KIDS WORLD SCHOOL, NAGPUR
SESSION – 2026-27
CLASS – VII
SUBJECT – SCIENCE

UNIT		Topic	Sub-Topic	Month		Suggested Ice-Breaking Activity	Teaching Pedagogy	Curricular Goals	Competency	Expected Learning Outcome	Assessment
No.	Name			Starting	Closing						
1.	**The Ever-Evolving World of Science**	1. What is Science?	1.1 Science as a process of inquiry 1.2 How scientific knowledge evolves	July Day 1	July	**Science Story Time:** Teacher narrates a short story of a historical scientific discovery (e.g., Newton and the apple). Students identify what questions the scientist asked. Purpose: Introduces science as a process of questioning and inquiry.	1. Inquiry-Based Learning 2. Think-Pair-Share 3. Use of ICT (Technology)	CG-6 Explores the nature and processes of science through engaging with the evolution of scientific knowledge and conducting scientific inquiry.	C-6.1 Illustrates how scientific knowledge and ideas have changed over time (description of motion of objects and planets, spontaneous generation of life) and identifies scientific values inherent across the evolution of scientific knowledge. C-6.2 Formulates questions using scientific terminology and collects data as evidence through observation or simple experiments.	Learner will be able to describe science as a process of questioning, observing, and investigating, and explain how scientific knowledge evolves over time.	
		1. What is Science?	1.3 Nature of scientific inquiry 1.4 Science and society	Day 2		**Question Jar:** Students write one "Why?" or "How?" question about the natural world on a slip of paper. Class discusses which questions science can answer. Purpose: Encourages questioning and scientific thinking.	1. Inquiry-Based Learning 2. Discussion Approach	CG-6 Explores the nature and processes of science through engaging with the evolution of scientific knowledge and conducting scientific inquiry.	C-6.1 Illustrates how scientific knowledge has changed over time and identifies scientific values common across the evolution of scientific knowledge. C-6.2 Formulates questions using scientific terminology and collects data as evidence.	Learner will be able to identify the steps of scientific inquiry and connect scientific knowledge to real-life societal challenges.	
		2. Science Around Us	Chapter Overview Activity Connecting science to daily experiences	Day 3		**Science Spotter:** Students look around the classroom and identify 5 scientific phenomena (condensation on a water bottle, friction, shadows). Purpose: Connects science concepts to everyday observations.	1. Discovery Approach 2. Hands-on Science 3. Use of ICT (Technology)	CG-7 Communicates questions, observations, and conclusions related to science.	C-7.1 Uses scientific vocabulary to communicate Science accurately in oral and written form and through visual representation. C-7.3 Represents real-world events and relationships through diagrams and simple	Learner will be able to connect scientific concepts across disciplines (physics, chemistry, biology, earth science) and communicate observations using scientific vocabulary.	

									mathematical representations.		
			Class Notes Buffer Days if Required	Day 4 Day 5			Written work with the help of I-Board				
2.	**Exploring Substances: Acidic, Basic, and Neutral**	1. Acids and Bases in Nature	Activity 2.1, 2.2, 2.3 1.1 Litmus as an indicator 1.2 Natural indicators (turmeric)	July Day 1	July	**Colour Change Magic**: Teacher dips turmeric paper into lemon juice and baking soda solution. Students observe colour changes and predict whether substances are acidic or basic. Purpose: Introduces concept of indicators through a visually engaging demonstration.	1. Hands-on Science 2. Inquiry-Based Learning 3. Use of ICT (Technology)	CG-1 Explores the world of matter and its constituents, properties, and behaviour.	C-1.1 Classifies matter based on observable chemical characteristics (pure, impure; acid, base; metal, non-metal). C-1.2 Describes changes in matter (physical and chemical) and uses particulate nature to represent the properties of matter.	Learner will be able to classify common substances as acidic, basic, or neutral using natural indicators such as litmus and turmeric.	
		2. Reactions of Acids and Bases	Activity 2.4, 2.5, 2.6 2.1 Acid-base reactions 2.2 Neutralisation in daily life	Day 2		**Fizz Test:** Students add baking soda to vinegar and observe the fizzing reaction. Predict: Is this a physical or chemical change? Purpose: Sparks curiosity about acid-base interactions.	1. Hands-on Science 2. Discovery Approach 3. Visit to Chemistry Lab	CG-1 Explores the world of matter and its constituents, properties, and behaviour.	C-1.1 Classifies matter based on chemical characteristics (acid, base). C-1.2 Describes changes in matter (physical and chemical) and uses particulate nature to represent the properties and changes.	Learner will be able to describe acid-base reactions, explain neutralisation, and identify everyday applications such as treating acidity or bee stings.	
		3. Acids and Bases in Our Lives	3.1 Uses of acids and bases in daily life 3.2 Science and Society connection	Day 3		**Product Detectives:** Students bring product labels from home (shampoo, soap, toothpaste). **Classify them as acidic or basic.** Purpose: Connects chemistry to real-life consumer products.	1. Explanation with Textbook 2. Entab Videos 3. Use of ICT (Technology)	CG-5 Understands the interface of Science, Technology, and Society.	C-5.1 Illustrates how Science and Technology help improve the quality of human life. C-5.2 Shares views on articles related to the impact that Science or Technology and society have on each other.	Learner will be able to explain the importance of acids and bases in everyday contexts and describe their applications in industry and daily life.	
			Class Notes Buffer Days if Required	Day 4 Day 5			Written work with the help of I-Board				
3.	**Electricity: Circuits and their Components**	1. What is Electricity?	Activity 3.1, 3.2 1.1 Electric cell and battery 1.2 How a torchlight works	August Day 1	August	**Torch Challenge:** Provide students with a bulb, wire, and cell. Ask them to make the bulb glow without instructions. Purpose: Introduces circuit components through hands-on exploration.	1. Hands-on Science 2. Inquiry-Based Learning 3. Use of ICT (Technology)	CG-2 Explores the physical world in scientific and mathematical terms.	C-2.2 Describes how electricity works through manipulating different elements in simple circuits and demonstrates the heating and magnetic effects of electricity.	Learner will be able to describe the components of a simple electric circuit (cell, wire, bulb, switch) and explain how a torchlight works.	

		2. Simple Electrical Circuits	Activity 3.3, 3.4, 3.5, 3.6 2.1 Making circuits 2.2 Open and closed circuits	Day 2		**Circuit or Not?** Show students a circuit diagram on the board with one connection missing. Ask: will the bulb glow? Students predict and then test. Purpose: Develops conceptual understanding of open vs. closed circuits.	1. Hands-on Science 2. Discovery Approach	CG-2 Explores the physical world in scientific and mathematical terms.	C-2.2 Describes how electricity works through manipulating different elements in simple circuits and demonstrates the heating and magnetic effects of electricity.	Learner will be able to construct simple electrical circuits, distinguish between open and closed circuits, and predict when a bulb will or will not glow.	
		3. Conductors and Insulators	3.1 Testing materials for conductivity 3.2 Safety with electricity	Day 3		**Conductor Hunt:** Students test household objects (key, eraser, pencil, clip) using a simple circuit tester to identify conductors and insulators. Purpose: Encourages hands-on testing and classification.	1. Hands-on Science 2. Think-Pair-Share 3. Entab Videos	CG-2 Explores the physical world in scientific and mathematical terms.	C-2.2 Describes how electricity works through manipulating different elements in simple circuits. C-1.1 Classifies matter based on observable physical characteristics (conducting, non-conducting).	Learner will be able to classify materials as conductors or insulators based on experimental observation and describe basic electrical safety measures.	
			Lab Activity Buffer Days if Required	Day 4 Day 5			Hands-on Science and visit to STEM Lab Written work with I-Board	CG-2 Explores the physical world in scientific and mathematical terms.	C-2.2 Describes how electricity works through manipulating different elements in simple circuits. C-1.1 Classifies matter based on observable physical characteristics (conducting, non-conducting).	Learner will be able to design and test simple circuits and record observations accurately.	
4.	**The World of Metals and Non-metals**	1. Properties of Metals	Activity 4.1, 4.2 1.1 Malleability and ductility 1.2 Sonority and lustre	August Day 1	August	**Metal or Not?** Pass around pieces of copper wire, rubber, coal, and aluminium foil. Students predict which are metals based on look and feel. Purpose: Activates prior knowledge and introduces properties of metals.	1. Hands-on Science 2. Inquiry-Based Learning 3. Use of ICT (Technology)	CG-1 Explores the world of matter and its constituents, properties, and behaviour.	C-1.1 Classifies matter based on observable physical characteristics (metal, non-metal; element, compound; conducting, non-conducting). C-1.2 Describes changes in matter and uses particulate nature to represent properties of matter.	Learner will be able to describe properties of metals (malleability, ductility, sonority, lustre, conductivity) and distinguish them from non-metals.	
		2. Metals and Non-metals: Conductivity	Activity 4.3, 4.4 2.1 Heat and electrical conductivity 2.2 Designing a conductivity tester	Day 2		**Spoon Race:** Provide spoons of metal, wood, and plastic. Place in hot water. Students predict which heats up fastest and test. Purpose: Introduces conductivity of heat in a concrete, familiar context.	1. Hands-on Science 2. Discovery Approach 3. Visit to Chemistry Lab	CG-1 Explores the world of matter and its constituents, properties, and behaviour. CG-2 Explores the physical world in scientific and mathematical terms.	C-1.1 Classifies matter based on physical and chemical characteristics. C-2.2 Describes how electricity works through manipulating elements in simple circuits.	Learner will be able to compare metals and non-metals based on their ability to conduct heat and electricity and design a simple conductivity tester.	

		3. Effects of Air and Water on Metals	Activity 4.5 3.1 Rusting of iron 3.2 Preventing corrosion	Day 3		**Rusty Nail Race:** Show two iron nails — one dry, one kept in water for a week. Students observe and discuss: what caused the change? Purpose: Introduces the concept of corrosion through direct observation.	1. Inquiry-Based Learning 2. Project-centred Approach 3. Use of ICT	CG-1 Explores the world of matter and its constituents, properties, and behaviour.	C-1.2 Describes changes in matter (physical and chemical) and uses particulate nature to represent the properties of matter and the changes.	Learner will be able to explain the conditions required for rusting of iron and describe methods used to prevent corrosion.	
			Class Notes Buffer Days if Required	Day 4 Day 5			Written work with the help of I-Board				Assessment As Learning
5.	**Changes Around Us: Physical and Chemical**	1. Physical Changes	Activity 5.1 1.1 Reversible and irreversible changes 1.2 Observing changes around us	September Day 1	September	**Change or No Change?** Teacher tears paper, dissolves sugar in water, and burns a candle. Students classify: reversible or irreversible? Purpose: Develops observation and classification skills.	1. Hands-on Science 2. Think-Pair-Share 3. Inquiry-Based Learning	CG-1 Explores the world of matter and its constituents, properties, and behaviour.	C-1.2 Describes changes in matter (physical and chemical) and uses particulate nature to represent the properties of matter and the changes.	Learner will be able to identify and describe physical changes in matter and classify them as reversible or irreversible with real-life examples.	
		2. Chemical Changes	Activity 5.2, 5.3, 5.4 2.1 Signs of a chemical change 2.2 Examples: rusting, burning, cooking	Day 2		**Fizz and Glow:** Students observe baking soda + vinegar and burning of a magnesium ribbon (teacher demo). Ask: Can you reverse these? Purpose: Illustrates the key difference between physical and chemical changes.	1. Hands-on Science 2. Discovery Approach 3. Visit to Chemistry Lab	CG-1 Explores the world of matter and its constituents, properties, and behaviour.	C-1.2 Describes changes in matter (physical and chemical) and uses particulate nature to represent the properties of matter and the changes. C-1.1 Classifies matter based on observable physical and chemical characteristics.	Learner will be able to describe the signs of a chemical change (colour change, gas production, heat/light) and give examples from daily life.	
		3. Useful and Harmful Changes	Activity 5.5, 5.6 3.1 Rusting and combustion 3.2 Changes in everyday life	Day 3		**Good Change or Bad Change?** Teacher shows images: a burning candle, a rusted bicycle, bread baking, silver tarnishing. Students sort into useful and harmful changes. Purpose: Connects chemical changes to real-world consequences.	1. Explanation with Textbook 2. Entab Videos 3. Use of ICT (Technology)	CG-5 Understands the interface of Science, Technology, and Society.	C-5.1 Illustrates how Science and Technology can help improve the quality of human life. C-5.2 Shares views on articles related to the impact of Science or Technology on society.	Learner will be able to distinguish between useful and harmful chemical changes and explain their significance in everyday life.	
			Class Notes Buffer Days if Required	Day 4 Day 5			Written work with the help of I-Board				Assessment For Learning
6.	**Adolescence: A Stage of**	1. Growing with Age	Activity 6.1 1.1 Stages of human	September Day 1	October	**Then and Now**: Students look at baby photos vs. current photos (brought by	1. Explanation with Textbook 2.	CG-4 Understands the components of	C-4.3 Describes biological changes (growth, hormonal) during adolescence, and	Learner will be able to identify the stages of human life and	

	Growth and Change		life 1.2 Changes during adolescence			teacher for demonstration). Discuss: What changed? Why? Purpose: Personally, connects students to the concept of growth and development.	Entab Videos 3. Think-Pair-Share	health, hygiene, and well-being.	measures to ensure overall well-being.	describe the physical, emotional, and hormonal changes that occur during adolescence.	
		2. Emotional and Behavioural Changes	Activity 6.2 2.1 Emotional changes in adolescence 2.2 Managing emotions and behaviour	Day 2		**Emotion Cards**: Students receive cards with different emotions. They role-play situations and identify healthy responses. Purpose: Builds emotional intelligence and self-awareness.	1. Think-Pair-Share 2. Discussion Approach	CG-4 Understands the components of health, hygiene, and well-being.	C-4.3 Describes biological changes (growth, hormonal) during adolescence and measures to ensure overall well-being. C-4.4 Recognises and discusses substance abuse, viewing school as a safe space to raise these concerns.	Learner will be able to describe emotional and behavioural changes during adolescence and identify healthy strategies for emotional well-being.	
		3. Health and Well-being During Adolescence	Activity 6.3, 6.4 3.1 Nutrition, hygiene, and physical activity 3.2 Avoiding harmful substances	Day 3		**Healthy Choices Auction:** Students bid (with play tokens) on a list of lifestyle choices (balanced diet, junk food, exercise, substance use). Discuss: Which choices contribute to well-being? Purpose: Highlights responsible health choices.	1. Inquiry-Based Learning 2. Project-centred Approach 3. Use of ICT (Technology)	CG-4 Understands the components of health, hygiene, and well-being.	C-4.1 Undertakes a nutrition-based analysis of food components with special reference to Indian culinary practices. C-4.4 Recognises and discusses substance abuse, viewing school as a safe space to raise these concerns.	Learner will be able to explain the importance of nutrition, hygiene, and physical activity during adolescence and describe the risks associated with substance abuse.	
			Class Notes Buffer Days if Required	Day 4 Day 5			Written work with the help of I-Board				Assessment Of Learning
7.	**Heat Transfer in Nature**	1. Conduction of Heat	Activity 7.1 1.1 Conduction in metals 1.2 Conductors and insulators of heat	October Day 1	October	**Pin Drop Experiment:** Students predict the order in which wax-attached pins will fall from a heated metal strip. Then perform the activity. Purpose: Introduces conduction through a prediction-and-test experiment.	1. Hands-on Science 2. Inquiry-Based Learning 3. Use of ICT (Technology)	CG-1 Explores the world of matter and its constituents, properties, and behaviour.	C-1.4 Observes and explains phenomena caused due to differences in temperature (e.g., cooling of things, formation of winds). C-1.3 Explains the importance of measurement and measures physical properties of matter (temperature) using simple instruments.	Learner will be able to describe conduction as a mode of heat transfer and classify materials as good or poor conductors of heat.	
		2. Convection in Nature	Activity 7.2, 7.3, 7.4 2.1 Convection in liquids and gases 2.2 Land and sea breeze	Day 2		**Smoke Spiral:** Show a slow-motion video of smoke rising from incense in front of a heater. Ask: Why does smoke spiral	1. Hands-on Science 2. Discovery Approach 3. Entab Videos	CG-1 Explores the world of matter and its constituents, properties, and behaviour.	C-1.4 Observes and explains phenomena caused due to differences in pressure, temperature, and density (e.g., formation of winds).	Learner will be able to explain convection in liquids and gases and describe natural phenomena such as	

						upward? Purpose: Visually introduces convection currents.		CG-3 Explores the living world in scientific terms.		land and sea breeze using the principle of convection.	
		3. Radiation and Heat Transfer in Daily Life	3.1 Radiation from the Sun 3.2 Applications of heat transfer (cooking, seasons)	Day 3		**Sunny or Shady?** Students hold a thermometer in direct sunlight and shade for 2 minutes. Compare readings. Purpose: Introduces radiation as a mode of heat transfer without a medium.	1. Hands-on Science 2. Project-centred Approach 3. Use of ICT	CG-2 Explores the physical world in scientific and mathematical terms. CG-5 Understands the interface of Science, Technology, and Society.	C-1.4 Observes and explains phenomena caused due to differences in temperature and density. C-5.1 Illustrates how Science and Technology help improve the quality of human life.	Learner will be able to describe radiation as a mode of heat transfer and give examples of radiation in daily life, including solar energy applications.	
			Class Notes Buffer Days if Required	Day 4 Day 5			Written work with the help of I-Board				
8.	**Measurement of Time and Motion**	1. Measurement of Time	Activity 8.1, 8.2 1.1 Historical time-measuring devices 1.2 Simple pendulum	November Day 1	November	**Pendulum Challenge:** Students make a simple pendulum using a string and a stone. Count oscillations in 30 seconds. Predict: What changes if the string is longer? Purpose: Introduces the pendulum and concepts of time period through hands-on exploration.	1. Hands-on Science 2. Inquiry-Based Learning 3. Use of ICT (Technology)	CG-2 Explores the physical world in scientific and mathematical terms. CG-5 Understands the interface of Science, Technology, and Society.	C-2.1 Describes one-dimensional motion (uniform, non-uniform) using physical measurements (position, speed, and changes in speed) through mathematical and diagrammatic representations. C-1.3 Explains the importance of measurement and measures physical properties in standard units using simple instruments.	Learner will be able to describe how time has been measured historically, construct a simple pendulum, and investigate how its time period varies with length.	
		2. Slow or Fast — Comparing Speeds	Activity 8.3 2.1 Comparing speeds of objects 2.2 SI unit of time and speed	Day 2		**Race the Clock:** Students walk, jog, and run across a fixed distance (marked in the corridor). Record time using a stopwatch. Discuss: Who is fastest? Purpose: Makes the concept of speed concrete and measurable.	1. Hands-on Science 2. Think-Pair-Share	CG-2 Explores the physical world in scientific and mathematical terms. CG-5 Understands the interface of Science, Technology, and Society.	C-2.1 Describes one-dimensional motion (uniform, non-uniform, horizontal, vertical) using physical measurements through mathematical and diagrammatic representations.	Learner will be able to compare the speeds of moving objects and understand the SI unit of time (second).	
		3. Speed and its Calculation	Activity 8.4 3.1 Calculating speed (distance/time) 3.2 Uniform and non-uniform motion	Day 3		**Speed Detectives:** Students are given distance and time data for different animals (cheetah, tortoise, snail). Calculate speed and rank them. Purpose: Reinforces speed calculation with engaging real-world data.	1. Inquiry-Based Learning 2. Use of ICT (Technology)	CG-2 Explores the physical world in scientific and mathematical terms. CG-5 Understands the interface of Science, Technology, and Society.	C-2.1 Describes one-dimensional motion using physical measurements through mathematical and diagrammatic representations. C-7.3 Represents real world events and relationships	Learner will be able to calculate speed using the formula speed = distance/time and distinguish between uniform and non-uniform motion.	

								CG-7 Communicates questions, observations, and conclusions related to science	through simple mathematical representations.		
			Class Notes Buffer Days if Required	Day 4 Day 5			Written work with the help of I-Board				Assessment As Learning)
9.	**Life Processes in Animals**	1. Nutrition in Animals	Activity 9.1 1.1 Digestion in humans 1.2 The alimentary canal	December Day 1	December	**Journey of a Bite:** Students trace the path of a bite of chapati through the human body using a simple diagram. Mark each organ and its role. Purpose: Introduces the digestive system in an engaging, visual way.	1. Explanation with Textbook 2. Entab Videos 3. Use of ICT (Technology)	CG-3 Explores the living world in scientific terms. CG-4 Understands the components of health, hygiene, and well-being.	C-3.2 Distinguishes the characteristics of living organisms (need for nutrition, respiration, excretion, cellular organisation) from non-living things. C-4.1 Undertakes a nutrition-based analysis of food components with reference to Indian culinary practices.	Learner will be able to describe the process of digestion in humans, identify organs of the alimentary canal, and explain the role of digestive juices.	
		2. Digestion in Other Animals	2.1 Digestion in ruminants 2.2 Digestion in amoeba and grass-eating insects	Day 2		**Cud Chewers:** Ask students if they have seen a cow chewing even when not eating. Discuss: What is cud? Why do cows do this? Purpose: Introduces the concept of ruminant digestion through a familiar observation.	1. Discovery Approach 2. Think-Pair-Share 3. Entab Videos	CG-3 Explores the living world in scientific terms.	C-3.1 Describes the diversity of living things including at a smaller scale (microscopic organisms). C-3.2 Distinguishes the characteristics of living organisms.	Learner will be able to compare digestion in humans with that in ruminants and other animals, explaining adaptations for different diets.	
		3. Respiration in Animals	Activity 9.2 3.1 Respiration in humans 3.2 Breathing mechanisms in different animals	Day 3		**Breath Counter:** Students count their breaths per minute at rest, then after 30 seconds of jumping jacks. Discuss: Why does rate change? Purpose: Introduces respiration through self-observation.	1. Hands-on Science 2. Inquiry-Based Learning	CG-3 Explores the living world in scientific terms.	C-3.2 Distinguishes the characteristics of living organisms (need for respiration) from non-living things. C-3.3 Analyses patterns of relationships between living organisms and their environments.	Learner will be able to describe the mechanism of breathing in humans, explain gas exchange in the lungs, and compare respiration in animals such as fish, earthworms, and insects.	
			Lab Activity Class Notes Buffer Days if Required	Day 4 Day 5 Day 6			Hands-on Science and visit to Biology Lab Written work with I-Board	CG-3 Explores the living world in scientific terms.	C-3.1 Describes the diversity of living things including at a smaller scale (microscopic organisms). C-3.2 Distinguishes the characteristics of living organisms (need for	Learner will be able to observe and record life processes in living organisms.	

									nutrition, growth and development, need for respiration, response to stimuli, reproduction, excretion, cellular organisation) from non-living things		
10.	**Life Processes in Plants**	1. How Do Plants Grow?	Activity 10.1 1.1 Role of sunlight, water, and soil 1.2 Experimental investigation of plant growth	December Day 1	January	**Sunlight Debate:** Ask students: Do plants need sunlight or soil more for growth? Students vote and defend their choice. Purpose: Activates prior knowledge and sets up the need to investigate systematically.	1. Inquiry-Based Learning 2. Project-centred Approach 3. Use of ICT (Technology)	CG-3 Explores the living world in scientific terms.	C-3.2 Distinguishes the characteristics of living organisms (nutrition, growth and development) from non-living things. C-3.3 Analyses patterns of relationships between living organisms and their environments.	Learner will be able to design and conduct an experiment to investigate the roles of sunlight and water in plant growth, and interpret results.	
		2. Photosynthesis: How Plants Make Food	Activity 10.2, 10.3, 10.4 2.1 Role of chlorophyll and light 2.2 Role of carbon dioxide	Day 2		**Leaf Starch Test:** Teacher demonstrates iodine test on a leaf kept in light vs. one kept in dark. Students predict: Which will turn blue-black? Purpose: Makes photosynthesis visible through a simple chemical test.	1. Hands-on Science 2. Discovery Approach 3. Visit to Biology Lab	CG-3 Explores the living world in scientific terms.	C-3.2 Distinguishes the characteristics of living organisms (nutrition, cellular organisation). C-3.3 Analyses patterns of relationships between living organisms and their environments.	Learner will be able to describe photosynthesis as the process by which plants make food using sunlight, water, and carbon dioxide, and explain the role of chlorophyll.	
		3. Transport and Other Life Processes in Plants	3.1 How water moves in plants 3.2 Excretion and reproduction in plants	Day 3		**Colour Travel:** Place a white flower or celery stalk in coloured water. Observe after 2 hours. Discuss: How did the colour reach the petals? Purpose: Demonstrates water transport in plants visually.	1. Hands-on Science 2. Explanation with Textbook 3. Entab Videos	CG-3 Explores the living world in scientific terms.	C-3.2 Distinguishes the characteristics of living organisms (growth, reproduction, excretion, cellular organisation). C-3.1 Describes the diversity of living things observed in natural surroundings.	Learner will be able to describe how water and nutrients are transported in plants and explain basic life processes in plants including respiration and reproduction.	
			Class Notes Buffer Days if Required	Day 4 Day 5			Written work with the help of I-Board				
11.	**Light: Shadows and Reflections**	1. Sources of Light	Activity 11.1 1.1 Luminous and non-luminous objects 1.2 Natural and artificial light sources	January Day 1	February	**Luminous or Not?** Teacher shows images: the Sun, Moon, a mirror, a candle, a firefly, a torch. Students sort into luminous and non-luminous. Purpose: Builds the concept of light sources through classification.	1. Inquiry-Based Learning 2. Explanation with Textbook 3. Use of ICT (Technology)	CG-2 Explores the physical world in scientific and mathematical terms.	C-2.4 Demonstrates rectilinear propagation of light from different sources and verifies the laws of reflection through manipulation of light sources and objects.	Learner will be able to distinguish between luminous and non-luminous objects, and identify natural and artificial sources of light.	

		2. Does Light Travel in a Straight Line?	Activity 11.2, 11.3 2.1 Rectilinear propagation of light 2.2 Transparent, translucent, and opaque objects	Day 2		**Pinhole Discovery:** Students align three cardboard pieces with holes. Shine a torch through them and observe: when aligned, light passes; when misaligned, it does not. Purpose: Demonstrates rectilinear propagation of light.	1. Hands-on Science 2. Discovery Approach	CG-2 Explores the physical world in scientific and mathematical terms.	C-2.4 Demonstrates rectilinear propagation of light and verifies the laws of reflection through manipulation of light sources, objects, and apparatus.	Learner will be able to demonstrate that light travels in a straight line and classify materials as transparent, translucent, or opaque.	
		3. Shadows and Reflection	Activity 11.4, 11.5 3.1 Shadow formation 3.2 Reflection of light	Day 3		**Shadow Puppet Play:** Students create shadow puppets using cardboard cutouts and a torch. Experiment with angle and distance to change shadow size. Purpose: Makes shadow formation interactive and engaging.	1. Hands-on Science 2. Project-centred Approach 3. Use of ICT	CG-2 Explores the physical world in scientific and mathematical terms. CG-8 Understands and appreciates the contribution of India through history and the present times to the overall field of science, including the disciplines that constitute it.	C-2.4 Demonstrates rectilinear propagation of light and verifies laws of reflection through manipulation of light sources and apparatus (plane mirrors, pinhole camera, periscope). C-8.1 Knows and explains significant contributions of India to all matters studied.	Learner will be able to explain shadow formation and describe the laws of reflection, applying them to plane mirrors and devices like a periscope.	
			Lab Activity Class Notes Buffer Days if Required	Day 4 Day 5			Hands-on Science and visit to STEM Lab Written work with I-Board	CG-2 Explores the physical world in scientific and mathematical terms.	C-2.4 Demonstrates rectilinear propagation of light and verifies laws of reflection through manipulation of light sources and apparatus (plane mirrors, pinhole camera, periscope). C-8.1 Knows and explains significant contributions of India to all matters studied.	Learner will be able to conduct experiments on light reflection and record observations accurately.	Assessment AS Learning
12.	**Earth, Moon, and the Sun**	1. Rotation of the Earth	Activity 12.1, 12.2 1.1 Rotation and day/night 1.2 Shadow length and time of day	February Day 1	March	**Merry-Go-Round Observation:** Students rotate slowly on a chair (or describe standing in the centre of a rotating platform). Observe: Do surrounding objects appear to move? Purpose: Introduces the concept of Earth's rotation	1. Explanation with Textbook 2. Entab Videos 3. Use of ICT (Technology)	CG-2 Explores the physical world in scientific and mathematical terms. CG-9 Develops awareness of the most current discoveries, ideas, and	C-2.5 Observes and identifies celestial objects (stars, planets, satellites, constellations) and explains their role in navigation, calendars, and phenomena (phases of the moon, eclipse, life on Earth). C-9.1 States concepts representing the most	Learner will be able to explain why day and night occur, describe the rotation of the Earth, and connect this to the apparent movement of the Sun across the sky.	

						and apparent movement of the Sun.		frontiers in all areas of scientific knowledge in order to appreciate that Science is ever evolving and that there are still many unanswered questions	current understanding of the matter being studied.		
		2. Revolution of the Earth	Activity 12.3 2.1 Revolution and seasons 2.2 Changing view of the night sky	Day 2		**Season Modelling:** Using a globe and a torch, students simulate Earth's revolution. Ask: Why is it summer in one place and winter in another at the same time? Purpose: Makes the abstract concept of seasons tangible.	1. Hands-on Science 2. Discovery Approach 3. Use of ICT (Technology)	CG-2 Explores the physical world in scientific and mathematical terms.	C-2.5 Observes and identifies celestial objects and explains their role in navigation, calendars, and phenomena (phases of the moon, eclipse, life on Earth).	Learner will be able to describe the revolution of the Earth around the Sun and explain how it causes seasons and changes in the night sky.	
		3. Eclipses	Activity 12.4 3.1 Solar and lunar eclipses 3.2 India's contribution to astronomy	Day 3		**Eclipse Reenactment:** Using a torch (Sun), a basketball (Earth), and a smaller ball (Moon), students physically position themselves to demonstrate solar and lunar eclipses. Purpose: Makes eclipse formation concrete and memorable.	1. Hands-on Science 2. Concept Mapping 3. Use of ICT (Technology)	CG-2 Explores the physical world in scientific and mathematical terms. CG-8 Understands and appreciates the contribution of India through history and the present times to the overall field of science, including the disciplines that constitute it	C-2.5 Observes and identifies celestial objects and explains phenomena (phases of the moon, eclipse, life on Earth). C-8.1 Knows and explains significant contributions of India to all matters studied (e.g., Aryabhata, ancient Indian astronomy).	Learner will be able to explain the conditions for solar and lunar eclipses, describe their difference, and appreciate India's historical contributions to astronomy.	
			Class Notes Buffer Days if Required	Day 4 Day 5			Written work with the help of I-Board				Assessment of Learning