First Term Curriculum
Subject: Science
Class: VII
Session: 2026-27

	April	May	June	July
Content	***Life Process in Plants**	***Life Processes in Animals** ***Heat Transfer in Nature**	***Measurement of Time and Motion** ***Exploring Substance:Acidic, Basic and Neutral**	***Exploring Substance:Acidic, Basic and Neutral (Cont.)**
Learning Outcomes	**Students will be able to** -Classify and differentiate between various modes of nutrition in plants. -Demonstrate and explain the process of photosynthesis by identifying its essential requirements, describing the steps involved, and generalizing its importance in the plant's life cycle and the environment. -Analyze the role of xylem in transporting water and minerals and phloem in transporting food in plants, explaining their importance in plant survival and growth.	**Students will be able to** -Classify and differentiate between various modes of nutrition in animals. -Explain the process of digestion in animals. -Describe Human Circulatory system and Excretory System along with functions. -Differentiate between heat and temperature, understand their relationship, and explain their effects on states of matter. -Analyze and explain the different modes of heat transfer—conduction, convection, and radiation—with the help of real-life examples. -Describe the water cycle and identify the role of heat in evaporation. -Ientify factors affecting the water table and demonstrate methods of water management.	**Students will be able to:** -Discuss the concept of time measurement, identify standard units of time, and explain the use of clocks in everyday life. -Compares and contrasts different kinds of motion. -Interprets speed in daily life situations. -Identify and compare the physical and chemical properties of acids, bases, and salts through observation and experimentation. -Distinguishes between natural and synthetic indicators -Analyze the use of Indicators to determine acidity and basicity of different substances.	**Students will be able to**: -Explain the importance of Neutralization reactions in daily life
Skills	Cognitive skills: Critical thinking, problem solving, observation and analysis, research skills Practical and technical skills: Experimentation, Use of tools and technology Communication skills: Scientific communication, listening and interpretation	Cognitive skills: Critical thinking, problem solving, observation and analysis, research skills Practical and technical skills: Data collection and recording Communication skills: Scientific communication, listening and interpretation Emotional and social development: Curiosity and exploration, responsibility and ethics	Cognitive skills: Critical thinking, problem solving, observation and analysis, research skills Practical and technical skills: Data collection and recording Communication skills: Scientific communication, teamwork, listening and interpretation Emotional and social development: Curiosity and exploration, responsibility and ethics	Cognitive skills: Critical thinking, problem solving, observation and analysis, research skills Practical and technical skills: Data collection and recording Communication skills: Scientific communication, listening and interpretation

	Emotional and social development: Curiosity and exploration, responsibility and ethics Academic and career readiness: Scientific literacy	Academic and career readiness: Scientific literacy, Interdisciplinary learning	Academic and career readiness: Scientific literacy	Emotional and social development: Curiosity and exploration, patience and perseverance, responsibility and ethics Academic and career readiness: Scientific literacy, Interdisciplinary learning
Activities	**Competency Skill based Activities/Experientia l learning Activities:** **Lab activities**: *To show that leaves contain starch using alcohol, Iodine solution, test tube and beaker. *To demonstrate that the Sunlight is necessary for photosynthesis using a destarched plant, iodine solution and paper strips. *To observe stomata in leaves using a microscope. **Activity:** Students will observe bread mould growth and note down the observations for a week. *To observe water transport through stem (xylem). **Activity**: Students will place a freshly cut plant stem in coloured water and observe the upward movement of colour in the stem and leaves. They will note down their observations. **Art Integrated Project** *Students will prepare project on the topic “Floral Journey Across States”: A comparative study of plant diversity in Himachal Pradesh and the paired state.	**Competency Skill based Activities/Experiential learning Activities:** **Lab activity:** ***** To investigate the effect of saliva on the food using boiled rice or potato, iodine solution. **Class-Activities:** *Students will perform role play on the human digestive system. *Students will give diagrammatic representations of the human digestive system, nutrition in grass eating animals and birds. *Students will make model of human lungs. **Class-Activity:** *****Students will perform an activity to observe land and sea breeze using hot and cold surfaces and note the direction of air movement. **Search Work**: Students will research Ice Stupas of Ladakh and explore their purpose, construction, and importance in water conservation.	**Competency Skill based Activities/Experiential learning Activities:** **Class-Activities:** *Students will measure and compare the length of desk and green board, oven etc .Using hand span and meter scale. *To compare and contrast distance and displacement. **Activity:**Students will measure the distance covered along a given path and the shortest distance (displacement) between the starting and ending points, and record their observations. *Students will solve numericals based on topic speed. ***Class -Activities:** The teacher will demonstrate how to make natural indicators with turmeric powder and then students will check acidity and basicity of common daily use items. **Lab-Activity:** *To observe the acidic or basic nature of baking soda, Sodium hydroxide, Water and lemon by using pH paper strips and Standard pH chart. *To observe the change in colour of synthetic Indicators with various acidic and basic solutions. *To observe the reaction between an acid and base.	**Competency Skill based Activities/Experiential learning Activities:** **Class -Activity:** *Students will create a birthday card with a secret message using acids and bases to understand the concept of neutralisation. **(Integration with Art and English)**

	(Integrated with English, Hindi, Mathematics, Social Studies) **Visit:** Students will visit the school's borrowed land to observe and monitor plant maintenance.	**(Integrated with Art, IT and English)**	**(Integration with Mathematics)**	
Assessments	**Pen – Paper test, Observations, Diagrams, Tabular information, Report, Concept map, HOTs, Quiz, Reasoning questions, Value based questions, Search work, C.W. and H.W.**			
	Main Book: Cambridge Splendid Science (New Edition) **Publisher: Cambridge University Press**			

Final Term Curriculum
Subject: Science
Class: VII
Session: 2026-27

	August	September	October/November	December/January
Content	*** Changes Around Us:Physical and Chemical**	***The World of Metals and Non-Metals**	***Adolescence:A stage of Growth and Change** ***Electricity: Circuits and their Components**	*** Earth, Moon and the Sun** *** Light:Shadows and Reflections**
Learning Outcomes	**Students will be able to:** -Identify and classify different types of changes in their surroundings as physical or chemical, reversible or irreversible. -Differentiate between physical and chemical changes based on characteristics such as formation of new substances, reversibility, and energy change. -Describes the concept of combustion and its applications in everyday life.	**Students will be able to:** -Differentiate between metals, non-metals and alloys on the basis of their properties. -Enlist practical utility of metals and non-metals. -Analyze and deduce the method to write formulae and balanced chemical equations.	-Students will be able to -Analyze the changes occurring during puberty and adolescence. -Locate the endocrine glands in the body. -Recognizes changes during adolescence and practices healthy behaviours for a balanced and positive lifestyle. -Identify common electrical components such as cells, batteries, wires, bulbs, switches and draw their standard circuit symbols accurately. -Recognizes and outlines an electrical circuit and explains the components and their functions. -Constructs and differentiates various types of electrical circuits.	**Students will be able to:** -Relates the movements of the Earth to changes observed in daily life and environment. -Differentiates between lunar and solar eclipses based on their causes and positions of celestial bodies. -Interpret the phenomenon of rectilinear propagation and reflection of light. -Observes the formation of shadows and the conditions required for their formation. -Identifies the characteristics of images formed by a plane mirror. -Recognizes practical applications of reflection in daily life (e.g., periscope, kaleidoscope).
Skills	Cognitive skills: Critical thinking, problem solving, observation and analysis, research skills Practical and technical skills: Experimentation, Data collection and recording, use of tools and technology	Cognitive skills: Critical thinking, problem solving, observation and analysis, research skills Communication skills: Scientific communication, listening and interpretation	Cognitive skills: Critical thinking, problem solving, observation and analysis, research skills Communication skills: Scientific communication, listening and interpretation	Cognitive skills: Critical thinking, problem solving, observation and analysis Practical and technical skills: Experimentation Communication skills: Scientific communication,

	Communication skills: Scientific communication, listening and interpretation Emotional and social development: Curiosity and exploration, responsibility and ethics Academic and career readiness: Scientific literacy	Emotional and social development: Curiosity and exploration, responsibility and ethics Academic and career readiness: Scientific literacy	Emotional and social development: Curiosity and exploration, responsibility and ethics Academic and career readiness: Scientific literacy	teamwork, listening and interpretation Emotional and social development: Curiosity and exploration, responsibility and ethics. Academic and career readiness: Scientific literacy
Activities	**Competency Skill based Activities/Experiential learning Activities:** **Class-Activities:** *****Students will perform activities with materials such as crushing bottles, tearing paper into small pieces, melting candle wax and They will discuss the type of changes observed above activities. *Students will be asked to mix vinegar and baking soda. The teacher will burn paper and will show a rusted iron piece. Students will observe the activities and write their observations. *Students will observe physical and chemical changes at home and record their findings in an observation table with brief descriptions	**Competency Skill based Activities/Experiential learning Activities:** **Class-Activities:** ***** Students will investigate the malleability and ductility of elements using Iron nail, pencil lead and hammer. *Students will calculate the valency through magic numbers. **Lab-Activities:** *To demonstrate the formation of metal oxide and show that they are basic in nature. *To study the reaction between acids and metals and liberation of hydrogen gas.	**Competency Skill based Activities/Experiential learning Activities:** **Group Activity:** *Students will be asked study and collect the data regarding the diet pattern of their family in the tabular form on the basis of balanced diet, need improvement and undernourishment, then they will represent data in the form of pie charts or graphs. Students will also make a healthy diet chart including an exercise plan as well for holistic development of the body. **Class-Activity:** Students will present a role play based on the functioning of the endocrine system. **Class-Activities:** *Students will make open and closed circuits. *Students will perform an activity to investigate the electrical conductivity of tap water. **Project Work:** Students will create and present a story on how life would be affected without electricity, emphasizing the importance of conserving electricity.	**Competency Skill based Activities/Experiential learning Activities:** **Class-Activity:** *Students will present role plays to demonstrate the concepts of rotation, revolution and eclipses. ***Search Work:** Students will search out the location on Foucault's pendulum in India. Write a brief report on how it proves rotation of the Earth. **Class-Activities**: *****Students will perform an activity to show rectilinear propagation of light during the class and will write their observations. *Teachers will demonstrate image formation by plane mirror. **Group Activity:** Students will make a pinhole camera and a kaleidoscope.

	(Integrated with Art and Mathematics)	**(Integrated with Art)**	**Visit:** **Visit to Hydroproject** **(Integration with Art, English and IT)**	**(Integration with Art, IT, English and Social Science)**
Assessments	**Pen – Paper test, Observations, Diagrams, Tabular information, Report, Concept map, HOTs, Quiz, Reasoning questions, Value based question, Collage, Search work, Model, C.W. and H.W.**			
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