

| S.No. | Month | Topic                            | subtopic   | Objectives of the topic   | Period required | Teaching Aids                | Activity Assignment  |
|-------|-------|----------------------------------|--|---|-----------------|------------------------------|--|
| 1.    | April | Rational Numbers                 | <ul style="list-style-type: none"> <li>Definition of Rational Number.</li> <li>properties of Rational Number</li> <li>closure</li> <li>Commutative</li> <li>Associativity</li> <li>Distributivity</li> <li>Multiplication Identity</li> <li>Additive Inverse.</li> <li>Additive &amp; Multiplicative Identity</li> <li>Number line.</li> </ul> | <p>At the End of the topic Students will be able to</p> <ul style="list-style-type: none"> <li>Define Rational Numbers.</li> <li>Explain various properties of Rational numbers</li> <li>Using Suitable Identities to Solve Examples</li> <li>Define additive and Multiplicative Identity for Rational Numbers</li> <li>Negative of a Rational number.</li> <li>Find Reciprocals of the Rational numbers.</li> <li>Representing Rational numbers on Number line.</li> <li>Find Rational Number between two Rational numbers.</li> </ul> | 10              | Marker, White board, Duster. | <p>Make a chart showing all the properties of Rational numbers, with Suitable Examples.</p> <p>Make a chart of Rational Numbers.</p> |
| 2.    | June  | Linear Equations in one variable | <ul style="list-style-type: none"> <li>Algebraic Expression.</li> <li>Linear Equation</li> <li>Solving Linear Equations having variable on one side and number on another side.</li> <li>Solving Equation having variables on both side</li> </ul>   | <p>At the End of the topic Students will be able to</p> <ul style="list-style-type: none"> <li>Define linear Equations</li> <li>Solve Equations which have linear Expression on one side and number on the other side.</li> <li>Solving Equations having variables on both sides</li> <li>Equations Reducible to the linear form.</li> </ul>  | 9               | Marker, White board          |  |

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| 3.    | July  | Understanding Quadrilaterals | <ul style="list-style-type: none"> <li>• Polygon</li> <li>• Classification of polygon.</li> <li>• Regular &amp; Irregular polygon</li> <li>• Angle Sum property of Quadrilaterals.</li> <li>• Kinds of Quadrilaterals</li> <li>• Some special parallelogram.</li> </ul> | <ul style="list-style-type: none"> <li>• At the End of the topic Students will be able to</li> <li>• Define polygon.</li> <li>• Define Diagonal.</li> <li>• Explain Concave, convex polygon.</li> <li>• Draw regular and Irregular polygon</li> <li>• Explain the angle sum property of quadrilateral</li> <li>• Calculate the sum of Exterior angles of polygons</li> <li>• Kinds of quadrilaterals, Trapezium, kite, parallelogram and some special parallelogram, like Rhombus, Rectangle, Square and its properties.</li> <li>• Elements of parallelogram</li> </ul> | 12              | White Board<br>Marker.<br>Quadrilaterals Models. | <p>Make a Chart Showing different kinds of Quadrilaterals.</p> <p>Make a Chart Showing parallelogram.</p> |
| 4.    | July  | Squares and square roots     | <ul style="list-style-type: none"> <li>• Definition.</li> <li>• properties of square number</li> <li>• Some pattern</li> <li>• Triangular number</li> <li>• Square of Decimals</li> </ul>   | <ul style="list-style-type: none"> <li>• At the End of the topic Students will be able to</li> <li>• Define squares and square roots.</li> <li>• Explain properties of square number</li> <li>• Find square root by prime factorisation and division method</li> <li>• Square roots of decimal numbers &amp; Estimating square roots.</li> </ul>   | 12              | White Board<br>Duster<br>Marker.                 | Make a chart of Squares from 1 to 30.   |

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| 5     | August    | cubes and cube roots  | <ul style="list-style-type: none"> <li>cubes</li> <li>cubic number</li> <li>perfect cube</li> <li>cube root by prime factorisation</li> </ul>   | <p>At the end of the topic students will be able to</p> <ul style="list-style-type: none"> <li>Define cube and cube number</li> <li>Identify perfect cube</li> <li>Find the smallest Multiple that is perfect cube</li> <li>Find cube root by prime factorisation</li> <li>Some interesting patterns</li> </ul> | 11               | White board<br>Duster<br>Marker | Make a chart of cubes from 1 to 15.             |
| 6     | August    | Exponents and powers  | <ul style="list-style-type: none"> <li>Exponents, powers with negative</li> <li>Exponents</li> <li>Laws of Exponents</li> <li>Uses of Exponents to Express small numbers in standard form.</li> </ul> | <p>At the end of the topic students will be able to answer</p> <ul style="list-style-type: none"> <li>Laws of Exponent</li> <li>powers of negative Exponents</li> <li>Use of Exponents to Express small numbers in standard form.</li> <li>Use of suitable laws of Exponents to solve problems.</li> </ul>      | 7                | White Board<br>Marker<br>Duster |   |
| 7     | September | Algebraic Expressions | <ul style="list-style-type: none"> <li>Expressions</li> <li>Terms, Co-efficients and factors.</li> <li>Like and Unlike terms</li> <li>Polynomials</li> <li>Operations of Algebraic</li> </ul>         | <p>At the end of the topic students will be able to answer</p> <ul style="list-style-type: none"> <li>what are Expressions, terms, factors and Co-efficients of Algebraic Expression</li> <li>Monomial, Binomial, and Polynomials</li> </ul>  | 11               | White Board<br>Marker<br>Duster | Make a chart of Algebraic Identities with proof |

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|      |          |               |   | <ul style="list-style-type: none"> <li>• Like and unlike terms.</li> <li>• Addition and subtraction of Algebraic Expressions.</li> <li>• Multiplication of Algebraic Expressions.</li> <li>• Rules of signs.</li> <li>• standard identities</li> <li>• Applying identities to solve problems</li> </ul>  |                  |   |  |
| 8    | October  | Data Handling | <ul style="list-style-type: none"> <li>• Data</li> <li>• Bar graph.</li> <li>• pictograph</li> <li>• Organising data</li> <li>• pie chart</li> <li>• probability</li> </ul> | <p>At the End of the topic students will be able to understand,</p> <ul style="list-style-type: none"> <li>• Data, pictograph, Bar graph, double Bar graph.</li> <li>• Draw appropriate graph to represent given information.</li> <li>• chance and probability</li> <li>• Event</li> </ul>  | 9                | White Board<br>Marker<br>Duster<br>graph chart. | <p>Make a 3-D model of a bar graph with thermocol or card board.</p> <p>SA-I</p> |
| 9.   | November | Factorisation | <p>Factors of Algebraic Expression</p> <ul style="list-style-type: none"> <li>• Factorisation using identities</li> </ul>   | <p>At the End of the topic students will be able to answer.</p> <ul style="list-style-type: none"> <li>• What is Factorisation?</li> <li>• Factorisation by regrouping terms,</li> <li>• Factorisation by using identities</li> <li>• Factors of the form <math>(x+a)(x+b)</math>.</li> <li>• Division of Algebraic Expressions Continued</li> </ul> | 10               | Marker,<br>white board<br>Duster                | <p>Make a chart of identities</p>  |

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| 5    | August    | cubes and cube roots  | <ul style="list-style-type: none"> <li>cubes</li> <li>cube numbers</li> <li>perfect cube</li> <li>cube root by prime factorisation</li> </ul>  | <p>At the end of the topic students will be able to</p> <ul style="list-style-type: none"> <li>Define cube and cube number</li> <li>Identify perfect cube</li> <li>Find the smallest Multiple that is perfect cube</li> <li>Find cube root by prime factorisation</li> <li>Some interesting patterns</li> </ul> | 11               | White board<br>Duster<br>Marker | Make a chart of cubes from 1 to 15.            |
| 6    | August    | Exponents and powers  | <ul style="list-style-type: none"> <li>Exponents, powers with negative Exponents</li> <li>Laws of Exponents</li> <li>Uses of Exponents to Express small numbers in standard form</li> </ul>  | <p>At the end of the topic students will be able to answer</p> <ul style="list-style-type: none"> <li>Laws of Exponent</li> <li>powers of negative Exponents</li> <li>Use of Exponents to Express small numbers in standard form</li> <li>Use of suitable laws of Exponents to solve problems</li> </ul>        | 7                | White Board<br>Marker<br>Duster |  |
| 7    | September | Algebraic Expressions | <ul style="list-style-type: none"> <li>Expressions</li> <li>Terms, Co-efficients and factors</li> <li>like and unlike terms</li> <li>polynomials</li> <li>operations of algebraic</li> </ul> | <p>At the end of the topic students will be able to answer</p> <ul style="list-style-type: none"> <li>what are Expressions, terms, factors and Co-efficients of Algebraic Expression</li> <li>Monomial, Binomial, and Polynomials</li> </ul>  | 11               | White Board<br>Marker<br>Duster | Make a chart of Algebraic identities with prog |

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| 10    | December | Introduction to graphs | <ul style="list-style-type: none"> <li>Graphs</li> <li>Lineal graph</li> </ul>  | <p>At the End of the topic Students will be able to plot</p> <ul style="list-style-type: none"> <li>Lineal graph and answer the questions related to graph</li> </ul>  | 8                | White Board<br>Marker<br>Duster<br>Graph Chart  | Make a 3D model of bar graph  |
| 11    | January  | Comparing Quantities   | <ul style="list-style-type: none"> <li>Ratio &amp; proportion</li> <li>profit &amp; loss</li> <li>Discount</li> <li>Estimation</li> </ul> | <p>At the End of the topic Students will be able to find profit and loss percent.</p> <ul style="list-style-type: none"> <li>Discount</li> <li>prices related to buying &amp; selling (find %)</li> <li>Sales tax / value Added tax and service tax</li> <li>Compound Interest</li> <li>Compound Annually or half yearly</li> <li>Applications of Compound Interest</li> </ul> | 10               | White Board<br>Marker<br>Duster                 | PA - II   |
| 12    | February | Mensuration            | <ul style="list-style-type: none"> <li>Solid shapes</li> <li>polygen</li> <li>Area and Volume</li> <li>Trapezium</li> </ul>               | <p>At the End of the topic Students will be able to Recall 3D shapes</p> <ul style="list-style-type: none"> <li>find surface area of cube, cuboid &amp; cylinders</li> <li>learn about volume of solid shapes such as cube, cuboid and cylinder</li> <li>Area of Trapezium</li> </ul>  | 10               | Marker<br>White Board<br>Duster<br>solid shapes | Make a model of 3D shapes -<br>or<br>Make a chart of solid shapes with formula. |

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| 13  | March | Direct and Inverse proportion | <ul style="list-style-type: none"> <li>• Direct proportion</li> <li>• Inverse proportion</li> </ul> | <p>At the end of the topic students will be able to answer what is</p> <ul style="list-style-type: none"> <li>* proportion</li> <li>* Direct and Inverse proportion</li> <li>* Concept of variation</li> <li>* some daily life situations where the properties are applicable</li> <li>* solve problems based on direct and inverse proportion.</li> </ul> | 10               | Marker<br>Duster<br>White Board | SA-TI               |