

BANYAN TREE SCHOOL, LODHI ROAD
DETAILED YEARLY SYLLABUS
SESSION 2024-25
CLASS: VI
SUBJECT: MATHEMATICS

Book

NCERT Mathematics- 6

OBJECTIVES

The students will be able to:

1. build the number concept.
2. use the four basic operations; addition, subtraction, multiplication and division and perform them with speed and accuracy.
3. convert various kinds of measurements such as length, mass and capacity, in all units
4. develop reasoning and logical thinking.
5. analyze 2 – D and 3 – D geometrical shapes and their characteristics.
6. perform basic addition and subtraction with Integers.
7. differentiate the concept of area and perimeter.
8. interpret and represent the information given in a pictorial form.
9. write expressions in algebraic statement and vice versa.
10. apply operations and concepts learnt in day to day life.

MONTH	SYLLABUS	CONCEPTS
<u>APRIL</u>	<p>Ch – 1: Knowing our Numbers</p> <ul style="list-style-type: none"> • Comparison • Place value of large numbers • Estimation • Roman numerals • Word problems <p>Ch – 2: Whole Numbers</p> <ul style="list-style-type: none"> • 4-operations • Properties • Number pattern 	<p>Students will be able to:</p> <ul style="list-style-type: none"> • arrange numbers according to Indian and International place value system • estimate to the nearest 10's, 100's • analyze and calculate the sum, the difference, the product and the quotient of the given number • infer numbers in Roman Numerals and in Hindu- Arabic numbers and vice- versa • illustrate patterns in whole numbers
Activity	<p><u>Math Lab Activity</u></p> <ul style="list-style-type: none"> • Write the ages of family members in Roman Numerals. • Make an estimated budget for a Birthday Party. <p><u>Mental Math</u></p> <ul style="list-style-type: none"> • What is 4 times the difference of 10 from 15 ? • _____ is the natural number having no predecessor. 	

<p>MAY</p>	<p>Ch – 4: Basic Geometrical ideas</p> <ul style="list-style-type: none"> • Line segment • Parallel and Intersecting lines • Polygons • Angles • Circle <p>Ch – 5: Understanding Elementary shapes</p> <ul style="list-style-type: none"> • Types of triangles • Measuring angles • Triangles • Quadrilaterals • 3D-shapes 	<p>Students will be able to:</p> <ul style="list-style-type: none"> • Classify line segment, parallel lines, open and closed curves. • categorize 2-D and 3-D shapes • illustrate angles with help of a protractor. • classify polygons-triangle, quadrilateral, pentagon • identify and compare types of triangles. • describe straight, right, acute, obtuse and reflex angles
<p>Activity</p>	<p>Math Lab Activity</p> <ul style="list-style-type: none"> • On a political map of India, choose a scale and illustrate the distance between the capital cities of India in km and identify the lines and the shapes thus formed. • Draw a dream room having furniture with all the geometrical shapes learnt. <p>Mental Math</p> <ul style="list-style-type: none"> • I have less than 6 sides, no line of symmetry, one or more right angles, I am quadrilateral. Who am I ? • Which angle is formed at 4 O' clock? 	
<p>JULY</p>	<p>Ch – 3: Playing with Numbers</p> <ul style="list-style-type: none"> • Factors and Multiples • Types of numbers • Divisibility rules • Prime Factorization • HCF and LCM <p>Ch – 6: Integers</p> <ul style="list-style-type: none"> • Basic concept of Integers • Integers on number line • Addition of integers • Subtraction of integers 	<p>Students will be able to:</p> <ul style="list-style-type: none"> • perform divisibility test on various numbers. • analyse whether the number is natural number, whole number or prime number. • illustrate the factor tree. • calculate LCM and HCF. analyze LCM for fraction problems. • identify integers and solve the real life problems using mathematical operations.
<p>Activity</p>	<p>Math Lab Activity</p> <ul style="list-style-type: none"> • Find Prime numbers between 1 to 100 using Sieve method of Eratosthenes on a coloured sheet. • Illustrate factor tree for given numbers on coloured sheets. • Addition and subtraction of integers using different colour bindis on coloured sheets <p>Mental Math</p> <ul style="list-style-type: none"> • What is the HCF of two consecutive odd numbers? • Predecessor of $(-11) + 12$ 	

<u>AUGUST</u>	<p>Ch – 6: Integers (Contd)</p> <ul style="list-style-type: none"> • Basic concept of Integers • Integers on number line • Addition of integers • Subtraction of integers <p>Ch – 9: Data Handling</p> <ul style="list-style-type: none"> • Bar Graph • Pictographs • Tally marks 	<p>Students will be able to:</p> <ul style="list-style-type: none"> • Illustrate data according to tally marks, bar graph and pictograph and pie-chart • identify integers and solve the real life problems using mathematical operations
<u>Activity</u>	<p><u>Math Lab Activity</u></p> <ul style="list-style-type: none"> • Collect and compare the data on the total population, male – female ratio, area, children below age 10 of Delhi, Haryana, Rajasthan, Uttar Pradesh and Punjab with help of Tally marks, Bar Graph and Pictograph <p><u>Mental Math:</u></p> <ul style="list-style-type: none"> • What is the range of 10, 20, 30 and 40? 	
<u>SEPTEMBER</u>	<p>Revision of the Half yearly syllabus</p> <p>Ch-7 : Fractions</p> <ul style="list-style-type: none"> • Types of fraction • Comparing • Addition • Subtraction 	<p>Students will be able to:</p> <ul style="list-style-type: none"> • differentiate between proper and improper fractions • arrange, add and subtract like and unlike fractions • illustrate fraction on the number line
<u>Activity</u>	<p><u>Math Lab Activity</u></p> <ul style="list-style-type: none"> • Illustrate fractions and decimal on a number line on a coloured sheet. • Illustrate decimal and fractions on a 10 x10 graph sheet by shading • represent fraction $\frac{1}{6}$, $\frac{2}{3}$, $\frac{3}{4}$, $\frac{4}{9}$, $\frac{5}{7}$, $\frac{6}{6}$ using paper strip and paste them on coloured sheets. 	
<u>TERM-II</u>		
<u>OCTOBER</u>	<p>Ch – 7: Fractions (Contd)</p> <ul style="list-style-type: none"> • Types of fraction • Comparing • Addition • Subtraction <p>Ch – 8: Decimals</p> <ul style="list-style-type: none"> • Decimals on number line • Comparing • Addition • Subtraction 	<p>Students will be able to:</p> <ul style="list-style-type: none"> • differentiate between proper and improper fractions • arrange, add and subtract like and unlike fractions • illustrate fraction and decimal on a number line • evaluate the place value for decimals
<u>Activity</u>	<p><u>Math Lab Activity</u></p> <ul style="list-style-type: none"> • making a fraction robot/ any scenary using fraction shapes. 	

	<p><u>Mental Math</u></p> <ul style="list-style-type: none"> • What will be the proper fraction with 6 as numerator and 8 as denominator? • 0.04 in fraction is _____ 	
<u>NOVEMBER</u>	<p>Ch-8: Decimals (Contd)</p> <p>Decimals on number line</p> <ul style="list-style-type: none"> • Comparing • Addition • Subtraction <p>Ch – 11: Algebra</p> <ul style="list-style-type: none"> • Writing the equation • Solve linear equation 	<p>Students will be able to:</p> <ul style="list-style-type: none"> • formulate an algebraic expression for a given statement. • analyze a statement for an algebraic expression.
<u>Activity</u>	<p><u>Math Lab Activity</u></p> <ul style="list-style-type: none"> • Using tooth picks make a pattern of algebraic expression. <p><u>Mental Math</u></p> <ul style="list-style-type: none"> • Sum of 3 times y (variable) and 10. 	
<u>DECEMBER</u>	<p>Ch – 10: Mensuration</p> <ul style="list-style-type: none"> • Area and perimeter 	<p>Students will be able to:</p> <ul style="list-style-type: none"> • differentiate between perimeter and area calculate area, perimeter of square and rectangle.
<u>Activities</u>	<p><u>Math Lab Activity</u></p> <ul style="list-style-type: none"> • Find area of irregular shape (leaf or palm) and perimeter of a regular polygon on a graph paper. • Using tooth picks make a figure and find out its perimeter and area. <p><u>Mental Math</u></p> <ul style="list-style-type: none"> • Perimeter of a square football field having a side of 50 m. 	
<u>JANUARY</u>	<p>Ch – 12: Ratio and Proportion</p> <p>Unitary Method</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> • Differentiate between Ratio and Proportion. • analyse that ratio has to be calculated in lowest terms compare quantities through unitary method.
<u>Activities</u>	<p><u>Math Lab Activity</u></p> <ul style="list-style-type: none"> • Calculate different ratios of the nutrients present on a food packet (snack) on a coloured sheet. • Calculate rates of the any five pens of different companies on colored sheets. <p><u>Mental Math</u></p> <ul style="list-style-type: none"> • What is the ratio of girls and boys in your class? 	
<u>FEBRUARY</u>	Revision for Final term Examination.	