

ACADEMIC STANDARDS AND LEARNING INDICATORS

CLASS : V MATHS

| Area | Key concepts | AS ₁ (Problem Solving) | AS ₂ (Reason & Proof) | AS ₃ (Communication) | AS ₄ (Connection) | AS ₅ (Representation) |
|----------------|---|---|---|---|---|--|
| 1) Geometry | <ul style="list-style-type: none"> • Shapes and special understanding | <ul style="list-style-type: none"> • Can identify the nets the shapes at cubes, cuboids • Can draw the different views at simple objects plans • Can explore line of symmetry in familiar 3D objects expressed as 2D shapes. • Can explore the perimeter and area to simple shapes • Can understand angle through observation an paper folding. • Can identify and draw the right angle, more than and less than right angle. | <ul style="list-style-type: none"> • Can use shapes to create different shapes and different patterns by using tangrams. • Can explore rotation and reflections of familiar 2D shapes • Can estimates the area & perimeter of shapes | <ul style="list-style-type: none"> • Can identify and express the center and radius of a circle. • Can explain area & perimeter of 2D shapes. | <ul style="list-style-type: none"> • Can identifies the floor maps, roots / road maps by connecting the knowledge of 2D & 3D shapes. | <ul style="list-style-type: none"> • Can draw the shapes on dotted paper • Can draw a simple floor map of familiar locations by using indications (point, line, vertex, ray) |
| NUMBERS | <ul style="list-style-type: none"> • Number concept • Addition • Subtraction • Multiplication • Division | <ul style="list-style-type: none"> • Can expands the numbers using place values. • Can solve the word problem for addition and subtraction (upto 99999) | <ul style="list-style-type: none"> • Can compare the numbers using the contextual situation (up to 5 digits) • Can forms numbers using given digits | <ul style="list-style-type: none"> • Can frame the word problems involving four fundamental operations | <ul style="list-style-type: none"> • Can explore the relation between multiplication and division by using 2 and 3 digit numbers. | <ul style="list-style-type: none"> • Can represent the simple fractions on number line |

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| | | <ul style="list-style-type: none"> • Can multiply 3 digits x 2 digits using standard algorithm as well as the distributive law. • Can divide 2 digit by 2digit, 3 digits by 2 digits with remainder. • Can identify the even and add numbers • Can do addition and subtraction at like fractions. | <ul style="list-style-type: none"> • Can estimate the sums and differences at 3,4 digit numbers • Can answer the product at the number multiplying by 10's, 100's, and 1000's by oral and written • Estimates the product at 3 digit x 1 digit and 3 digit x 2 digit numbers. • Can say the divisible rules for 2,5 & 10 • Estimates the quotients | | <ul style="list-style-type: none"> • Can apply simple fractions to measurements. | |
| Day to Day Maths | <ul style="list-style-type: none"> • Understanding and solving problems in daily life situations | <ul style="list-style-type: none"> • Can solve the problems related to daily life situations | <ul style="list-style-type: none"> • Can estimate the result / answer in daily life problems | <ul style="list-style-type: none"> • Can explain the method to solve problems in daily life situations | <ul style="list-style-type: none"> • Can solve word problems / contextual situations using more than one operations (or) more than one concept (or) multiple stages at solving | |
| Measurements | <ul style="list-style-type: none"> • Length • Weight • Capacity | <ul style="list-style-type: none"> • Can apply the four operations in solving problems involving length, weight and capacity | <ul style="list-style-type: none"> • Can estimate length, weight, capacity at a solid body. | <ul style="list-style-type: none"> • Can relates commonly used larger and smaller units of length, weight | <ul style="list-style-type: none"> • Can determine intuitively are and perimeter | |

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| | | <ul style="list-style-type: none"> • Can understand the concept of area & can solve the problems | | <ul style="list-style-type: none"> and capacity and converts one to the other. • Can convert fractional larger unit into complete smaller unit. | <ul style="list-style-type: none"> • Can apply simple fractions to quantities | |
| Time | <ul style="list-style-type: none"> • Time | <ul style="list-style-type: none"> • Can complete the number of days between two dates. • Can find time intervals in simple cases using addition and subtraction. | | <ul style="list-style-type: none"> • Converts hours into minutes and seconds • Can express the time using the terms A.M and P.M • Can convert 12 hours time to 24 hours clocks (vise versa) | | |
| Data Handling | <ul style="list-style-type: none"> • Reading Data and using picture graphics | <ul style="list-style-type: none"> • Can interpretation the data given in tables | <ul style="list-style-type: none"> • Can analyse the given data in tables | | | <ul style="list-style-type: none"> • Can understand the importance of appropriate scale for picto graph • Can read the data using bar graphs • Can organize the data using tally marks • |

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| Patterns | <ul style="list-style-type: none"> Understanding simple patterns | <ul style="list-style-type: none"> Can draw symmetric pictures and symmetric axis | <ul style="list-style-type: none"> Can identify the patterns in square numbers and triangular numbers Can identify the patterns in multiplication and division Can make border strip and tiling patterns Identifies the blocks are units at the pictures. | | | |

Visualization and representation are skills that mathematics can help to develop. Modeling situations using quantities, shapes and forms are the best use of mathematics, mathematical concepts can be represented in multiple ways and these representation can serve a variety of purposes in different contexts. All of this adds to the power of mathematics. For example a function may be represented in algebraic form or in the form of a graph. The representation p/q can be used to denote a fraction as a part of the whole, but can also denote the quotient of two numbers, p and q . Learning this about fractions is as important, if not more, than learning the arithmetic of fractions.

- NCF 2005