JINDAL VIDYA MANDIR, JSW HILL SIDE TOWNSHIP

Syllabus Bifurcation: 2025-26

Subject: Science **Class: VII**

Term: I

Sl No.	Month	WD	ID	No. of Periods	Chapter/Units	Learning Objectives	Activities	Assessment Methods	Portion for WT/PT/Term/AE
				3	Bridge Course	Recall Types of animals based on food habits, photosynthesis, human life prcesses, Types of joints in human beings etc	Oral discussion		
1	April	13	13	5	Ch. 1. Nutrition in Plants	• Recall details/definitions specific to autotrophic mode of nutrition plants/photosynthesis/detecti on of photosynthetic activity of plants/nutrients other than carbohydrates, in plants • Define Nutrition & its importance to living organisms • Examine different methods of nutrition in order to differentiate between autotrophic and heterotrophic nutrition • Draw a schematic diagram of a section through a leaf in order to pictorially represent photosynthesis • Elaborate the photosynthetic process in plants • Evaluate if leaves that are red, purple/colours other than green might show lesser photosynthetic activity than green leaves	To grow fungi on bread	Oral test Worksheet	

						• Describe the process of photosynthesis with the help of word/chemical equation • List the nutrients and sunlight requirements in plants in order to explain how these are fulfilled through enquiry activity • Relate the nutritional requirements of different organisms (plants & animals) to the environment or surroundings for survival • 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. • Construct the cause & effect model of plant rotation done by farmers • Establish the relationship between Rhizobium bacteria & leguminous plants			
				5	Ch.2.Nutrition in Animals	• Recall details pertaining to different modes of acquiring food. • Classifies animals based on their modes of feeding. • Summarize the functions of Human digestive system. • Illustrate human digestive system with the help of a well labelled diagram & elaborate the process & function of each part • Perform the starch test on raw and chewed food in order to infer the role of saliva.	<u>SEA-1:</u> To make a model of digestive system from the waste material		

						• Compare & contrast the features of digestive system of grass-eating animals with those of humans. • Recall details pertaining to nutrition in amoeba.			
w2	June	20	20	7	ch-3 Heat.	• Categorize a given substance as hot & cold by a reliable measure (using temperature without touching). • 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 clinal and laboratory thermometer in order to identify the role of a kink. • Observe the heating and cooling of objects in order to describe conduction. • Devise an activity or elaborate a situation to show the rate of thermal conduction, convection & radiation. • Apply the concept of convection to heating of land and water in order to predict the description of land and sea breeze. • Explain why a substance remains in the same temperature in a thermos flask or vacuum bottle • Corelate the modes of transfer of heat to the usage of different clothes in different parts of the world (Polar, temperature, tropical, etc.)	Insulation Challenge (Testing different materials in hot water)	Class test (Open Book Test)	

						• Devise an activity to show that woollen clothes are insulators/poor conductors of heat.			
				7	Ch-4. Acids, Bases and Salts	• Examine the common substance used at home based on taste and touch and classify them as acidic or basic • Summarizes observations with respect to behaviour 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.	Litmus indicators test for acids and bases		
				6	Ch-5 Physical and chemical changes	• Differentiates physical changes from other changes (periodic changes etc) in order to characterize the common feature of physical changes • Physical Changes Infer the effects which help you to identify a physical change. • Summarize various features accompanying chemical change • Extrapolate the understanding of chemical change to new term • Illustrates chemical change with specific examples • Evaluate a given set of changes (in everyday life) on attributes of physical or chemical changes to	Example of chemical reaction like displacement reaction of iron with copper sulphate	Worksheet	

						distinguish between them • Defend why rusting of iron is a chemical change • Design an experiment to prevent rusting by eliminating/controlling a particular condition for rusting. • Illustrate the usage of crystallization in purification of various salts. • Judge why better crystallization occurs at lower temperatures.			
3	July	25	20	10	Ch-6. Respiration in Organisms	• List the functions performed by a cell in order to infer the need of energy for various processes • Define cellular respiration in order to differentiate between aerobic and anaerobic respiration. • List instances when anaerobic respiration conditions might • set in human beings/ways to reverse such situations to aerobic conditions • Examine inhalation, exhalation and breathing rate in own body in order to analyse the effect of various activities on breathing rate • Recall details/definitions of terminology related to respiration in humans. • Describe the process of breathing in humans in order to explain the role of nostrils (hair and mucus), trachea, lungs, ribs and diaphragm. • Observe the reaction of exhaled air with lime water in order to infer the gas exhaled. • Describe the process of respiration in cockroach, earthworm, fish and plants in order to predict	SEA-2 -To make a model of mechanism of breathing in human being	Open book test Worksheet	Periodic Test-1(Portion-Ch-1,2,3) Weekly Test-7(23.7.25) (Portion-(Ch-4, Ch-5)

						consequences of absence of respiratory organs/features, in animals or plants. • Construct a cause-and-effect model of respiratory processes in animals and plants, as an extension of available resources and respiratory organs/features. • Select distinguishing features and categorize them as belonging to respiratory systems in plants and human beings (stomata & lungs).			
				10	Ch. 7 Transportation in animals and plants	• 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. • Distinguish between the functions of arteries and veins, in the functioning of the circulatory system • Examine one's pulse in order to infer the pulse rate and define it. • Describe the location and function of the heart. • Analyse the implications of intermixing of oxygenated and deoxygenated blood in order to explain the existence of four chambers in the heart. • Define heartbeat in order to design a model of stethoscope to measure it. • Observe one's heartbeat and pulse rate after different activities in order to draw a relationship	SEA-3 To make a model of urinary system		

						between them • Recall details/functions of parts of the excretory system • Interpret reasons for discrepancies in the process of urine formation and expulsion. • Compare situations of effective and ineffective functioning of the excretory system, in connection with functions of the parts of the system • Explain the process of transport of water, minerals and food in plants in order to differentiate between xylem and phloem. • Explain the process of transpiration in order to infer its advantages. • Predict reasons for decreased absorption of water by plants.			
4	August	20	20	10	Ch-9 Motion and time	• Recall the definition of speed (average speed) as distance covered in unit time. • Recall the instrument used to measure speed. • Recall change in position of the body with respect to surroundings as motion. • Derive the mathematical formula to calculate speed in order to compare the speeds of various moving objects (uniform and non-uniform motion) • Identify repetition of natural events at definite/regular intervals of time/fraction of second in		Oral test	

						order to describe periodicity. • Paraphrase the to and fro motion of simple pendulum/metallic bob suspended by a string as oscillatory motion • Calculate speed or distance or time taken if any two of these three are quantitates are provided • Measurement of Speed Utilize data given in odometer to measure distance travelled, average speed for a given time. • Infer from the given data that time taken to complete one oscillation as time period of simple pendulum. • Record data for distance covered in fixed intervals of time for a moving object in order to plot a distance-time graph and interpret the shape.			
				10	Ch-10. Electric Current and its Effects	• Translate a circuit with actual components into a circuit diagram. • Recall the precautions to be observed while working with electricity. • Observe heating effect of current in order to enlist its uses and compare it for conductors of different material, length and thickness. • 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.	SEA-4 Make a model of sand clock / To Make simple Electric Circuit using electric components		WeeklyTest-13 (30.08.25) Portion- (Ch6, Ch7)

						• Perform a simple activity to demonstrate the magnetic effect of an electric current. • Examine how that an electric current can be used as a magnet in order to list its uses. • Outline the construction and uses of electromagnets and electric bell.			
								Gamification (Tarsia Puzzle)	
5	September	20	12	12	Revision			Oral test/quiz, Class test	Term I Examination (Ch-1,2,3,4.5,6,7)
						Term-II			
6	October	19	19	10	Ch.8. Reproduction in plants.	• Define reproduction in order to identify its need. • Observe and recall how different types of plants grow new ones in order to differentiate between asexual and sexual modes of reproduction. • Infer the mode of reproduction from the features of a plant • Distinguish between any two modes of asexual reproduction, in connection with parts involved, etc. • Recall details/definitions pertaining to sexual mode of reproduction in plants. • 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	Observation of budding in yeast and observation of sexual reproductive parts of hibiscus flowers	Peer Assessment (Group Presentation)	

				9	Ch.11. Light	• Recall reflection as change in direction of light by polished surfaces/mirrors. • Observe and describe image formed by a plane mirror in order to enlist its uses. (image/object, erect/inverted, virtual/real, distance from the mirror) • Analyse the reason behind 'AMBULANCE' written as its mirror image on the hospital vehicles/ambulances. • Conclude from observations that concave mirror forms real, inverted image at all places except when the object is too close whereas convex mirror is erect, virtual & smaller size than the object. • Analyse why virtual image cannot be obtained on the screen but still can be photographed • Differentiate between convex and concave lenses based on the image formed when object is placed at different positions. • Outline the important uses of spherical mirrors & lenses. • Explain the formation of a rainbow.	Image formation using lens and mirror and dispersion of light by using prism		
7	November	22	22	11	Ch.12. Forest: Our lifeline	• Infer reasons for the aerial appearance of forests(as shown in the chapter), in connection with types of	To collect some forest products	Project Based assessment	Weekly Test-21 (Date: 28.11.25) (Portion-Ch-9,10)

						trees/shapes of trees • Uses of Forests Outline features of forests that are responsible for sustenance of life • Create a flowchart of the food web, taking into consideration some examples of living beings, used in the chapter • Design a forest ecosystem by considering a few plants and animals and explaining how they support one another			
				11	Ch. 13. Wastewater story	• List the uses of water in everyday life in order to identify various source of contamination. • Sewage Define sewage and list its components in order to identify their points of origin. • Perform various processes related to treatment of wastewater in order to describe processes inside a Wastewater Treatment Plant. • Recall the journey of used water as waste water/ water that goes down the drains from sinks, showers, toilets, laundries • Outline factors responsible for scarcity of clean water and list some waterborne diseases in order to suggest methods of their prevention. • Make a flow chart/line diagram of sewage route from all the various sources of generation to the treatment plant. • Conduct a water contamination survey in order to devise a • plan for good sanitation practices and avoidance of contagious diseases. • Devise and execute a step wise plan	Visit to wastewater treatment plant		

						for treatment of wastewater.			
8	December	26	26	26	Revision			Concept Mapping	
9	January	22	17	17	Revision			Flip the Classroom /Digital Portfolios	
11	February	23	22	22	Revision			Gamification (Tarsia Puzzle)	Weekly Test-28 (Date-13.02.25) (Portion-Ch-8, Ch-11, Ch-12)
	March								Term- II Examination (Ch-8,9,10,11,12,13,4 (1st Term)

Sign. Of Sub Teachers Subject I/C V P Principal