

## NUMERACY CONCEPT MAP

<b>Sl No.</b>	<b>Dimension</b>	<b>Micro-concept</b>	<b>Micro-concept</b>	<b>Grade level</b>
1	Geometry	Spatial relations vocabulary	Development of geometry vocabulary	Class 1
2	Geometry	2D Shape/ Patterns Observe, understand, compare, identify (name), draw and sort shapes and patterns, including lines, angles, triangles and other shapes; understand the concept of area and perimeter	Distinguish, compare, draw shapes and lines	Class 2, 3, 4
3	Geometry	2D Shape/ Patterns Observe, understand, compare, identify (name), draw and sort shapes and patterns, including lines, angles, triangles and other shapes; understand the concept of area and perimeter	Compare shapes	Class 1
4	Geometry	2D Shape/ Patterns Observe, understand, compare, identify (name), draw and sort shapes and patterns, including lines, angles, triangles and other shapes; understand the concept of area and perimeter	Understand angles in objects and shapes - identify different types of angles	Class 5
5	Geometry	2D Shape/ Patterns Observe, understand, compare, identify (name), draw and sort shapes and patterns, including lines, angles, triangles and other shapes; understand the concept of area and perimeter	Observe, Identify, Draw, Sort 2D shapes	Class 1, 2, 3, 4
6	Geometry	2D Shape/ Patterns Observe, understand, compare, identify (name), draw and sort shapes and patterns, including lines, angles, triangles and other shapes; understand the concept of area and perimeter	Order in patterns	Class 1, 2, 4
7	Geometry	2D Shape/ Patterns Observe, compare, identify (name), draw and sort shapes and patterns get spatial understanding (including lines, angles, triangles and other shapes)	Explores intuitively rotations and reflections of familiar 2-D shapes.	Class 4, 5
8	Geometry	2D Shape/ Patterns Observe, compare, identify (name), draw and sort shapes and patterns get spatial understanding (including lines, angles, triangles and other shapes)	Properties of 2D shapes: understand triangle is 3 sides etc.	Class 2, 3
9	Geometry	2D Shape/ Patterns Observe, compare, identify (name), draw and sort shapes and patterns get spatial understanding (including lines, angles, triangles and other shapes)	Understand concept of Area and perimeter	Class 4
10	Geometry	3D Objects Identify, observe, order, draw, understand properties (including symmetry, weight and volume)	Order and patterns	Class 1
11	Geometry	3D Objects Identify, observe, order, draw, understand properties (including symmetry, weight and volume)	Observe, Identify, Draw 3D shapes	Class 1, 2, 3
12	Geometry	3D Objects Identify, observe, order, draw, understand properties (including symmetry, weight and volume)	Properties of 3D shapes	Class 4, 5

13	Geometry	3D Objects Identify, observe, order, draw, understand properties (including symmetry, weight and volume)	Arrange/order in objects	Class 2
14	Geometry	3D Objects Identify, observe, order, draw, understand properties (including symmetry, weight and volume)	Spatial understanding: Volume - understand and compare objects, liquids in container	Class 1, 3, 5
15	Geometry	3D Objects Identify, observe, order, draw, understand properties (including symmetry, weight and volume)	Understand conservation of volume	Class 3
16	Geometry	3D Objects Identify, observe, order, draw, understand properties (including symmetry, weight and volume)	Understand and compare weight of objects	Class 1, 2, 3
17	Geometry	3D Objects Identify, observe, order, draw, understand properties (including symmetry, weight and volume)	Conservation of weight	Class 3
18	Geometry	3D Objects Identify, observe, order, draw, understand properties (including symmetry, weight and volume)	3D to 2D objects	Class 2, 4, 5
19	Number sense	Counting Counting using objects, numbers (written and oral) and estimation of quantities without counting	Sense of quantities, count objects	Class 1, 3
20	Number sense	Counting Counting using objects, numbers (written and oral) and estimation of quantities without counting	Cardinality in counting	Class 1
21	Number sense	Counting Counting using objects, numbers (written and oral) and estimation of quantities without counting	Map quantities to numbers	Class 1
22	Number sense	Counting Counting using objects, numbers (written and oral) and estimation of quantities without counting	Decode: Read, speak, write numbers: 0-9, 10 - 99, 3 digit numbers and higher	Class 1, 2, 3, 4, 5
23	Number sense	Sequence Compare, order and arrange numbers; mental number line; properties of numbers (odd, even, squares, etc.)	Compare numbers	Class 1, 2, 3
24	Number sense	Sequence Compare, order and arrange numbers; mental number line; properties of numbers (odd, even, squares, etc.)	Order numbers	Class 1, 2, 3, 5
25	Number sense	Sequence Compare, order and arrange numbers; mental number line; properties of numbers (odd, even, squares, etc.)	Mental number line	Class 1, 2
26	Number sense	Place value Vocabulary of place value, understanding ones, tens and higher digit place values, expansion of numbers	Vocabulary of place value	Class 1
27	Number sense	Place value Vocabulary of place value, understanding ones, tens and higher digit place values, expansion of numbers	Groups objects into tens and ones etc. to understand place value	Class 1, 2, 3, 4, 5

28	Number sense	Place value Vocabulary of place value, understanding ones, tens and higher digit place values, expansion of numbers	Expansion (expand a number with respect to place values)	Class 2,3,4,5
29	Number sense	Addition/subtraction Understand symbols; estimation of sum/difference; addition/subtraction with and without grouping; addition as inverse of subtraction, properties like commutative and associative, mental maths	Understand symbols	Class 1
30	Linear math	Addition/subtraction Understand symbols; estimation of sum/difference; addition/subtraction with and without grouping; addition as inverse of subtraction, properties like commutative and associative, mental maths	Estimation of sum/difference	Class 2, 3, 4, 5
31	Linear math	Addition/subtraction Understand symbols; estimation of sum/difference; addition/subtraction with and without grouping; addition as inverse of subtraction, properties like commutative and associative, mental maths	Addition/Subtraction without grouping	Class 1, 2
32	Linear math	Addition/subtraction Understand symbols; estimation of sum/difference; addition/subtraction with and without grouping; addition as inverse of subtraction, properties like commutative and associative, mental maths	Addition/Subtraction with grouping	Class 2, 3, 4
33	Linear math	Addition/subtraction Understand symbols; estimation of sum/difference; addition/subtraction with and without grouping; addition as inverse of subtraction, properties like commutative and associative, mental maths	Addition as inverse of subtraction	Class 1
34	Linear math	Addition/subtraction Understand symbols; estimation of sum/difference; addition/subtraction with and without grouping; addition as inverse of subtraction, properties like commutative and associative, mental maths	Properties: commutative, associative	Class 2
35	Linear math	Addition/subtraction Understand symbols; estimation of sum/difference; addition/subtraction with and without grouping; addition as inverse of subtraction, properties like commutative and associative, mental maths	Mental maths	Class 1, 2
36	Linear math	Multiplication Understand the concept, symbols and use; multiplication of 2 and 3 digits, place values in multiplication, tables	Multiplication of 2 digits, 3 digits	Class 3, 4
37	Linear math	Multiplication Understand the concept, symbols and use; multiplication of 2 and 3 digits, place values in multiplication, tables	Multiplication tables upto 10 (understand, learn)	Class 3, 4
38	Linear math	Division Meaning and context; division versus multiplication; various methods of understanding division, methods of division	Meaning of division in the context of equal grouping and sharing; inverse multiplication; by multiplication tables	Class 3

39	Linear math	Division Meaning and context;division versus multiplication; various methods of understanding division, methods of division	Understand symbols	Class 3, 5
40	Linear math	Division Meaning and context;division versus multiplication; various methods of understanding division, methods of division	Divide a number with another given number	Class 4, 5
41	Linear math	Multiplication/Division factors and multiples; mental math	Factors and multiples	Class 4, 5
42	Linear math	Multiplication/Division factors and multiples; mental math	Mental Maths:	Class 5
43	Linear math	Mutiple operations BODMAS; using operations in length, weight and volume problems	BODMAS etc.	Class 4
44	Linear math	Word problems Understand, interpret and frame word problems	Understand, interpret and frame word problems	Class 3, 4
45	Linear math	Meaning of fractions understand fractions and decimals; context to time, distance, weight; notations and symbols; identify fractions; equivalence of fractions; application, conversion to and from decimal to fractions	Understand, represent fractions	Class 4, 5
46	Linear math	Compare fractions Difference, distance and equivalence of fractions	Compares fractions	Class 5
47	Measurement	Length Measurement with non standard metric, standard metric; understand need for standard metric; measuring; conversion between units; solve problems on length and distance;estimation	Measurement with non standard metric	Class 2, 3
48	Measurement	Length Measurement with non standard metric, standard metric; understand need for standard metric; measuring; conversion between units; solve problems on length and distance;estimation	Measurement with standard metric, appreciate need for standard metric	Class 3, 4, 5
49	Measurement	Weight Measurement with non standard metric, standard metric; understand need for standard metric; use a balance to measure and compare weights; conservation of weight; conversion from one unit to another	Measurement with non standard metric	Class 2,3
50	Measurement	Weight Measurement with non standard metric, standard metric; understand need for standard metric; use a balance to measure and compare weights; conservation of weight; conversion from one unit to another	Measurement with standard metric, appreciate need for standard metric	Class 3,4,5
51	Measurement	Volume Measurement with non standard metric, standard metric; understand need for standard metric;estimation, comparison, measurement using containers, calculation, conversion from one unit to another	Measurement with non standard metric	Class 2,3

52	Measurement	Volume Measurement with non standard metric, standard metric; understand need for standard metric; estimation, comparison, measurement using containers, calculation, conversion from one unit to another	Measurement with standard metric, appreciate need for standard metric	Class 3, 4, 5
53	Measurement	Time Measurement and reading time- understanding events and their order and length; reading and understanding the calendar and clock; sequencing; computing days, weeks and months; understand am/pm; computation of time interval, days etc.	Measuring and reading time	Class 1,2,3,4,5
54	Measurement	Measurement of geometry/shapes Area, perimeter of 2D shapes	Measurement of 2D shapes	Class 4, 5
55	Measurement	Measurement of geometry/shapes Measure, estimate and compare volume for 3D shapes	Measure, estimate and compare volume for 3D shapes	Class 5
56	Measurement	Money Identify and convert money; calculation of money (add/subtract/ multiply/divide); fractions and decimals in money	Identify and convert money	Class 1, 2
57	Measurement	Money Identify and convert money; calculation of money (add/subtract/ multiply/divide); fractions and decimals in money	Addition/subtraction using money	Class 1, 2, 4
58	Measurement	Money Identify and convert money; calculation of money (add/subtract/ multiply/divide); fractions and decimals in money	Multiplication	Class 4
59	Measurement	Money Identify and convert money; calculation of money (add/subtract/ multiply/divide); fractions and decimals in money	Multiple operations	Class 5
60	Measurement	Money Identify and convert money; calculation of money (add/subtract/ multiply/divide); fractions and decimals in money	Understand, represent fractions	Class 4,5
61	Measurement	Angles Types of angles and their properties	Angles	Class 5
62	Statistics	Collect data	Collect and represent data	Class 1,2
63	Statistics	Data interpretation	Draw inferences from data	Class 2, 5
64	Statistics	Graphical representation	Represent data	Class 3,4,5