

**Annual Syllabus**  
**Class-VII (2022-23)**  
**Subject: Mathematics (Level – 2)**

Chapter	Content and its mapping with previous classes	Learning Outcomes	Suggested Activities
<p><b>Chapter-1</b> <b>Integers</b></p>	<p><b>CLASS V:</b> Comparing numbers, big number in practice, outcome in number situation.  <b>(Use Worksheet No. 4,7,9)</b></p> <p><b>CLASS VI:</b> Representation of integers on number line, Addition and subtraction of integers  <b>(Use Worksheet No. 1,3,4,5,9,10)</b></p> <p><b>CLASS VII:</b> Introduction, Multiplication of integers, Properties of multiplication of integers, division of integers, properties of division of integers.  <b>(Use Worksheet No. 1,5,6,7,8)</b></p>	<p>The learner:</p> <ul style="list-style-type: none"> <li>● Multiplies and divides two integers.</li> <li>● Solves problem involving the Multiplication and Division of integers.</li> </ul>	<ul style="list-style-type: none"> <li>● To locate &amp; multiply the integers on number line.</li> <li>● To fill the right integers in the given figure. (Pragati)</li> <li>● To find the right key of the doors. (Pragati)</li> <li>● To write the appropriate integers in given square. (Pragati)</li> <li>● Arrows matching. (Pragati)</li> </ul>
<p><b>Chapter-2</b> <b>Fraction and Decimals</b></p>	<p><b>CLASS V:</b> Equivalent fractions, mixed fractions without using terms, Tenths, Hundredths.  <b>(Use Worksheet No. 130,135,141,143)</b></p> <p><b>CLASS VI:</b> Proper and improper fractions, representation of fractions on number line, Addition and Subtraction of fractions, Addition and Subtraction of decimals, comparing decimals  <b>(Use Worksheet No.18,19,20,21)</b></p> <p><b>CLASS VII:</b> Introduction, Multiplication of fractions, Division of fractions, Multiplication of decimal numbers, division of decimal numbers.  <b>(Use Worksheet No .10,11,12,13)</b></p>	<p>The learner:</p> <ul style="list-style-type: none"> <li>● Interprets the division and multiplication of fractions.</li> <li>● Uses algorithms to multiply and divide fractions and decimals.</li> <li>● Can solve the problems related to fractions and decimals in daily life.</li> </ul>	<ul style="list-style-type: none"> <li>● Introduction using daily life examples.</li> <li>● Colouring/shading equal parts</li> </ul>

<p><b>Chapter-5</b> <b>Lines and Angles</b></p>	<p><b>CLASS V:</b> Meaning of line and angle, Angles less than <math>90^{\circ}</math>, More than <math>90^{\circ}</math>, Straight angles, Types of Polygons (Use Worksheet No.96,100,106)</p> <p><b>CLASS VI:</b> Type of lines parallel and perpendicular, Types of angles - Acute angle. Obtuse angle, straight angle and Reflex angle. (Use Worksheet No. 24,27,28,29)</p> <p><b>CLASS VII:</b> Introduction, related angles, pair of lines, checking for parallel lines.(Use Worksheet No. 4,14,15)</p>	<p>The learner:</p> <ul style="list-style-type: none"> <li>• Classifies pairs of angles based on their properties as linear, supplementary, complementary, adjacent and vertically opposite</li> <li>• Finds the value of the one angle when the other angle is given.</li> </ul>	<ul style="list-style-type: none"> <li>• Searching examples of angles around us.</li> <li>• Role play on recognition of angles and names of angles.</li> </ul>
<p><b>Chapter15</b> <b>Visualizing Solid Shapes</b></p>	<p><b>CLASS V:</b> Basic geometrical Shapes</p> <p><b>CLASS VI:</b> 2D and 3D shapes</p> <p><b>CLASS VII:</b> Net for 3D shapes, Visualizing solid shapes and objects, viewing different sections of a solid – by cutting and slicing, shadow play and from certain angles to get different views. (Use Worksheet No. 20,21,22)</p>	<ul style="list-style-type: none"> <li>• Able to view solid objects from different sides.</li> <li>• Identify and differentiate between cross-sectional views of a single solid object.</li> <li>• Illustrate the shadow of a 3D object as two dimensional.</li> </ul>	<p>Activities</p> <ul style="list-style-type: none"> <li>• Making net of different 3D shapes</li> <li>• Take a long brinjal, banana etc and cut it first horizontally and then vertically. Observe different cross-sections of the objects</li> <li>• Take any 3D object and observe its shadow under sun or through torch-light. Which shape you see in the shadow?</li> </ul>
<p>➤ <b>Mental Maths and Maths Lab Activities</b></p> <p>➤ <b>The above content must be completed by 30<sup>th</sup> September 2022.</b></p> <p>➤ <b>Revision of syllabus for Mid Term Examination</b></p>			
<p><b>MID-TERM EXAMINATION - 2022</b></p>			
<p><b>Chapter-3</b> <b>Data Handling</b></p>	<p><b>CLASS V:</b> Tally Marks, Reading of Bar graph, Line Graph (Use Worksheet No.14,16)</p> <p><b>CLASS VII:</b> Introduction, collecting data, organization of data, representative values, use of bar graphs with a different purpose.</p>	<p>The learner:</p> <ul style="list-style-type: none"> <li>• Interprets data using bar graph such as consumption of electricity is more in</li> </ul>	<ul style="list-style-type: none"> <li>• Activity based on the conveyance used by the students.</li> <li>• Role play</li> </ul>

	(Use Worksheet No. 23, 24, 25, 26)	winter or summer. <ul style="list-style-type: none"> <li>Runs scored by team in first 10 over etc.</li> </ul>	
<b>Chapter-6 The triangle and its properties</b>	<p><b>CLASS V:</b> Triangle shape and Area, perimeter.</p> <p><b>CLASS VI:</b> Triangle shape in polygon.(Use Worksheet No. 110)</p> <p><b>CLASS VII:</b> Introduction, Medians of a triangle, altitudes of a triangle, Exterior angle of a triangle, two special triangles - equilateral and isosceles triangle and their properties, angle sum property of a triangle, sum of the length of two sides of a triangle, right angled triangles and Pythagoras property. (Use Worksheet No. 27, 28, 29, 30)</p>	<p>The learner:</p> <ul style="list-style-type: none"> <li>Labels different parts of a triangle – altitude, median</li> <li>Classify triangles on the basis of its properties.</li> <li>Finds unknown angles of a triangle when its two angles are known.</li> </ul>	<ul style="list-style-type: none"> <li>Colouring activity for visualization of interior and exterior parts of a triangle.</li> <li>Role play to understand triangle and its parts</li> <li>Drawing different types of triangles on dot paper.</li> <li>Paper folding activity</li> <li>Making triangles from sticks.</li> </ul>
<b>Chapter-8 Comparing Quantities</b>	<p><b>CLASS V:</b> How Big How heavy, comparing lengths and weights.</p> <p><b>CLASS VII:</b> Introduction, Equivalent ratios, percentage-another way of comparing quantities, use of percentages, prices related to an item or buying and selling, charge given on borrowed money or simple interest. (Use Worksheet No. 31,32,33,34,35)</p>	<p>The learner:</p> <ul style="list-style-type: none"> <li>Solves problems related to conversion of percentage to fraction and decimal and vice versa.</li> <li>Calculates profit/loss percent, rate percent and simple interest.</li> </ul>	<ul style="list-style-type: none"> <li>Conversation between friends (Role play) to understand profit /loss % and interest.</li> </ul>
<b>Chapter-10 Practical Geometry</b>	<p><b>CLASS V:</b> Line segment.</p> <p>*<b>CLASS VI:</b> Same as in chapter 5. (Use Worksheet No. 24,27,28,29)</p> <p><b>CLASS VII:</b> Introduction, construction of a line parallel to a given line through a point not on the line. Construction of triangles, constructing a triangle when the lengths of its three sides are known (SSS Criterion), constructing a triangle when the lengths of two sides and the measure of the angle between them are known (SAS</p>	<p>The learner:</p> <ul style="list-style-type: none"> <li>Using ruler and a pair of compasses, construct a line parallel to a given line from a point outside it.</li> <li>Construct different</li> </ul>	<ul style="list-style-type: none"> <li>Pictures made by Aman - cycle, house and car. (Pragati)</li> <li>In the given grid make triangles of different sizes</li> <li>Draw different triangles by cutting and pasting of paper</li> </ul>

	<p>criterion), constructing a triangle when the measure of two of its angles and the length of the side included between them is given (ASA criterion), constructing a right-angled triangle when the length of its one side and its hypotenuse are given (RHS criterion).  <b>(Use Worksheet No. 36, 37, 38, 39, 40, 41)</b></p>	<p>type of triangles.</p>	
<p><b>Chapter-13 Exponents and Powers</b></p>	<p><b>CLASSV:</b> Multiples and Factors.   <b>CLASS VII:</b> Introduction, exponents, laws of exponents, miscellaneous examples using the laws of exponents, decimal number system, expressing large numbers in the standard form.  <b>(Use Worksheet No. 16,17,18)</b></p>	<p>The learner:</p> <ul style="list-style-type: none"> <li>• Uses exponential form of numbers to simplify problems involving multiplication and division of large numbers.</li> </ul>	<ul style="list-style-type: none"> <li>• Conversation between Yogesh and Kavita (Pragati)</li> <li>• Is your secret intact? (Pragati)</li> </ul>
<ul style="list-style-type: none"> <li>➤ <b>The whole syllabus must be completed by 31<sup>st</sup> January, 2023.</b></li> <li>➤ <b>Mental Maths &amp; Maths Lab Activities</b></li> <li>➤ <b>Revision of syllabus for Annual Examination</b></li> <li>➤ <b>Annual Examination will be based on complete syllabus.</b></li> </ul>			
<p><b>Note: The above said syllabus is for assessment purpose only and remaining Chapters may be taught as Subject Learning Enrichment</b></p>			
<p><b>ANNUAL EXAMINATION - 2023</b></p>			