

Early Grade Numeracy Standards/ Indicators  
For Primary Classes

Numeracy learning indications I		
Domain	Sub domains	Learning Indications
Pre-number concepts	a) Sorting of concrete objects and pictures basis physical properties b) Creating and identifying patterns	1. Group objects based on a specific attribute (colour, shape, size, taste, utility,) 2. Group a collection of different objects based on one's own rationale (classification) 3. Sequence objects based on a specific attribute (length, heaviness) (light heavy , small big) 4. Create pattern through objects, images 5. Introduce vocabulary like more less
Understanding whole numbers and numerals	a) Comparing two collections by one to one matching	1. Establish one to one correspondence between two objects (cups -saucers, leaf-stick,) using concrete object and pictures. 2. Understand a group has more, less or same as other
	b) Counting and recognizing numerals from 1-10 using objects and pictures	1. Count by adding one object to another, recite number name in sequence 1 to 9 (through songs,) 2. Make groups of a given number (1,2,3,4..9) using concrete objects Compare two collections by one to one matching 3. Understand that last number name said in a group of objects is the number counted (cardinality). 4. Map number of objects to number names (using concrete objects, images, situations 5. Position object (first, second, third,) 6. Estimate number of things in a group 7. Understand number conservation, number of objects is the same regardless of their arrangement or the

		<p>order in which they are counted</p> <ol style="list-style-type: none"> <li>8. Recognize and create different representations of numbers (symbolic, hand form, arranging stones on the shape, write numbers by joining dots)</li> <li>9. Compares two numbers through help of concrete objects, symbolic representation, number names , Introducing symbol (=)</li> <li>10. Skip count -forward and backward counting , arrange three numbers in a sequence (increasing, decreasing), and identifying missing number in a sequence</li> </ol>
	c) Concept of zero	<ol style="list-style-type: none"> <li>1. Understand the concept of zero using concrete experiences, number songs</li> <li>2. Recognize symbol 0 to represent absence of something</li> </ol>
	<ol style="list-style-type: none"> <li>d) Using the concept of place value to form 2 digit numbers</li> <li>e) Counting and recognizing numerals from 10-20</li> </ol>	<ol style="list-style-type: none"> <li>1. Arrange objects in a group of ten</li> <li>2. Compose numbers (10 to 20) as tens and ones (concrete objects gin mala, bundle , sticks )</li> <li>3. Composing numbers as tens and ones (in pictorial and written form),</li> <li>4. Reciting number names (10 to 20)</li> <li>3. Associating number of objects with number names and number symbols(10-20)</li> <li>4. Count raised fingers, put a tally for object count for upto 20 objects</li> <li>5. Recognise and Write numbers (10 to 20)</li> <li>5. Compare groups (more/less) using counting strategies (forming groups, one to one correspondence) for upto 20 objects</li> <li>6. Write numbers in sequence, complete missing number in</li> </ol>

		<p>sequence , identify one less than , one more than a given number,          compare two numbers as greater ,less than, equal          skip count numbers forward, backward by (10-20) (2s,3s,5s,10s)          solving simple word problem          7. Estimate number in a group</p>
	<p>f) Using the concept of place value to form number 21-50          g) Counting and recognizing numerals from 21-50</p>	<ol style="list-style-type: none"> <li>1. Compose numbers (21-50) as tens and ones (using gin mala, number cards)</li> <li>2. Composing numbers as tens and ones (in pictorial and written form)</li> <li>3. Reciting number names (21-50) , Associating number of objects with number names and number symbols</li> <li>4. Make a group of objects of a given number Matches objects with correct number; Recognises and writes numerals (21-50)</li> <li>5. Complete missing number in sequence (21-50)</li> <li>6. Filling out missing numbers in a numerical pattern,</li> <li>7. Comparing two numbers (greater, smaller, equal )</li> <li>8. Skip counting forward and backward (in 2s,3s,5s,10s) (through games, number line) (21-50)</li> </ol>
	<p>h) Using the concept of place value to form number 51-100          i) Counting and recognizing numerals from 51-100</p>	<ol style="list-style-type: none"> <li>1. Compose and Decompose numbers in tens and ones (51-100)</li> <li>2. Write numerals till 100 Estimates number of object in a group compares two groups</li> <li>3. Associate quantity ,number name and symbols</li> <li>4. Compose and decomposes numbers (Pictorially, numerals ) in tens and ones , write a number in expansion form ,tens and units</li> <li>5. Write numbers in sequence, complete missing number in</li> </ol>

		<p>sequence , identify one less than , one more than a given number,          compare two numbers as greater ,less than, equal          skip count numbers forward, backward by (51-100)          (2s,3s,5s,10s)</p>
Ability to Add, Subtract whole numbers	a) Adds two numbers 0-9 with sum not exceeding 9	<ol style="list-style-type: none"> <li>Put two group of objects together (concrete, symbols (1-9))              understanding addition orally through real life experiences (1-9)</li> <li>Build concept of addition through locating it through different real life vocabulary (joining, putting together, mixing,)</li> <li>Put two groups of same sizes and different sizes together (1, 2,3) (concretely , symbolically , numerically )</li> <li>Addition facts ( concrete objects ,pictures, number line, number strips ),              Introducing symbol + for addition              Horizontal addition representation <math>3+4=7</math></li> <li>Add zero a number and explain why the sum is the same as the addend.(using real life experiences, concrete objects, pictures, numerals)</li> <li>Addition is commutative (the order in which numbers are added does not affect the sum) (using concrete, symbols, numerals)</li> <li>Compose a number as a combination of different numbers</li> <li>Adds two numbers mentally with sum not exceeding 9</li> </ol>
	b) Subtracting two numbers 1-9	<ol style="list-style-type: none"> <li>Subtract using concrete objects (1-9)              understanding concept of subtraction through oral real life situations (1-9)</li> <li>Real life vocabulary representing subtraction</li> </ol>

		<p>(removing, taking away, sharing,)</p> <ol style="list-style-type: none"> <li>3. Remove objects from a collection of objects (concrete, pictures, numbers) subtracting a small number from a big number</li> <li>4. Subtract (1 9) using concrete objects pictures, number line, number strips</li> <li>5. Symbol - for subtraction vertical subtraction algorithm</li> <li>6. Subtract zero from a number and explain why the difference is the same as the number..(using real life experiences, concrete objects, pictures, numerals) subtracting a number from itself gives zero</li> <li>7. Subtraction is non commutative (the order in which numbers are subtracted affects answer ) (using concrete, symbols, numerals)</li> <li>8. Matching number sentence a missing subtrahend or minuend problem        Result                      Unknown  <math>(a - b = ?)</math>        Change                      Unknown  <math>(a - ? = c)</math>        Start                          Unknown  <math>(? - b = c)</math></li> <li>9.</li> </ol>
	<ol style="list-style-type: none"> <li>c) Adding 2 digit numbers</li> <li>d) Subtracting 2 digit numbers</li> <li>e) Solving word problems</li> </ol>	<ol style="list-style-type: none"> <li>1. Composing a number as a combination of different numbers using addition , subtraction</li> <li>2. Add two collections (using objects, pictures, symbols)</li> <li>3. Add two collection of objects (single digit) without carry forward(by concrete addition, and through place value algorithm )</li> <li>4. Add two collection of objects (0-20) with carry forward(by</li> </ol>

		<p>concrete addition, and through place value algorithm )</p> <p>5. Daily life problems using simple operations(addition) Formulating simple real life problems using addition.</p> <p>6. Subtract two group of objects one less than 20 and other less than 10, using concrete objects, algorithm.</p> <p>7. Subtract two double digit numbers (0 20) without borrowing using counters and through place value algorithm (concrete, pictures, numbers.</p> <p>8. Daily life problems using simple operations(subtraction) Formulating simple real life problems using subtraction</p>
Use of Mathematics for everyday life	a) Money	1. Recognises coins and currency notes of different denominations
	b) Length	<p>2. Compare and order objects by length, height (long-short. Tall -short)"</p> <p>3. Uses non-standard units ( such as hand span, human feet, stick, etc., ) to measure length of objects in immediate environment</p>
	c) Mass ( Weight )	4. Uses non-standard units of mass ( weight ) ( such as stones, beads, etc., ) to weigh objects in immediate environment using a toy scale / pan balance
	d) Capacity	5. Uses non-standard units ( such as cup, tumbler, bottle, etc., ) to measure capacity
	e) Time	6. Names days of the week in sequence
Understanding of geometrical shapes and spatial relationship	<p>a) Recognizing basic shapes 2D</p> <p>b) Recognizing basic shapes 3D</p>	<p>1. Recognizes and names the four basic shapes – circle, triangle, rectangle and square.</p> <p>2. Establishes one to one correspondence by matching shapes Sorts objects by their shapes</p>

		<ol style="list-style-type: none"><li>3. Uses spatial relationship and vocabulary based on observable properties in 3 D objects like ability to roll and slide classifies 3-D objects by their ability to roll, slide (through manipulation, pictorial discrimination)</li><li>4. Recognizes and classifies various solids in the environment on the basis of their shapes without necessarily mentioning their geometrical names</li></ol>
--	--	---

Numeracy learning indications II		
Domain	Sub-domains	Learning Indications
Understanding whole numbers and numerals	a) Counting in sequence (1-100) b) Recognizing numerals 1-100 c) Comparing relative values of numbers (“more than”/ “lesser than”/ “equal to”)	1. Skip count in groups (2s, 3s, 4s, 5s, 10s) 2. To count quantity using groups of 2s, 5s, or 10s and counting on 3. Extend a skip-counting sequence by 2s, 5s, or 10s forward and backward. 4. Counting through making equal groups Applying different counting strategies-using the counting-on strategy ,using parts or equal groups to count sets 5. Identify and correct errors and omissions in a skip-counting sequence. 6. To write numbers (1 to 100) in sequence 7. To count numbers in forward and backward sequence (1 to 100) 8. To arrange numbers in sequence (increasing , decreasing order) 9. To write numbers in inverse sequence (50 to 41)... 10. To compare two numbers(small, big ,more ,less equal) 11.To estimate number in a collection
	d) Recognizing relative positions of numbers	1. Indicate the position of an object in a sequence by using ordinal numbers. 2. Compare the relative position of an object in two different sequences.

	<p>e) Concept of place values</p> <p>f) Composing and decomposing 2 digit numbers into ones and tens (1-100)</p>	<p>3. Counting by grouping in 10s (concrete, pictorial, numbers) Decomposing a number in 10s and 1s (1 to 100)</p> <p>4. To skip count by 10 (using number line, number strips, bundle of sticks)</p> <p>5. Compose number by counting group of 10s and 1s</p> <p>6. Represent a number using concrete materials, such as ten frames or base-10 materials.</p> <p>7. Compare two numbers using tens and unit frame Identify skip counting pattern in a number sequence</p> <p>8. Fill in missing number in a skip counting sequence (forward and backward)</p> <p>9. Composing and decomposing numbers in 10s and 1s through real life situations (money, game, symbolic and number stories)</p>
<p>Ability to Add, Subtract whole numbers</p>	<p>a) Adding two or three 2-digit numbers without carrying and with carrying (sum not exceeding 99)</p> <p>b) Subtracting two or three 2-digit numbers without borrow and with borrow (numbers not exceeding 99)</p> <p>c) Solving daily life problems involving addition and subtraction (sum not exceeding 99)</p> <p>d) Applying mental mathematics strategies for addition and subtraction</p>	<p>1. Adds two 2-digit numbers with carry forward using numeric representations</p> <p>2. Add two or three 2-digit numbers</p> <p>3. Word problems/ stories solving using addition and subtraction skills</p> <p>4. Adding through number line</p> <p>5. Solve a problem involving a missing addend, and describe</p>

		<p>the strategy used</p> <ol style="list-style-type: none"> <li>6. Match a number sentence to a missing addend problem.        Result Unknown (<math>a + b = ?</math>)        Change Unknown (<math>a + ? = c</math>)        Start Unknown (<math>? + b = c</math>)        Combine (<math>a + b = ?</math>)</li> <li>7. Apply mental mathematics strategies, including using doubles, making 10, using one more, one less</li> <li>8. Addition is associative  <math>(a+b)+c=a+(b+c)= (a+c)+b</math></li> <li>9. Addition of two digit numbers using place value algorithm (concrete objects, pictorial , numerical) (with and without carry forward) through number stories</li> <li>10. Subtraction of two digit numbers using place value algorithm (concrete objects, pictorial , numerical) (with and without borrowing) through number stories</li> <li>11. Real life word problems using operations (addition , subtraction) (pictorial, numbers)</li> <li>12. create an addition or a subtraction number sentence and a story problem for a solution.</li> <li>13. to add using place value algorithm (through story, pictorial represents , numerical representation )</li> <li>14. To add two digit numbers using</li> </ol>
--	--	--

		<p>algorithm (number drills)</p> <p>15.To subtract two digit .single digit number using algorithm (number drills)</p> <p>16.Composing a number as a combination of different numbers</p> <p>17.Apply addition and subtraction operations to solve real life problems/ situations</p>
--	--	--

<p>Everyday Math and data handling</p>	<p>a) Understanding the relationship of days to weeks, weeks to months and months to year</p> <p>b) Recognizing the sequence of months in a year</p> <p>c) Making inferences based on simple data</p>	<ol style="list-style-type: none"> <li>1. Identifies sequence of days in a week</li> <li>2. Identifies name of days in a week</li> <li>3. Positioning of day in a week (first, second,)</li> <li>4. Identifies relative positioning like before , after</li> <li>5. Introducing terminology like today, yesterday, tomorrow, day after yesterday, day after tomorrow</li> <li>6. Applies the understanding of weekly schedule in devising and analysing a school timetable</li> <li>7. Records occurrence of event in a week</li> <li>8. Understand sequence of month in a year</li> <li>9. Associates occurrence of events with specific month Identifies positioning of month in a year</li> <li>10. Identifies relative positioning of one month with another month in a year</li> <li>11. Identifies number of days in a month, pattern of occurrence , outliners</li> <li>12. Counting, recording specific occurrences through tally marks, numbers</li> <li>13. Analysing data as more, less, how many</li> <li>14. Inferring from data</li> </ol>
<p>Geometric shapes and measurements</p>	<p>a) Recognizing common 3D and 2D shapes</p> <p>b) Sorting objects based on shape and size</p> <p>c) Comparing weights and lengths</p> <p>d) Identifying and creating geometric patterns</p>	<ol style="list-style-type: none"> <li>1. Observe and describe shape of different objects</li> <li>Discuss similarities and differences among their properties, physical features such as edge, corners faces, smooth or rough surfaces</li> </ol>

		<p>D, if it rolls or slides</p> <ol style="list-style-type: none"> <li>2. Understanding how change in shape changes properties</li> <li>3. Observes and recognises objects around on one specific property like long, round, roll- slide Identifies objects having more than one attribute (objects which can both roll and slide)</li> <li>4. Understanding stability of shapes by stacking, spinning manipulating objects of different shapes</li> <li>5. Understands properties of heavy , light of different objects through stories Measures ,compares weight through see-saw, weight balance</li> <li>6. Compares and sequences different objects on their weight Analyses relationship between size and weight one can carry (children- adults, ant-elephant)</li> <li>7. Identify patterns in real life objects Extending / forming patterns using a given shape Identify and extending geometric patterns</li> <li>8. comparing different sizes and shapes of objects around (footprints of different animals)</li> <li>9. Sorting objects on shapes Tracing 2-D images of 3-D object</li> <li>10. Identify 2 D common shares (circle, triangle, square, rectangle)</li> </ol>
--	--	---

		<p>Count 2D shapes</p> <p>Create images using 2D geometrical shapes</p> <p>Identify 2D geometrical shapes from real life objects</p>
	e) Drawing shapes and patterns	<p>11. Tracing image of objects (leaves)</p> <p>Tracing objects by changing orientation (top, bottom)</p> <p>Drawing 3-D objects, depicting different positions (top, bottom front, back,)</p>
	f) Length and its measurement	<p>1. Measuring distance, length using non standard measures (leg span, hand span)</p> <p>2. compare the difference in measurement when non standard methods are used to measure</p> <p>3. Measuring distance between two non linear points understanding the shortest distance between two non linear</p>
	g) Capacity	<p>12. Understanding volume by measuring capacity of different objects using different objects to measure (half lemon, pinch of salt, spoon of sugar, glass of water)</p> <p>Comparing capacities of different sizes of objects</p> <p>13. Build understanding on capacities of objects with respect to shape and size of the object</p> <p>14. Understand principle of conservation (e.g. Two cups of water will remain the same irrespective of them being in a glass or a</p>

		<p>jug)          Measure the capacity of a object using unit measure method (capacity of bucket by measuring number of mugs it can accommodate)          Apply measuring capacity to estimate water consumed in a day</p>
	<p>h) Recognizing lines and curves          i) Using lines and curves to draw patterns</p>	<p>1. Identifies and draws slanting, sleeping and standing line from immediate environment          2. Differentiates between straight lines and curved lines          Create new shapes using different kinds of lines (alphabets, numbers from match stick)          Observe geometrical movements made by people from immediate context (policeman, dancer)          Drawing pictures by joining dots, line drawings</p>

### Numeracy Learning Indications III

Domain	Sub domains	Learning indications
Understanding whole numbers and numerals	<ul style="list-style-type: none"> <li>a) Introduction to 3-digit numbers</li> <li>b) Comparing 3-digit numbers</li> <li>c) Knowing (reciting , writing and filling-in) 100-1000 in sequence</li> <li>d) Composition and decomposition of 3 digit numbers</li> <li>e) Identifying odd and even number patterns</li> </ul>	<ol style="list-style-type: none"> <li>1. Number facts through adding on, taking away , comparison, complementary addition (two digit)</li> <li>2. Estimating numbers in a collection (upto hundred)</li> <li>3. Introducing three digit numbers through instances in real life context</li> <li>4. Identifies three digit numbers in sequence along with number names</li> <li>5. Writes missing numbers in sequence (three digit numbers)</li> <li>6. Compares three digit numbers (greater, lesser, equal)</li> <li>7. Extends patterns in three digit numbers through skip counting (10s,50s)</li> <li>8. Skip counting forward, backward(three digit number)</li> <li>9. Represents number as a combination of three small numbers</li> <li>10. Demonstrate an understanding of increasing patterns by reproducing, extending, creating patterns (through use of number stories, diagrams, numbers)</li> <li>11. Composing and Decomposing numbers into hundreds, tens and ones( through stories, concrete objects, pictorial representation)</li> <li>12. Composing number stories /mapping numbers to number equations,</li> <li>13. Understands rule formation that governs a pattern</li> <li>14. Demonstrate an</li> </ol>

		<p>understanding of increasing patterns by reproducing, extending, creating patterns (through use of number stories, symbols, numbers)</p> <p>15. Identifies odd and even pattern in a number sequence</p>
<p>Ability to Add, Subtract, Multiply and Divide whole numbers</p>	<p>a) Addition and Subtraction of 2 digit numbers</p> <p>b) Addition of 3 digit numbers</p> <p>c) Subtraction of 3 digit numbers</p>	<ol style="list-style-type: none"> <li>1. Quick addition and subtraction of 2 digit numbers using 10x10 number grids</li> <li>2. Addition strategy -by rounding numbers to nearest ten and adding them. (<math>26+43= 20+6+40+3</math>)</li> <li>3. Apply operations in a real life narrative context</li> <li>4. Step by Step explanation of addition algorithm for two digit number with regrouping into 10s and 1s. (using picture + number) (Using aids like token cards of , 10s and 1s for representing regrouping in calculations)</li> <li>5. Apply operations in a real life narrative context</li> <li>6. Step by Step explanation of addition algorithm for 3 digit numbers with regrouping (picture + number) (Using token cards of 100s, 10s and 1s for representing regrouping in calculations)</li> <li>7. Solves real life application problems involving addition (upto 3 digit numbers)</li> <li>8. Practice question for addition of 3 digit numbers (vertical and horizontal format)</li> <li>9. Estimates answer to three digit addition problem to the nearest hundred</li> <li>10. Understand that a number can be made by different combination of numbers (two digit, three digit</li> </ol>

		<p>number)</p> <ol style="list-style-type: none"> <li>11.using mental math to solve simple two digit/ three digit addition , subtraction problems</li> <li>12.understanding <math>a+b= c</math>, then <math>b+a =c</math> through multiple examples</li> <li>13.understanding if <math>a-b= c</math>, then <math>c-a=b</math> and <math>c-b=a</math>, through different examples</li> <li>14.Step by Step explanation of subtraction algorithm for 3 digit numbers (without/with borrowing) with regrouping (picture + number) (Using token cards of 100s, 10s and 1s for representing regrouping in calculations)</li> <li>15.Word problems involving addition and subtraction of 2, 3 digit numbers weaved into a story narration</li> <li>16.Estimating the answer to a word problem (greater than, less than, to the nearest 10s,100s)</li> <li>17.Practice question for addition and subtraction with regrouping for 3 digit numbers</li> <li>18.Understanding ways to check the answer to subtraction problem through using inverse addition method</li> <li>19.Quick addition and subtraction of 3 digit numbers using number grids</li> <li>20.Quick addition and subtraction of 3 digit numbers using mental math techniques (chunking, rounding, doubling,)</li> <li>21.solving math equations involving addition and subtraction</li> <li>22.Understanding ways to check the answer to subtraction problem through using inverse addition method</li> </ol>
--	--	--

		<p>23. fill in the missing number in a addition/subtraction algorithm</p> <p>24. Quick addition and subtraction of 3 digit numbers using number grids</p>
	<p>d) Concept of multiplication</p> <p>e) Constructing multiplication tables</p> <p>f) Single digit multiplication problem solving</p> <p>g) Multiplication of 2 digit numbers</p>	<p>1. Understand relationship between addition and subtraction (<math>x-y=z</math>, therefore <math>z+y= x</math>)</p> <p>2. Exemplify real life situations demonstrating need for repeated addition</p> <p>3. Multiplication as repeated addition, through visual representation</p> <p>4. Introducing vocabulary 'times of', symbol X</p>
		<p>5. Representing multiplication as a numerical equation (<math>a+a+ \dots</math>) = <math>n \times a = \text{value}</math></p> <p>6. Word Problems on multiplication by building a real life context, illustration</p> <p>7. constructing tables 2,3,4,7 sequentially (pictorial, skip counting in number line, times of, using symbol x)</p> <p>8. constructing tables through stick arrangement</p> <p>9. Practice question for multiplication of single-digit numbers through word problem,</p> <p>10. single digit multiplication fact retrieval, equation form (<math>5x \dots = 35</math>)</p> <p>11. Multiplication number families (e.g. <math>18=6 \times 3</math>, <math>3 \times 6</math>, <math>2 \times 9</math>, <math>9 \times 2</math>) (Children expected to fill without teaching it explicitly)</p> <p>12. Multiplication of big numbers using chunking method (step by step explanation) (<math>34 \times 2 = 30 \times 2 + 4 \times 2</math>)</p> <p>13. Estimate answers and check through calculation</p> <p>14. Multiplying two digit numbers ( step by step breaking the number</p>

		<p>into 10s and 1s algorithm) - visual and numerical representation</p> <p>15. understand pattern in multiplication table formation (9)</p>
	<p>a) Concept of division</p> <p>b) Solving division word problems( single digit divisions)</p> <p>c) Establishing relationship between division and multiplication</p>	<ol style="list-style-type: none"> <li>1. Forming groups with equal number of objects from a collection of objects (concrete)</li> <li>2. Introducing children to concept of fair share pictorially , through stories</li> <li>3. Introducing division statements pictorially and numerically</li> <li>4. children understand division as sharing things equally</li> <li>5. children understand division as distributing objects in equal groups</li> <li>6. children write division statements</li> <li>7. Word problems involving division depicting real life situation using pictures, numbers</li> <li>8. Division as number of equal steps taken to reach a destination (number line, skip counting)</li> <li>9. Relationship between division and multiplication</li> <li>10. Identifying a missing number in a division statement</li> </ol>

<p>Use of Mathematics for everyday life</p>	<p>a) Measures of time (days/ weeks/ months)  b) Reading a calendar  c) Reading a clock</p>	<ol style="list-style-type: none"> <li>1. Intuitively' understands the concepts of time (day, night, seconds, minutes hours, day, week , month, year) and associate them with real life events</li> <li>2. Estimates time taken for different task and classifies them into time taken (minutes, hours, days )</li> <li>3. classifies events to something that happens faster, slower</li> <li>4. Reads and infers information from a calendar around number of month in a year, days in a month, weeks in a month , total number of days in a year</li> <li>5. Look for pattern in a calendar observe repeated occurrences</li> <li>6. Build an intuitive sense around time by associating meaningful life and cultural events</li> <li>7. Look for number patterns in a calendar</li> <li>8. Marking life events on a timeline</li> <li>9. understand how time is measured as a relative positioning to some specific occurrence</li> <li>10. Application of concept of Time by inferring information from birth certificate</li> <li>11. Associating daily schedule to a clock through narrative experience</li> <li>12. Reads time in a clock</li> <li>13. Draws minutes and hour in a clock</li> <li>14. Observing daily happening, collect and record them in a table format</li> </ol>
---	---	---

	<p>d) Understanding patterns of occurrences</p>	<ol style="list-style-type: none"> <li>1. To enable children to classify individual occurrences from a collective scene</li> <li>2. Observe occurrences in a dice game and tabulate</li> <li>3. Children do a small survey to know people around them by filling in questionnaire</li> <li>4. Represent finding through pictographs , barographs</li> </ol>
	<p>e) Learning to use money</p>	<ol style="list-style-type: none"> <li>1. To help children create their own money (paper , coins)</li> <li>2. To quantify different denominations</li> <li>3. Express total amount as a combination of different denomination</li> <li>4. To read price tags and to calculate the total cost of different items in a shopping list</li> <li>5. To come with multiple options of purchase for a given money</li> <li>6. To Create a cash memo</li> <li>7. Add and Subtract given amounts of money (in Rupees and Paisa)</li> <li>8. Apply concept of money to solve real life problems - buying/ selling, wage, train fare etc</li> </ol>
<p>Understanding of geometrical shapes measurements</p>	<ol style="list-style-type: none"> <li>a) Spatial understanding of 3D objects</li> <li>b) Sorting 3 D objects based on their shape</li> <li>c) Developing spatial vocabulary</li> <li>d) Identifying and creating geometric patterns</li> </ol>	<ol style="list-style-type: none"> <li>1. Understand and differentiate between different views of 3D objects (top and side views) and draw objects from different perspectives</li> <li>2. Understand relative visualisation of the same object from different positions ( front, back, inside, outside)</li> <li>3. Creating symmetrical patterns in a dot grid through extending similar shapes</li> <li>4. Identifying mirror halves (symmetry)</li> <li>5. Identifying basic 2D geometrical shapes and</li> </ol>

		<p>their names (circle, triangle, square, rectangle) Counting , exploring shapes</p> <ol style="list-style-type: none"> <li>6. Identifying edges, corner and curved edges in 3D shapes and counting the same</li> <li>7. Creating shapes from paper having n number of edges by folding</li> <li>8. Classifying 3D objects based on attributes (number of corners, edges)</li> <li>9. Using tangrams to understand shapes and spatial coordination and putting them together into different shapes</li> <li>10. Using geometrical shapes to create pattern (curved line, straight line, both)</li> <li>11. Match tiles that can fit into each other to create a floor pattern</li> <li>12. Extend pattern in tiles</li> <li>13. Introducing spatial concepts (position, distance, size, corners and shapes) used in creating a pattern</li> <li>14. Introduce spatial concepts (positions, distance, size, corners and shapes) through a game. (E.g. instructions using 'left', 'right', up down, front, behind, near, far, tall and small)</li> <li>15. Identify objects things from ones surrounding which have pattern in them</li> <li>16. Identify rule that governs a pattern and extend the pattern (using shapes)</li> <li>17. Identifying , creating growing patterns which do not repeat but increment</li> </ol>
--	--	---

	<p>e) Length and its measurement</p>	<ol style="list-style-type: none"> <li>1. Identify , observe different non standard ways to measure length</li> <li>2. Observe how a unit is repeated number of times to measure total length, using nonstandard tools to measure (leg span, hand span, cup , pot)</li> <li>3. Understanding the measure of 'cm' through comparing length with real life objects</li> <li>4. Measuring different objects in cms through a ruler</li> <li>5. Understanding the measure of 'm" through comparing length with real life comparisons</li> <li>6. Measuring different objects in 'm' through standard tools</li> <li>7. classify objects from immediate surroundings on the basis of most appropriate standard units of measurement for them (in mts and cms)</li> <li>8. Identifying shortest route between two points</li> <li>9. Introduce 'km' through comparing distance between two places</li> <li>10. Apply the concept of measuring length to measure people and object in the classroom</li> <li>11. Estimate the length of different objects</li> </ol>
	<p>f) Weight and its measurement</p>	<ol style="list-style-type: none"> <li>1. Identify the heavier of the two objects by a non-standard method (by holding objects in hands, use of seesaw etc) (Revision)</li> <li>2. Estimate weight of different objects as relative comparisons</li> <li>3. Using balance to measure actual weight of an object</li> <li>4. Assessing which of the two object is heavy using a balance</li> </ol>

	g) Capacity and its measurement	<ol style="list-style-type: none"><li>5. Estimate the capacity of an object by using 1 litre as standard.(Capacity greater than 1 litre,lesser than 1 litre)</li><li>6. Estimate the capacity of different object</li><li>7. compare capacity of objects by using a non standard unit to emphasise features like - twice as much, half, double, etc. (Pot B holds 11 glassfuls of water. Pot A holds twice as much water as pot B. How many glasses of water are needed to fill pot A? )</li></ol>
--	---------------------------------	--