Vidya Pratishthan's
Dr. Cyrus Poonawalla School (CBSE)

Sub - Science **Annual Planning 2024 -25** **Std - VII**

o	Month	Topic	No. of working days	Period	Learning Objectives	Learning outcomes	Teaching aids	Activity	21st century skills
	April	Bridge course Practical work of Class VI Basic Concepts of - Food components - Fibre to fabrics - Reproductive Parts in flower - Motion - Electric circuits	21	12	To enable students to understand ● nutrients present in food ● variety of fibres ● difference between physical and chemical changes ● types of motion ● electric cell, circuit, conductors and insulators	● classifies different nutrients and their importance ● Enlists different types of fibres ● Differentiates between physical and chemical changes ● Defines different types of motion ● Describes electric cell, circuit, conductors and insulators	ICR, videos	Worksheets	critical thinking
	April	Nutrition in Plants	21	08	• To enable students to know kinds of nutrition in plants. • To enable differentiate between autotrophic and heterotrophic nutrition • To establish the relationship between Rhizobium bacteria & leguminous plants	• Define Nutrition & its importance to living organisms • Examine different methods of nutrition in order to differentiate between autotrophic and heterotrophic nutrition • Evaluate other plants in their surroundings & classify them as autotrophs, heterotrophs, saprotrophs, parasitic or symbiotic based on their nutritional requirements • Categorize features of insectivores, saprophytes and symbionts, based on their similarities.	Iodine, leaves. Alcohol. Fungus on food. Mushroom. Algae slides	To observe growth of fungi. To observe food is prepared in leaves.	Experimentation critical thinking

	June	Nutrition in Animals	15	10	• To enable students to know ways of nutritious food in unicellular & multicellular animals. • To classify animals based on their modes of feeding. • To illustrate human digestive system with the help of a well labelled diagram & elaborate the process & function of each part • To enable to perform the starch test on raw and chewed food in order to infer the role of saliva.	• Classifies different modes of nutrition in animals. • Can explain and draw the digestive system • Explains the role of saliva.	ICR, Model of Digestive system, Specimen-amoeba, Rice, Iodine	To detect presence of starch in chewed food, Study digestive system (human)	experimentation , critical thinking	
	June **July**	Motion and Time	June-15 July -25	05 06	• To enable students to calculate, compare speed of vehicle or any objects.	• Recall the instrument used to measure speed. • Recall change in position of the body with respect to surroundings as motion. • Calculate speed or distance or time taken if any two of these three are quantitates are provided • Infer from the given data that time taken to complete one oscillation as time period of simple pendulum.	Simple pendulum clock, sand clock, ICR	To calculate time of oscillation of simple pendulum.	creativity, experimentation , critical thinking	

	July	Acids, Bases & Salts	25	12	• To enable students to know properties of acids bases & salts. • To enable them o know daily life importance of these.	• Examine the common substance used at home based on taste and touch and classify them as acidic or basic • Summarizes observations with respect to behavior of indicators in acidic and basic solutions. • Identify neutralization reactions and its characteristics • Illustrates neutralization reactions seen in everyday life. • Evaluate the effectiveness of certain neutralization reactions employed in everyday life, based on observed data.	Indicator: Blue & red Litmus, lemon juice curd, washing soda, baking soda, water, test tubes.	To identify nature of diff. substances by performing Litmus Tests.	experimentation , critical thinking
	August	Heat	24	14	• To enable students to know devices to measure temperature of body. • To know diff. kinds of heat transfer. • Correlate the modes of transfer of heat to the usage of different clothes in different parts of the world	• Distinguish the Clinical thermometer from Laboratory thermometer (range, least count, units of measurement). • Examine the need for Laboratory thermometer while doing experiments in the laboratories. • List precautions while using a clinical and laboratory thermometer in order to identify the role of kink. • Explain why a substance remains in the same temperature in a thermos flask or vacuum bottle	Thermometers, Flask, Water burner. ICR	To observe heat transfer in solid & liquids.	experimentation , critical thinking

	October	Respiration in Organism	23	13	• To enable students to know diff. in respiration & breathing.	• Define cellular respiration in order to differentiate between aerobic and anaerobic respiration. Describe the process of breathing in humans in order to explain the role of nostrils (hair and mucus), trachea, lungs, ribs and diaphragm. • Describe the process of respiration in cockroach, earthworm, fish and plants in order to predict consequences of absence of respiratory organs/ features, in animals or plants.	ICR, Charts, Model of respiratory system.	To count breathing rate of students & in adults.	creativity, experimentation , critical thinking
	November	Reproduction in Plants	16	10	• To enable students to know process of reproduction in plants. • Ways of seeds dispersal	• Define reproduction in order to identify its need • Distinguish between any two modes of asexual reproduction, in connection with parts involved, etc. • Compare the outcomes of sexual reproduction in unisexual plants with those in bisexual plants. • Critique the idea that any one of the categories of seeds might disperse better than another category, in connection with reference to their features.	Hibiscus flowers, potato, (eyed) Rose stem, dicot seeds- (pea Rajma) dandelion, castor.	To study reproductive organs in flower (pistil & stamen)	creativity, experimentation , critical thinking
	December	Transportation in Animals & Plants	18	09	• To enable students to know circulatory system in plants & animals. • To enable students to know about need of transportation.	• Outline functions carried out by parts of the human circulatory system in order to examine the importance of circulation of oxygen • Describe the function of blood and its constituents.	Specimen heart stem of plants beaker coloured, water, ICR	Writing donor & recipient groups of each blood group. To observe transpiration in plants.	creativity, experimentation , critical thinking

				• Excretory system in animals and plants.	• Describe the location and function of the heart. • Explains the function of parts of the excretory system. • Explain the process of transport of water, minerals and food in plants in order to differentiate between xylem and phloem.			
	December January	Fiber to Fabric	18	12	• To enable students to know process of formation of silk & wool fibres from animals i.e., sheep & silkworm.	• Outlines the steps involved in processing of fibres into wool. • Critiques the risk factors associated with wool industry & appreciate the efforts of people involved in it • Explains the significance of silk in textile industry • Describes and illustrate diagrammatically the life cycle of silk moth • Outlines the steps involved in obtaining silk from cocoon • Evaluates the contribution of silk in Indian Economy and appreciate our weavers for the intricate & dedicated efforts	ICR, Chart life cycle of silkworm, woolen, silk, synthetic threads.	To detect difference in smell of diff. fibres by burning them.	experimentation , critical thinking
	January	Electric current and its effect	24	10	● To enable students to know component, symbols of electric circuit & its uses in daily life.	● Translate a circuit with actual components into a circuit diagram. ● Summarize the benefits of using CFLs over ordinary electric bulbs. ● Evaluate the role of a fuse wire and MCBs provide for electrical safety in a circuit. ● Perform a simple activity to demonstrate the magnetic effect of an electric current.	Electric circuit, Electric Bell ICR	Working model of electric bell.	creativity, experimentation , critical thinking

						● Outline the construction and uses of electromagnets and electric bell.			
	January	Light	24	14	● To enable students to know mirror, lenses their images, types of images formed. ● To know uses of lenses, mirror in routine life. ● To know light spectrum.	● Observe and describe image formed by a plane mirror in order to enlist its uses. ● Analyze why virtual image cannot be obtained on the screen but still can be photographed. ● Attribute to the type of image formed by convex mirror for its utility as rear view mirror in the vehicles ● Differentiate between convex and concave lenses based on the image formed when object is placed at different positions. ● Explain the formation of a rainbow.	Lenses, mirrors (Convex, Concave) Plane mirror, Chess board, Magnifying lens, Paper, candle, ICR.	To measure dist. Of object & image of plane mirror. Newton's disc. Images formed by convex Concave mirror. To create fire with convex lens.	creativity, experimentation , critical thinking
	February	Waste water story	23	10	● To enable students to know waste water ● Ways to disinfect waste water ● Reuse of waste water ● Importance to disinfect waste from industrial & society.	● List the uses of water in everyday life in order to identify various source of contamination. ● Define sewage and list its components in order to identify their points of origin. ● List various processes related to treatment of wastewater in order to describe processes inside a Wastewater Treatment Plant	ICR	Visit to waste water plant (MIDC)	