right angle and angles more than and less than right angles.
- Division of complete angles into parts
- Drawing shapes on dotted paper
- Identifies and reads floor maps, routes/road maps
- Draws simple floor maps of familiar locations
- Point, line, vertex, ray
- Identifies centre and radius of a circle.

Numbers (40 hrs.)

NUMBERS UPTO 1,00,000

- Using word problems/ contextual situations, reads, writes and compares 3,4,5- digit numbers.
- Understands place value in numbers up to 99,999
- Expands a number using place value.
- Forms numbers using given digits.
- Skip counting in terms of hundreds, thousands and ten thousands

ADDITION AND SUBTRACTION

- Using word problems/ contextual situations for a additions and subtractions up to 99999. (comparecombination and comparison types of word problems)
- Estimates sums and differences of 3,4 digit numbers through word problems and in sums.
- Frames word problems.

MULTIPLICATION

- Multiply by 10's, 100's, 1000's and 10,000s

- Using word problems/ contextual situations multiplies 3 digit number by
- 2 digit numbers using the standard (column) algorithm as well as the distributive law. (array product - rate product and grouping – Cartesian product types of word problems)
- Frames word problems.
- Estimates products of 3 digit by 1 digit and 3 digit by 2 digit numbers

DIVISION

- Using word problems/ contextual situations dividing 2-digit numbers by two digit numbers and three digit numbers by two digit numbers- with remainder and without remainder (using both equal grouping and sharing)
- Understands the pattern which emerges from division by 10
- Uses standard division algorithms for two-and three digit numbers divided by one and two-digit numbers
- Frames word problems.
- Even and odd numbers
- Tests of divisibility for 2, 5 & 10.
- Understanding of the multiples and factors
- Estimates quotients
- Explores the relationship between multiplication and division using 2 and 3 digit numbers

FRACTIONAL NUMBERS

- Finds the fractional part of a collection/ object
- Identifies equivalent fractions $\frac{2}{4}$ and $\frac{1}{2}$; situations using more than one operations and/ or more than one concept and/or multiple stages of solving
- Estimation in daily life $\frac{2}{6}$ and $\frac{1}{3}$, $\frac{2}{8}$ and $\frac{1}{4}$
- Compares like and unlike fractions(without LCM)
- Addition and subtraction of like fractions
- Applies simple fractions to measurements.

Day to Day Maths (5 hrs.) (Money, Length, Weight, Capacity, Space)

- word problems/ contextual situations using more than one operations and/ or more than one concept and/or multiple stages of solving
- Estimation in daily life

Measurement (26 hrs.) (LENGTH, WEIGHT, CAPACITY)

- Relates commonly used larger and smaller units of length, weight and capacity and converts one to the other.
- Relates feet to inches.
- Relates km to m; liter-ml; kg-gram; quintal-kg
- Applies simple fractions to quantities.
- Converts fractional larger unit into complete smaller units. Applies the four operations in solving problems involving length, weight and capacity.
- Determines intuitively area and perimeter.
- Estimated length, weight, capacity of a solid body: intuitively and also by informal measurement.
- Understands the concept of area

TIME

- Appreciates the difference in time in terms of seconds, minutes, hours, days, months and years.
- Reading time in hour, minutes and seconds
- Converts hours into minutes and minutes into seconds
- Expresses time, using the terms, 'a.m.' and 'p.m.'
- Understanding 24 hour clock (Bus and Railway timetable) and conversion between 12 hour and 24 hour clocks
- Computes the number of days between two dates.
- Uses addition and subtraction in finding time intervals in simple cases.

Data Handling (6 hrs.)

- Reading data using a pictograph
- Understands the importance of an appropriate scale for pictograph
- Reading data using bar graphs
- Organizing data using tally marks using tally marker.
- Making bar graphs based on data(without scale)

Patterns (6 hrs.)

- Identifies patterns in square numbers, triangular numbers.
- Identifies patterns in multiplication and division.
- Numbers between consecutive square numbers.
- Makes border strip and tiling patterns.
- Identifies the patterns in the multiples of 9.
- Draws symmetric pictures and symmetric axis.
- Identifies the block or unit of the pattern.