

**INFANT JESUS CONVENT SCHOOL**  
**ANNUAL PLAN**  
**SCIENCE**  
**CLASS: VII**  
**2024-25**

<b>MONTH/NO OF DAYS</b>	<b>TOPIC: SUB TOPIC</b>	<b>OBJECTIVES</b>	<b>AIDS/ACTIVITIES</b>	<b>MULTIPLE INTELLIGENCE SKILLS</b>	<b>LEARNING OUTCOME</b>
<p>APRIL No of Days: 18</p>	<p><b>L-1 Nutrition In Plants</b>  Mode of Nutrition in plants:  a. Autotrophic  b. Heterotrophic  Photosynthesis  Other modes of nutrition in plants</p> <p><b>L-2 Nutrition in Animals</b>   Define nutrition  Processes involved in nutrition  Human digestive system</p>	<p><b>Students will be able to:</b></p> <ul style="list-style-type: none"> <li>• Understand the different modes of nutrition</li> <li>• Identify and illustrate the types of modes</li> <li>• Explain the photosynthesis process.</li> <li>• Write the word equation of photosynthesis</li> <li>• How nutrients are replenished in the soil</li> <li>• Define nutrition</li> <li>• Relate the processes involved in nutrition</li> </ul>	<p><b>KNOWLEDGE:</b></p> <ul style="list-style-type: none"> <li>• Identify different modes of nutrition in plants.</li> <li>• Learn about stomata, chlorophyll.</li> <li>• Students know about the digestive juices and the organs which secrete them.</li> <li>• Locate the types of teeth and taste buds of tongue.</li> </ul> <p><b>SKILL:</b></p> <ul style="list-style-type: none"> <li>• Diagram making</li> <li>• Analyzing Scientific skill</li> <li>• Problem solving</li> </ul> <p><b>APPLICATION:</b></p> <ul style="list-style-type: none"> <li>• Investigate and infer the presence of starch in leaf</li> </ul>	<p>Naturalist Intelligence</p> <p>Logical-Mathematical Intelligence</p> <p>Interpersonal Intelligence</p> <p>Visual-Spatial Intelligence.</p> <p>Existential Intelligence</p> <p>Linguistic Intelligence</p>	<p><b>Students will be able to:</b></p> <ul style="list-style-type: none"> <li>• Define Nutrition and explain mode of nutrition and photosynthesis.</li> <li>• Identify the types of modes of nutrition in plants.</li> <li>• Draw the diagram of photosynthesis.</li> <li>• Understand the importance of replenishment of nutrients in soil.</li> </ul>

		<ul style="list-style-type: none"> <li>• Explain the digestion process in human beings</li> </ul>	<p>through experiment.</p> <ul style="list-style-type: none"> <li>• Students demonstrate the effect of saliva on starch through experimental activity.</li> <li>• Draw well labelled diagrams Human beings and tongue</li> <li>• Prepare a model using clay of digestive system of human being, Cow, Amoeba</li> </ul> <p><b>UNDERSTANDING:</b></p> <ul style="list-style-type: none"> <li>• Describe the process stomatal opening and the raw materials used by plants during photosynthesis.</li> <li>• Importance of manure /nature replenishment of nutrients over application of fertilizers</li> <li>• Students identify the organs involved in digestive system of humans.</li> </ul>		<ul style="list-style-type: none"> <li>• Identify types of teeth.</li> <li>• Identify the taste buds.</li> <li>• Know about the digestive juices.</li> <li>• Differentiate s organisms on the basis of the process of digestion.</li> <li>• Explain process of digestive system in animals and human</li> <li>• Draw labelled diagram or flow charts of human digestive system.</li> </ul>
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<p style="text-align: center;">MAY No of Days: 14</p>	<p><b>L-2 Nutrition in Animals</b> Digestion in ruminants Digestion in Amoeba</p>	<p><b>Students will be able to:</b></p> <ul style="list-style-type: none"> <li>• Define ruminants, rumination, pseudopodia</li> <li>• Explain the digestion process in ruminants and in amoeba</li> </ul>	<p><b>KNOWLEDGE:</b></p> <ul style="list-style-type: none"> <li>• Explain digestion process in grass eating animals and in amoeba.</li> </ul> <p><b>SKILL:</b></p> <ul style="list-style-type: none"> <li>• Diagram making</li> <li>• Observation</li> <li>• Scientific skill</li> <li>• Problem solving</li> </ul> <p><b>APPLICATION:</b></p> <ul style="list-style-type: none"> <li>• Draw well labelled diagrams of digestive system of human beings, Ruminants and amoeba.</li> </ul> <p><b>UNDERSTANDING:</b></p> <ul style="list-style-type: none"> <li>• Students identify the organs involved in digestive system of ruminants and amoeba.</li> <li>• Students describe the movement of amoeba.</li> </ul>	<p>Naturalist Intelligence</p> <p>Mathematical Intelligence</p> <p>Interpersonal Intelligence</p> <p>Visual-Spatial Intelligence.</p> <p>Existential Intelligence</p> <p>Linguistic Intelligence</p>	<p><b>Students will be able to:</b></p> <ul style="list-style-type: none"> <li>• Differentiate s organisms on the basis of the process of digestion.</li> <li>• Explain process of digestive system in animals and draw labelled diagram or flow charts</li> </ul>
	<p><b>REVISION: PT-1</b></p>				

**CONDUCTION OF PT-1 ASSESSMENT**

<p align="center">JULY No of Days: 27</p>	<p><b>L-3 Heat</b> Temperature Modes of transfer of heat. <b>L-4 Acid, Bases and Salts</b> Properties of acids and bases Natural indicators <b>L-5 Physical and Chemical Changes</b> Characteristics of physical and chemical changes Applications in daily life.</p>	<p><b>Students will be able to:</b></p> <ul style="list-style-type: none"> <li>• Differentiate between conduction, convection and radiation</li> <li>• Illustrate the daily life examples of the three modes of transfer of heat</li> <li>• To study the concept of acids, bases and salts</li> <li>• To study different indicators and their color changes on different substances.</li> <li>• To understand neutralization</li> <li>• Students will be able to describe the differences between a physical and chemical change.</li> </ul>	<p><b>KNOWLEDGE:</b></p> <ul style="list-style-type: none"> <li>• Identify the three modes of transfer of heat.</li> <li>• Understands the physical properties of Acids, Bases and Salts.</li> <li>• Illustrate and classify Physical and chemical change.</li> </ul> <p><b>SKILL:</b></p> <ul style="list-style-type: none"> <li>• Cartoon making</li> <li>• Hands on learning</li> <li>• Baking</li> </ul> <p><b>APPLICATION:</b></p> <ul style="list-style-type: none"> <li>• Conduct research and prepare a case study with evidence on the forests of Odisha.</li> <li>• Study the effects of acid and bases on different indicators.</li> <li>• Applies in daily life</li> </ul> <p><b>UNDERSTANDING:</b></p>	<p>Naturalist Intelligence</p> <p>Logical-Mathematical Intelligence</p> <p>Interpersonal Intelligence</p> <p>Visual-Spatial Intelligence.</p> <p>Existential Intelligence</p> <p>Linguistic Intelligence</p>	<p><b>Students will be able to:</b></p> <ul style="list-style-type: none"> <li>• Measure and calculate Temperature, explains modes of transfer of heat, differentiates materials as conductors and insulators.</li> <li>• Differentiate acidic, basic, neutral substances, conduct simple investigations to seek answers for flower colors as acid base indicator</li> <li>• writing word equation for chemical reactions</li> <li>• Classify physical and chemical changes.</li> </ul>
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			<ul style="list-style-type: none"> <li>Students apply the knowledge in their real-life applications.</li> </ul>		
<p style="text-align: center;">AUGUST No of Days: 23</p>	<p><b>CH-12 Forests: Our Lifeline</b> (Only for activity assessment) <b>L-6 Respiration in Organisms</b> Types of respiration Respiration in human beings, aquatic animals and insects</p>	<p><b>Students will be able to:</b></p> <ul style="list-style-type: none"> <li>Identify different layers of forests.</li> <li>Learn and understand various components of forests.</li> <li>Explain the process of respiration in human beings, fish, insects.</li> </ul>	<p><b>KNOWLEDGE:</b></p> <ul style="list-style-type: none"> <li>Learn about balance of oxygen and carbon dioxide.</li> <li>Differentiate between aerobic and anaerobic respiration.</li> </ul> <p><b>SKILL:</b></p> <ul style="list-style-type: none"> <li>Document making</li> <li>Hands on learning</li> <li>Drawing skill</li> <li>Observation</li> </ul> <p><b>APPLICATION:</b></p> <ul style="list-style-type: none"> <li>Make rap or poem to aware about the importance of the forests</li> <li>Apply in daily life applications.</li> </ul> <p><b>UNDERSTANDING:</b></p> <ul style="list-style-type: none"> <li>Importance of forests.</li> <li>Know and explain about the processes involved during respiration.</li> </ul>	<p>Naturalist Intelligence</p> <p>Logical-Mathematical Intelligence</p> <p>Interpersonal Intelligence</p> <p>Visual-Spatial Intelligence.</p> <p>Existential Intelligence</p> <p>Linguistic Intelligence</p>	<p><b>Students will be able to:</b></p> <ul style="list-style-type: none"> <li>Make efforts to protect the environment</li> <li>Make use of available resources.</li> <li>Plant more trees</li> <li>Explain the processes and phenomena organs and systems in human, plants and animals; write word equation for aerobic and anaerobic respiration.</li> </ul>

SEPTEMBER No of Days: 05	<b>REVISION: TERM-1</b>				
<b>CONDUCTION OF TERM-1 ASSESSMENT</b>					
OCTOBER No of Days: 22	<p><b>L-7 Transportation in Animals and Plants</b> Circulatory system Excretory system</p> <p><b>L- 8 Reproduction in Plants</b> Modes of reproduction Fertilization Seed dispersal</p>	<p><b>Students will be able to:</b></p> <ul style="list-style-type: none"> <li>Understands about circulatory system, excretory system and about the transportation of water and minerals</li> <li>Differentiates between sexual and asexual reproduction in plants.</li> <li>Identifies the male and female reproductive parts of flower</li> <li>Illustrate the unisexual and bisexual flower</li> <li>Explain fertilization</li> </ul>	<p><b>KNOWLEDGE:</b></p> <ul style="list-style-type: none"> <li>Identify the process involved in circulation of blood in heart, kidneys of human</li> <li>Know about sexual and asexual reproduction of plants, fertilization, formation of fruit and seed.</li> </ul> <p><b>SKILL:</b></p> <ul style="list-style-type: none"> <li>Diagram making</li> <li>Experimenting,</li> <li>Communicating</li> <li>Observing qualities</li> </ul> <p><b>APPLICATION:</b></p> <ul style="list-style-type: none"> <li>Role play: Explain the role of different organs participating in the Circulatory</li> </ul>	<p>Naturalist Intelligence</p> <p>Logical-Mathematical Intelligence</p> <p>Interpersonal Intelligence</p> <p>Visual-Spatial Intelligence.</p> <p>Existential Intelligence</p> <p>Linguistic Intelligence</p>	<p><b>Students will be able to:</b></p> <ul style="list-style-type: none"> <li>Explain the processes and phenomena organs and systems in human, plants and animals.</li> <li>Explain the processes and phenomena circulatory system, excretory system in humans.</li> <li>Draw the diagram for structure of heart, excretory system.</li> <li>Differentiate unisexual</li> </ul>

		and seed dispersal	system/ Excretory system/ <ul style="list-style-type: none"> <li>• Practical: To study the reproductive parts of a flower.</li> </ul> <b>UNDERSTANDING:</b> <ul style="list-style-type: none"> <li>• Relate in daily life applications.</li> <li>• Learn to reproduce new plants using vegetative parts of plants</li> </ul>		and bisexual flowers. <ul style="list-style-type: none"> <li>• Explain the modes of reproduction in plants.</li> <li>• Identify unisexual and bisexual flowers.</li> </ul>
NOVEMBER No of Days: 23	<b>L-9 Motion and time</b> Speed Distance time graph	<b>Students will be able to:</b> <ul style="list-style-type: none"> <li>• To define speed.</li> <li>• To calculate speed using its formula and state the units</li> <li>• To study the technique of measuring time using periodic movements.</li> <li>• To represent motion of objects in a distance-time graph.</li> </ul>	<b>KNOWLEDGE:</b> <ul style="list-style-type: none"> <li>• Draw the Distance time graphs.</li> <li>• Identify the speed of the object.</li> </ul> <b>SKILL:</b> <ul style="list-style-type: none"> <li>• Scientific skills</li> <li>• Problem solving</li> <li>• Mathematical calculation</li> <li>• Critical thinking</li> <li>• Experimentation</li> </ul> <b>APPLICATION:</b> <ul style="list-style-type: none"> <li>• To study the Motion of a simple pendulum and calculate its Time period.</li> </ul>	Naturalist Intelligence  Logical-Mathematical Intelligence  Interpersonal Intelligence Visual-Spatial Intelligence.	<b>Students will be able to:</b> <ul style="list-style-type: none"> <li>• Measure and calculate speed of moving objects.</li> <li>• Calculate time period of simple pendulum.</li> <li>• Plots interprets the graph; distance time graph.</li> </ul>

		<ul style="list-style-type: none"> <li>To study the motion of objects using distance time graph</li> </ul>	<ul style="list-style-type: none"> <li>Apply Knowledge in real life to find out the speed and distance covered of vehicles.</li> </ul> <p><b>UNDERSTANDING:</b></p> <ul style="list-style-type: none"> <li>Create distance vs. time graphs</li> <li>Use, Record and analyze data in a lab</li> <li></li> </ul>		
<p>DECEMBER No of Days: 11</p>	<p><b>L-10 Electric current and its Effects</b> Symbols of electrical components. Connections of electrical components in a simple circuit diagram. Effects of electric current.</p>	<p><b>Students will be able to:</b></p> <ul style="list-style-type: none"> <li>Learn about electric current, circuit</li> <li>Identify various electrical components</li> <li>Make connections in an electrical circuit.</li> <li>Understand effects of electric current.</li> <li>Learn ecofriendly ways to save energy.</li> </ul>	<p><b>KNOWLEDGE:</b></p> <ul style="list-style-type: none"> <li>Know the concept of electric current</li> <li>Identify the symbols of electronic components</li> <li>Understand the basic concept of effects of electric current.</li> </ul> <p><b>SKILL:</b></p> <ul style="list-style-type: none"> <li>Drawing skill</li> <li>Experimentation</li> <li>Scientific skills</li> <li>Problem solving</li> <li>Mathematical calculation</li> <li>Critical thinking</li> </ul> <p><b>APPLICATION:</b></p> <ul style="list-style-type: none"> <li>Identify the effects of electric current in</li> </ul>	<p>Naturalist Intelligence</p> <p>Logical-Mathematical Intelligence</p> <p>Interpersonal Intelligence</p> <p>Visual-Spatial Intelligence.</p> <p>Existential Intelligence</p> <p>Linguistic Intelligence</p>	<p><b>Students will be able to:</b></p> <ul style="list-style-type: none"> <li>Explain heating and magnetic effect of electric current.</li> <li>Draw electric circuits, Constructs and explains working of electromagnet and electric bell.</li> </ul>



			<p>various daily life applications.</p> <ul style="list-style-type: none"> <li>• Make simple circuit by using electrical components.</li> </ul> <p><b>UNDERSTANDING:</b></p> <ul style="list-style-type: none"> <li>• Draw electric circuit using the symbols of electrical components</li> <li>• Make electromagnet</li> <li>• Explain the concept of effects of electric current.</li> </ul>		
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**REVISION: PT-2**

**CONDUCTION OF PT-2 ASSESSMENT**

<p align="center">JANUARY No of Days: 21</p>	<p><b>L-11 Light</b> Reflection of light from plane mirror. Spherical mirrors.</p>	<p><b>Students will be able to:</b></p> <ul style="list-style-type: none"> <li>• Differentiate the concave and convex mirror</li> <li>• Explain about the rainbow formation.</li> <li>• Apply in daily life applications.</li> </ul>	<p><b>KNOWLEDGE:</b></p> <ul style="list-style-type: none"> <li>• Understand the properties of light</li> <li>• Identify and illustrate the types of mirror and lenses.</li> </ul> <p><b>SKILL:</b></p> <ul style="list-style-type: none"> <li>• Observing qualities,</li> <li>• Communicating</li> <li>• Eco friendly</li> <li>• Scientific skills</li> </ul> <p><b>APPLICATION:</b></p>	<p>Naturalist Intelligence</p> <p>Logical-Mathematical Intelligence</p> <p>Interpersonal Intelligence</p> <p>Visual-Spatial Intelligence.</p> <p>Existential Intelligence</p>	<p><b>Students will be able to:</b></p> <ul style="list-style-type: none"> <li>• Apply learning of scientific concepts in day-to-day life.</li> <li>• Identify mirrors and lenses on the basis of observable features.</li> </ul>
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			<p>Use different spherical mirrors and plane mirrors based on their characteristics.</p> <p><b>UNDERSTANDING:</b> Explain the applications of mirrors and lenses and natural phenomenon related to light.</p>	Linguistic Intelligence	<ul style="list-style-type: none"> <li>• Differentiate the images formed by mirrors and lenses.</li> <li>• Conducts simple investigations to seek answers- white light consists of seven colors.</li> </ul>
<p>FEBRUARY No of Days: 22</p>	<p><b>L-13 Waste water story</b></p> <p>Waste water treatment plant Water saving habits</p>	<p><b>Students will be able to:</b></p> <ul style="list-style-type: none"> <li>• Learn and understand importance of water and to avoid wastage of water.</li> <li>• Understand the processes of waste water treatment.</li> <li>• Practices sustainable habits for conservation</li> </ul>	<p><b>KNOWLEDGE:</b></p> <ul style="list-style-type: none"> <li>• Know the availability and importance of water.</li> </ul> <p><b>SKILL:</b></p> <ul style="list-style-type: none"> <li>• Observing qualities</li> <li>• Experimenting, Communicating</li> <li>• Eco friendly</li> <li>• Scientific skills</li> </ul> <p><b>APPLICATION</b></p> <ul style="list-style-type: none"> <li>• To reuse the waste water by adopting innovative and ecofriendly technique for purifying waste water.</li> </ul>	<p>Naturalist Intelligence</p> <p>Logical-Mathematical Intelligence</p> <p>Interpersonal Intelligence</p> <p>Visual-Spatial Intelligence.</p> <p>Existential Intelligence</p> <p>Linguistic Intelligence</p>	<p><b>Students will be able to:</b></p> <ul style="list-style-type: none"> <li>• Sensitize others with consequences of wasting water, suggesting methods for treatment of polluted water for reuse.</li> <li>• Follow good practices at public places.</li> </ul>

	<b>REVISION: TERM-2</b>				
MARCH	<b>CONDUCTION OF TERM-2 ASSESSMENT</b>				