

**First Term Curriculum  
Subject: Science  
Class: VIII  
Session: 2026-27**

	<b>April</b>	<b>May</b>	<b>June</b>	<b>July</b>
<b>Content</b>	<p><b>*Electricity: Magnetic and Heating Effects</b></p> <p><b>*Light: Mirrors and Lenses</b></p>	<p><b>*Particulate Nature of Matter</b></p> <p><b>*Nature of Matter: Elements, Compounds and Mixtures</b></p>	<p><b>*Health: The Ultimate Treasure</b></p> <p><b>*The Invisible Living World: Beyond our Naked Eye</b></p>	<p><b>*The Invisible Living World: Beyond our Naked Eye (Cont.)</b></p>
<b>Learning Outcomes</b>	<p><b>Students will be able to:</b></p> <ul style="list-style-type: none"> <li>-Describe the heating and magnetic effect of current and explain its applications in daily life.</li> <li>-Explore the working principle of electromagnets</li> <li>-Recognize and explain the role of safety devices like fuse and circuit breaker and their importance in preventing electrical hazards.</li> <li>-Identify and describe the working of dry cell and voltaic cell</li> <li>-Explain the laws of reflection and describe how light is reflected from spherical mirrors.</li> <li>-Identify different types of images formed by lenses and mirrors.</li> <li>-Apply the concept of reflection of light in everyday situations.</li> </ul>	<p><b>Students will be able to:</b></p> <ul style="list-style-type: none"> <li>-Identify the components that make up matter.</li> <li>-Illustrate the presence of inter-particle space in different states of matter.</li> <li>-Differentiate the movement of particles in different states of matter.</li> <li>-Define mixtures and identify them in everyday life.</li> <li>-Classify pure substances into elements and compounds.</li> <li>-Illustrate different methods used to separate components of mixtures.</li> <li>-Recognize the usefulness of elements, compounds, and mixtures in daily life.</li> </ul>	<p><b>Students will be able to:</b></p> <ul style="list-style-type: none"> <li>-Describe the concept of health and its importance for overall well-being.</li> <li>-Differentiate between different types of diseases and list their causes.</li> <li>-Suggest ways to prevent and control diseases.</li> <li>-Summarize the concept of a cell, its discovery, and its main types.</li> <li>-Distinguish between plant cells and animal cells.</li> <li>-Classify different types of microorganisms</li> </ul>	<p><b>Students will be able to:</b></p> <ul style="list-style-type: none"> <li>-Recognize the uses of some beneficial microorganisms.</li> </ul>

<p><b>Skills</b></p>	<p>Cognitive skills:Critical thinking, problem solving, observation, analysis,research skills Practical and technical skills: Experimentation,data collection and recording ,use of tools and technology</p> <p>Communication skills: Scientific communication, listening and interpretation</p> <p>Emotional and social development: Curiosity and exploration, responsibility and ethics</p> <p>Academic and career readiness: Scientific literacy, interdisciplinary learning</p>	<p>Cognitive skills:Critical thinking, problem solving,observation ,analysis,research skills</p> <p>Practical and technical skills: Experimentation, data collection and recording.</p> <p>Communication skills: Scientific communication, Teamwork,listening and interpretation</p> <p>Emotional and social development: Curiosity and exploration, responsibility and ethics</p> <p>Academic and career readiness: Scientific literacy, Interdisciplinary learning</p>	<p>Cognitive skills:Critical thinking, problem solving,observation, analysis,research skills</p> <p>Practical and technical skills: Experimentation,Data collection and recording,use of tools and technology</p> <p>Communication skills: Scientific communication, listening and interpretation</p> <p>Emotional and social development: Curiosity and exploration, responsibility and ethics</p> <p>Academic and career readiness: Scientific literacy</p>	<p>Cognitive skills:Critical thinking, observation, analysis,research skills Practical and technical skills: Data collection and recording</p> <p>Communication skills: Scientific communication, Teamwork, listening and interpretation</p> <p>Emotional and social development: Curiosity and exploration, responsibility and ethics.</p> <p>Academic and career readiness: Scientific literacy</p>
<p><b>Activities</b></p>	<p><b>Competency Skill based Activities/Experiential learning Activities:</b> <b>Class- Activity:</b> *Making an electromagnet Students will make an electromagnet using a coil of wire, an iron nail, and a battery to observe how electric current produces magnetism.</p> <p><b>Search Work:</b> *Gather information on different types of future batteries being developed by scientists and compare their advantages over existing batteries.</p>	<p><b>Competency Skill based Activities/ Experiential learning Activities:</b></p> <p><b>Class-Activities:</b> * Create a comic strip showing how ice changes into water. Add dialogues to make it interactive.</p>	<p><b>Competency Skill based Activities/Experiential learning Activities:</b></p> <p><b>Class-Activity</b> *Diagrammatic representation of cells.</p> <p><b>Lab Activities-</b> *Demonstration of a method to make temporary slides using an onion peel and cheek cell to observe the structure of plant and animal cells.</p>	<p><b>Competency Skill based Activities/ Experiential learning Activities:</b></p> <p>*To study fermentation of sugar into alcohol by the action of yeast.</p>

	<p><b>Lab-Activities</b></p> <p>*Students will perform activities to verify the laws of reflection.</p> <p>*Explore the working of common instruments that use light, lens/mirrors through hands-on activities.</p> <p><b>(Integration with Social Science, IT, Mathematics and Art)</b></p>	<p><b>Search Work</b></p> <p>*Students will do an internet search to find out at least three practical applications of the particulate nature of matter, collect relevant pictures and place a brief explanation of each.</p> <p>* Search and find out about decorative cultural items you need to different states of India that use elements and compounds in their creation for example the dhokra art of Bihar West Bengal and Orissa that uses different metals to create beautiful figures inspired by nature, blue pottery of Rajasthan made using crust quartz Pembarti steel metal work of Telangana etc mark the names on the map of India.</p> <p><b>Lab-Activities:</b></p> <p>* To show you potassium permanganate that particles of water are in constant motion</p> <p>* To show that vapour spread freely inside a jar.</p> <p>* To test if table sugar is an element or a compound</p> <p>* To find out the elements compounds and mixtures used for making the different components in a smartphone</p> <p><b>(Integration with Social Science, IT, English and Art)</b></p>	<p>* To show the various slides: Students will be shown various slides of the microorganisms</p> <p>*Visit to local health centre</p> <p><b>Art Integrated Project</b>  “Healthy States, Healthy Lives: Health, Hygiene, and Disease Prevention in Himachal Pradesh and Pair State”  <b>(Integration with Social Science, Mathematics, Hindi, English and Art)</b></p>	<p><b>(Integration with Art and English)</b></p>
<p><b>Assessments</b></p>	<p>Pen – Paper test, Observations, Diagrams, Tabular information, Map work, Report, Concept map, HOTs , Quiz, Reasoning questions, Value based questions, Collage, Search work, Model, C.W. and H.W.</p>			
	<p><b>Main Book: Cambridge Splendid Science (New Edition)</b>  <b>Publisher: Cambridge University Press</b></p>			

	<b>August</b>	<b>September</b>	<b>October/ November</b>	<b>December /January</b>
<b>Content</b>	<b>*The Amazing World of Solutes, Solvents and Solutions</b>	<b>*Exploring Forces</b>	<b>*Keeping Time with the Skies</b>  <b>*Pressure, Winds, Storms and Cyclones</b>	<b>*Our Home: Earth, a Unique Life Sustaining Planet</b> <b>* How Nature Works in Harmony</b>
<b>Learning Outcomes</b>	<p><b>Students will be able to:</b></p> <ul style="list-style-type: none"> <li>-Identify solute, solvent, and solution in different examples.</li> <li>-Differentiate between saturated and unsaturated solutions.</li> <li>-Explain the concepts of density and demonstrate how to measure mass, volume, and density of objects.</li> </ul>	<p><b>Students will be able to:</b></p> <ul style="list-style-type: none"> <li>-Identify force and Illustrate the effects of force in everyday situations.</li> <li>-Classify different types of forces.</li> <li>-Explain the concept of weight and demonstrate how it is measured.</li> </ul>	<p><b>Students will be able to:</b></p> <ul style="list-style-type: none"> <li>-Describe the different phases of the Moon.</li> <li>-Differentiate between various types of calendars.</li> <li>-Explain how artificial satellites help us in everyday life.</li> <li>- Explain the concept of pressure and identify its applications in daily life.</li> <li>-Describe how wind currents are formed.</li> <li>-Interpret how air pressure and wind currents influence weather patterns.</li> <li>-Recognize severe weather conditions such as storms, lightning, and cyclones.</li> </ul>	<p><b>Students will be able to:</b></p> <ul style="list-style-type: none"> <li>-Justify why Earth is considered a unique planet.</li> <li>-Identify the factors that support life on Earth.</li> <li>-Examine the conditions that help sustain life on Earth.</li> <li>-Analyze the major threats to life on Earth.</li> <li>-Describe habitats and categorize the different components of a habitat.</li> <li>-Explore the interactions among living and non-living components in a habitat.</li> <li>-Interpret how balance in nature is maintained.</li> </ul>
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	<p>Emotional and social development: Curiosity and exploration, responsibility and ethics</p> <p>Academic and career readiness: Scientific literacy, Interdisciplinary learning</p>	<p>Communication skills: Scientific communication, Teamwork, listening and interpretation</p> <p>Emotional and social development: Curiosity and exploration, responsibility and ethics</p> <p>Academic and career readiness: Scientific literacy</p>	<p>Communication skills: Scientific communication, listening and interpretation</p> <p>Emotional and social development: Curiosity and exploration, responsibility and ethics.</p> <p>Academic and career: Scientific literacy, Interdisciplinary learning</p>	<p>Communication skills: Scientific communication, Teamwork, listening and interpretation</p> <p>Emotional and social development: Curiosity and exploration, responsibility and ethics.</p> <p>Academic and career: Scientific literacy, Interdisciplinary learning</p>
<b>Activities</b>	<p><b>Competency skill based Activities/Experiential learning</b></p> <p><b>Class Activity:</b>  * Create sugar crystals using a supersaturated solution and observe crystal formation.  * Create a density column using different liquids to observe how liquids arrange according to their densities.</p> <p><b>Lab-Activities:</b>  * Show the effect of temperature on the solubility of baking soda in water  * Measure the volume of an object that has irregular shape using the water displacement method.</p>	<p><b>Competency skill based Activities/Experiential learning Activities</b></p> <p>*Demonstrate different types of forces using simple objects such as a toy car, rubber band, and magnet</p> <p>*Students use a spring balance or weighing scale to measure the weight of different objects such as a book, pencil box, and water bottle and record their observations.</p>	<p><b>Competency skill based Activities/Experiential learning Activities</b></p> <p><b>Class-Activities:</b>  * Make a 30 day moon journal  Students will observe the Moon every night for 30 days and record its shape, position, and brightness in a journal. They will draw the Moon's phase each day and note the date and time to understand how the Moon changes during a lunar cycle.  *Satellite Timeline Project</p> <p>Title: "Journey of Artificial Satellites"  Students create a timeline showing important satellites: Sputnik 1  Aryabhata</p> <p><b>Class-Activities:</b>  *Students will solve numericals related to pressure and area.</p>	<p><b>Competency skill based Activities/Experiential Learning</b></p> <p><b>Class-Activities:</b>  *Diagrammatic representation to show the biosphere as an interconnectedness of atmosphere, hydrosphere and geosphere  *To show Vegetative propagation of money plant stem and rose stem</p> <p><b>Search work</b>  *To find out the main objectives of the Global agreements, their timelines and action taken worldwide to protect the environment</p> <p><b>Class-Activities:</b>  *Students will create a Forest Action Plan: they will think about the threats that forests are facing and developed an action plan keeping in mind the main issues and what desirable outcome students would like to work towards their Action Plan.</p>

			<p><b>*Lab-Activities:</b>  *To show that pressure exerted by liquid increases with depth  *To prove air exerts pressure  *To show that air expands on heating and contracts on cooling  *To show that high speed creates low pressure region</p>	<p>*Student will make a one page description on any one of the Indian wildlife biologists and their contribution.  * Visit to G.B Pant National Institute of Himalayan Environment</p>
	(Integration with Mathematics and Art)	(Integration with Social Science, Mathematics and Art)	(Integration with Social Science, Mathematics and Art)	(Integration with English and Art)
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