

HANSRAJ MODEL SCHOOL
PUNJABI BAGH ,NEW DELHI
CURRICULUM PLANNING
SESSION 2022-23
SUBJECT: SCIENCE
CLASS: X

| MONTH | TOPIC/SUBTOPICS | LEARNING INTENTIONS | ACTIVITIES/ASSIGNMENTS |
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| April | Chapter- Electricity Electric current Potential difference Ohm law,Resistance and resistivity Factors affecting resistance Specific resistance | To enable students distinguish between electron movement and conventional current. To acquire the skill of drawing correct circuit diagrams. To be able to choose correct materials for their usefulness on the basis of their resistivity | Deshbhakti activity- skit Students are advised about correct and careful use of electrical components. They are emphasised upon with the need to conserve electricity in our country Content related activity 1. Identification of various electrical components 2. Study factors affecting resistance of a metallic wire using wires of different lengths ,materials etc Practical To study relationship between potential difference and current |

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| | | | <p>Assignment 1 for solving electric circuits</p> <p>Assignment 2 for conceptual problems</p> |
| April | <p>Chapter Electricity continued</p> <p>Series law, Parallel law, Application in daily life Power Heating effect of current</p> | <p>To be able to find equivalent resistance of a circuit.</p> <p>To be able to solve numerical problems .</p> <p>To enable students to understand why household circuits are connected in parallel</p> | <p>Practical</p> <p>To calculate equivalent resistance when resistors are connected i) in series ii) in parallel</p> |
| May and July | <p>Chapter -Magnetic Effect Of Current</p> <p>Oersted Experiment Field lines Magnetic field Of i) straight Conductor ii) circular Conductor iii) solenoid Force On a current carrying Conductor in a Magnetic field Fleming left hand rule Direct current, Alternating current, frequency of ac</p> | <p>To enable students to understand that a current carrying Conductor is also a source of Magnetic field</p> <p>To enable students to visualise, observe and draw Magnetic field patterns</p> <p>To enable students to apply Right Hand Thumb Rule, Fleming Left Hand Rule</p> | <p>Content related activity</p> <ol style="list-style-type: none"> 1. Demonstration of SNOW rule 2. Demonstration of Fleming Left Hand Rule 3. Demonstration of Fleming Right Hand Rule 4. Demonstration of magnetic field pattern of i) Bar magnet <p>ii) straight Conductor iii) circular coil iv) solenoid</p> |

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| | <p>Advantages of ac over dc</p> <p>Domestic circuits</p> | | <p>Art integration activity</p> <p>Students will draw Magnetic field pattern of bar magnet using a compass needle on A3 sheet</p> <p>Students will make a colourful collage on various natural phenomenon associated with Magnetic Effect Of Current</p> <p>Alternatively make a collage on important applications of magnetic Effect Of Current in technology and modern life</p> <p>Assignment 1 related to magnetic Effect Of Current</p> <p>Assignment 2 diagram based questions</p> |
| <p>August and September</p> | <p>Chapter - Light: Reflection and Refraction</p> <p>Reflection of light by plane and spherical mirrors</p> <p>Image formation</p> <p>Mirror formula</p> <p>Laws of refraction</p> <p>Refraction through glass slab</p> <p>Refractive index</p> | <p>To enable the students to understand and apply laws of Reflection and Refraction</p> <p>To enable the students to draw ray diagrams and observe the difference between real and virtual image</p> <p>To enable the students to use mirror formula and lens formula and apply in numerical problems and real life situations</p> | <p>Art Integration:</p> <p>1 Construct a pictorial concept map</p> <p>2 Make a colourful crossword puzzle</p> <p>3 Make a picture study of uses of mirrors and lenses in everyday life</p> <p>Practical :</p> <p>To find the focal length of a concave mirror and convex lens</p> <p>Practical :</p> <p>To trace the path of a ray of light incident on a glass slab</p> <p>Assignment 1 from reflection of light</p> |

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| | Refraction of light by spherical lenses Lens formula Power of a lens | | Assignment 2 from refraction of light |
| October and November | Chapter - Human eye and the colourful world Working of human eye Defects of human eye and their correction Refraction through prism, dispersion Rainbow Atmospheric refraction Scattering of light Tyndall effect | To enable the students to distinguish between refraction through a glass slab and a glass prism To enable the students to understand the cause of dispersion and formation of rainbow To enable the students to understand cause behind observation of various colourful natural phenomenon based on atmospheric refraction To understand scattering of light and its applications | Content related activity Students are asked to compare their grandparents' spectacles with those of other members of their family and arrive at conclusions. Also identify the defects in each case Practical To trace the path of a ray of light through a glass prism Assignment 1 from defects of human eye Assignment 2 from remaining chapter Activity Tabulate observations when light from a torch is passed through clear water, milky water, muddy water |