

ACADEMIC PLAN :2023-24  
CARMEL CONVENT SR SEC SCHOOL, RATANPUR, BHOPAL.

STD: VII

SUBJECT: -PHYSICS

Month / No of Working Days	Name of the Unit / Chapter/Topic	Learning Outcomes	Suggested Activities/ Projects under Internal Assessment/PRACTICALS	Assignment	Assessment
APRIL	CHAPTER -4 HEAT/ Heat, transfer of heat, SI unit of heat, Temperature, different units for measuring temperature, thermometer, it's types.	Students will be able to: - 1) Understand heat and its effects. 2) Understand temperature and ways of measuring it. 3) Reason to transfer of heat. 4) Different units for measuring temperature. 5) Device used to measure temperature.	Activities: - 1) Our sense of touch is not a reliable method to measure heat. 2) To identify the direction of heat flow. 3) To measure the temperature of hot water with the use of Laboratory thermometer.	*Define Heat. What is its SI unit. *What is a Thermometer? *Explain Clinical thermometer with labelled diagram. *What is the advantage of digital thermometer?	
JUNE	CHAPTER-4 HEAT/ Modes of transfer of heat, Conduction, Convection, Radiation, their practical utility.	3) Distinguish between conduction, convection and radiation 4) Concept of expansion.	4) To measure the temperature of different colour objects, via this deduce the result. 5) Ask them to list out practical applications of choice of colour in daily life.	*Differentiate Conduction and Convection. *What do you mean by Radiation? *Why does heating leads to expansion of matter?	
JULY	CHAPTER-12 MOTION AND TIME/ Motion, its types, Slow and fast motion, Unit of time, Speed, its practical utility.	Student will be able to understand: - 1) Motion 2) Difference between slow and fast motion. 3) Understand the concept of speed 4) SI unit and formula for speed.	Activities- *To identify the type of motion involved in the stated problem. *To measure the speed of a ball.	*How does a quartz clock work? *A moving train covers 20 m in 4 sec. what is its speed? *Different units of measuring time and their interrelation.	PT-1 (Chapter-4 Heat)
AUGUST	CHAPTER-12 MOTION AND TIME/ Graphical representation of motion, Calculation of speed from distance-time	5) Representation of motion in a graph- Distance- time graphs 6) Simple Pendulum its construction and working.	*Find out the history of Jantar Mantar. When was it constructed and how its used to find out the time.	*Define- (a) Simple Pendulum (b) Time Period of simple pendulum, (c) Slope of a graph.	

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	graph, types of graphs, Simple Pendulum.			*Draw the distance-time graph of a body in (a) rest (b) uniform motion.	
SEPTEMBER (REVISION)	CHAPTER-13 Electric current and its effects/ Electric current, Electric circuits and their components, Circuit diagram.	Student will be able to understand :- 1) Electric current 2) Electric circuit 3) Circuit diagram 4) Symbols of different electric components.	Activities- *To demonstrate open and close circuit. *Draw the symbols of given electric components. * Draw the circuit diagram of given electric circuit.	*What do you mean by a battery? *Differentiate open and closed circuit. *Explain the functioning of an electric switch. Also draw a circuit diagram with four cells battery, two bulbs and a closed switch.	(TERM -1) (Chapter 4 and Chapter 12 Heat+ Motion and time)
OCTOBER	CHAPTER-13 Electric current and its effects/ Heating effects of current, Electric fuse, its types, Magnetic effects of current, Electromagnetism, Electromagnets, their uses, Electric bell.	5) Study the effects of electric current. 6) Understand the concept of electromagnetism and its uses in daily life.	*Tube lights do not work on heating effect of electric current. Find how tube lights produce light. * To demonstrate magnetic effects of current. * Study open electric bell and draw its internal electric circuit.	*State heating effect of electric current. * Name five devices based on heating effect of current. *Explain working and construction of electric bell.	To make an Electromagnet.
NOVEMBER	CHAPTER -14 LIGHT/ Properties of light, Reflection of light, Reflection through plane and spherical mirrors. Uses of mirrors, Image formation by spherical mirrors.	Student will be able to: 1) Explain the properties of light, 2) Understand the concept of reflection from plane mirrors and curved mirrors. 3) Image formation by spherical mirror when object placed at different positions.	Activities- *Demonstrate rectilinear propagation of light. *To verify laws of reflection of light. *Study the properties of image formed by plane mirror as well as by concave and convex mirrors.	*Prove that light travels in a straight line. *State the laws of reflection of light. *A beam of light falls on a plane mirror at an angle of 45 degree, what is the angle of reflection?	
DECEMBER	CHAPTER -14 LIGHT/ Refraction of light, Lenses, its types, image formation by lenses,	4) Understand the concept of refraction of light 5) Image size variation with	*Image formation by lenses when object placed at different positions.	*Draw ray diagram for the image formed by a concave lens, when object placed at-	PT-2 CHAPTER-13 (Electric current and its effects)

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		different position of object.		(a) Focus (b) Infinity (c) at secondary focus.	
JANUARY	CHAPTER -14 LIGHT/ Dispersion of light, Newton's disc.	6) Dispersion of light, 7) Recombination of light.	*Study of Dispersion through Prism and natural phenomena based on it.	*Draw Newton's disc and verify recombination of light.	
FEBRUARY (REVISION)					(TERM-2) (Electric current and its effects +Light)

NAME OF THE SUBJECT TEACHER: Mr. JAIDEEP MATHEW

SIGNATURE OF THE SUBJECT COORDINATOR: Ms.SANDESHA DANI