

Sr. No.	Content/ Topic	Month	Learning Objectives	Expected Learning Outcome	Activity/ Practical	Teaching Aid	Assessment
10	Light – Reflection and Rarefaction Reflection of light	March	To understand how light travels in a medium when it encounters another object	State the laws of reflection of light		Mirror	Google form
	Spherical Mirrors		To complete the ray diagrams by drawing reflected rays.	Outline the rule of image formation by spherical mirrors.		Spherical Mirrors	Draw ray diagrams
	Mirror Formula & Magnification		To decipher the position and nature of image formed.	Represent the path of incident ray and reflected ray.		ICR	Solving problems
		To apply sign convention in solving word problems to find the unknown variable	Express u , v , f in the mirror formula.	Determination of the focal length of: i) Concave mirror ii) Convex lens by obtaining the image of a distant object.			
Refraction of Light	April	To relate height of object with height of image.	Deduce the nature and size of image by magnification.		Glass slab	Self-assessment	
			To formulate laws of refraction of	Demonstrate the path of light when it travels through	Tracing the path of a ray of light passing through a glass slab		

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			light.	a rectangular glass slab	for different angles of incidence.		
	Refractive Index		To calculate refractive index.	Compare speed of light in one medium with another.		ICR	
	Refraction by Spherical Lenses, Image formation		Decipher the position and nature of image formed.	Represent the path of incident & reflected light rays from a concave lens.	Finding the image distance for varying object distances in case of a convex lens	Lens	Draw ray diagrams
	Lens formula & Magnification		Decipher the position and nature of image formed.	Illustrate the path of incident & reflected light rays from a convex lens.			
			Construct the lens formula for a lens relating v, u, f.	To find an unknown variable given the other two.			Solve problems
			To relate height of object with height of image.	State the magnification for a lens.			
	Power of a lens		To determine its power to converge or diverge.	Calculate the power of a lens.			Draw diagram
11	Human Eye and the Colourful World	June					
	The Human Eye		-To understand	Illustrate the		Eye model	Draw human

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	Defects of vision and their correction		<p>how humans see the objects around them.</p> <p>-To devise a correction method for defects of vision.</p>	<p>parts and function of human eye.</p> <p>Identify the defects of vision in human eye and their causes.</p>		ICR	eye
	<p>Refraction of light through a prism</p> <p>Dispersion</p> <p>Atmospheric Refraction</p> <p>Scattering of Light</p>	June	<p>To determine how light gets deviated when travelling through a prism</p> <p>To determine that white light is made of seven colours.</p> <p>To understand natural phenomena, like twinkling of stars and advance sunrise and delayed sunset</p> <p>To understand natural phenomena, like blue colour of the sky & red colour of sun at sunrise & sunset</p>	<p>Examine the path of light rays through a prism.</p> <p>Trace the path of white light rays through a prism</p> <p>Elaborate the process of atmospheric refraction.</p> <p>Explain the process of scattering of light, tyndall effect.</p>	<p>Tracing the path of the rays of light through a glass prism.</p>	<p>Prism</p> <p>ICR</p>	<p>Draw ray diagram</p> <p>Self assessment</p> <p>Google form</p>

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12	<p>Electricity</p> <p>Electric current and circuit</p> <p>Electric Potential and Potential Difference</p> <p>Circuit Diagram</p>	July	<p>To calculate current flowing through it</p> <p>To calculate potential difference between two points.</p> <p>To build a functioning circuit</p>	<p>Evaluate the charge flowing through a conductor in a given time.</p> <p>Determine work done in moving a charge across two points.</p> <p>Identify the electrical components and their functions.</p>		Wires, battery, bulbs, key	<p>Problem solving</p> <p>Draw circuit diagram</p>
	<p>Ohm's Law</p> <p>Factors on which resistance depends</p> <p>Resistance of a system of resistors</p>	<p>July</p> <p>Aug</p>	<p>To prove ohm's law & find resistance.</p> <p>To classify substances as conductors, alloys and insulators</p> <p>To identify the suitable combination like house, etc</p>	<p>Plot a graph between voltage and current.</p> <p>Define resistivity and its range for different materials</p> <p>Determine the resultant resistance in a series and a parallel combination.</p>	<p>Studying the dependence of potential difference (V) across a resistor on the current (I) passing through it and determine its resistance. Also plotting a graph between V and I.</p> <p>Determination of the equivalent resistance of two resistors when connected in series and parallel</p>	Ohm's law apparatus	<p>Problem solving</p>

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	Heating effect of electric current Power		To learn working of appliances like heater and iron . To represent electric consumption in domestic circuits	Explain and calculate the heating effect of electric current. Calculate power.			Google form
13	Magnetic Effects of Electric Current Magnetic field and field lines	Sep	To identify the magnetic field strength at different points around a magnet	Draw magnetic field lines for a bar magnet	Draw magnetic field lines for a bar magnet	Bar magnet, iron fillings	Draw magnetic field lines for a bar magnet
	Magnetic field due to a straight current carrying conductor Magnetic field due to a current carrying circular loop Magnetic field due to a current carrying solenoid Force carrying conductor in a magnetic field + Electric motor	Oct	To identify the magnetic field strength at different points around it. To identify the magnetic field strength at different points around it. To identify the magnetic field strength at different points around it. To understand the working of an electric motor	Represent magnetic field lines for a straight current carrying conductor Draw magnetic field lines for at current carrying circular loop. Outline magnetic field lines for at current carrying solenoid. State Fleming's Left-Hand rule.	Draw magnetic field lines		Google form Self-assessment

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	<p data-bbox="271 225 515 284">Electromagnetic Induction</p> <p data-bbox="271 432 425 491">Electric Generator</p> <p data-bbox="271 608 528 667">Domestic Electric circuits</p>		<p data-bbox="694 225 947 424">To understand how a moving magnet can be used to generate electric currents.</p> <p data-bbox="694 432 913 600">To understand the working of an electric generator</p> <p data-bbox="694 608 931 737">To understand formation of a domestic electrical circuit</p>	<p data-bbox="969 225 1200 320">Discuss electromagnetic induction.</p> <p data-bbox="969 432 1229 496">Explain Fleming's right hand rule.</p> <p data-bbox="969 608 1238 737">Analyse the significance of neutral, earth and live wire</p>			