

INFANT JESUS CONVENT SCHOOL
ANNUAL PLAN
SCIENCE
CLASS: VII

MONTH/NO OF DAYS	TOPIC: SUB TOPIC	OBJECTIVES	AIDS/ACTIVITIES	MULTIPLE INTELLIGENCE SKILLS	LEARNING OUTCOME
<p>APRIL No of Days: 17</p>	<p>L-1 Nutrition In Plants Mode of Nutrition in plants: a. Autotrophic b. Heterotrophic Photosynthesis Other modes of nutrition in plants</p> <p>L-2 Nutrition in Animals Define nutrition Processes involved in nutrition Human digestive system</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> • Understand the different modes of nutrition • Identify and illustrate the types of modes • Explain the photosynthesis process. • Write the word equation of photosynthesis • How nutrients are replenished in the soil • Define nutrition • Relate the processes involved in nutrition 	<p>KNOWLEDGE:</p> <ul style="list-style-type: none"> • Identify different modes of nutrition in plants. • Learn about stomata, chlorophyll. • Students know about the digestive juices and the organs which secrete them. • Locate the types of teeth and taste buds of tongue. <p>SKILL:</p> <ul style="list-style-type: none"> • Diagram making • Analyzing Scientific skill • Problem solving <p>APPLICATION:</p> <ul style="list-style-type: none"> • Investigate and infer the presence of starch in leaf through experiment. 	<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>Students will be able to:</p> <ul style="list-style-type: none"> • Define Nutrition and explain mode of nutrition and photosynthesis. • Identify the types of modes of nutrition in plants. • Draw the diagram of photosynthesis. • Understand the importance of replenishment of nutrients in soil.

		<ul style="list-style-type: none"> • Explain the digestion process in human beings 	<ul style="list-style-type: none"> • Students demonstrate the effect of saliva on starch through experimental activity. • Draw well labelled diagrams Human beings and tongue • Prepare a model using clay of digestive system of human being, Cow, Amoeba <p>UNDERSTANDING:</p> <ul style="list-style-type: none"> • Describe the process stomatal opening and the raw materials used by plants during photosynthesis. • Importance of manure /nature replenishment of nutrients over application of fertilizers • Students identify the organs involved in digestive system of humans. 		<ul style="list-style-type: none"> • Identify types of teeth. • Identify the taste buds. • Know about the digestive juices. • Differentiate s organisms on the basis of the process of digestion. • Explain process of digestive system in animals and human • Draw labelled diagram or flow charts of human digestive system.
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<p>MAY</p> <p>No of Days: 12</p>	<p>L-2 Nutrition in Animals</p> <p>Digestion in ruminants</p> <p>Digestion in Amoeba</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> • Define ruminants, rumination, pseudopodia • Explain the digestion process in ruminants and in amoeba 	<p>KNOWLEDGE:</p> <ul style="list-style-type: none"> • Explain digestion process in grass eating animals and in amoeba. <p>SKILL:</p> <ul style="list-style-type: none"> • Diagram making • Observation • Scientific skill • Problem solving <p>APPLICATION:</p> <ul style="list-style-type: none"> • Draw well labelled diagrams of digestive system of Ruminants and amoeba. <p>UNDERSTANDING:</p> <ul style="list-style-type: none"> • Students identify the organs involved in digestive system of ruminants and amoeba. • Students describe the movement of amoeba. 	<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>Students will be able to:</p> <ul style="list-style-type: none"> • Differentiate s organisms on the basis of the process of digestion. • Explain process of digestive system in animals and draw labelled diagram or flow charts
	<p>REVISION: PT-1</p>				
<p>CONDUCTION OF PT-1 ASSESSMENT (Third Week of May)</p>					

<p style="text-align: center;">JULY No of Days: 23</p>	<p>L-4 Heat Temperature Modes of transfer of heat. L-5 Acid, Bases and Salts Properties of acids and bases Natural indicators L-6 Physical and Chemical Changes Characteristics of physical and chemical changes Applications in daily life.</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> • Differentiate between conduction, convection and radiation • Illustrate the daily life examples of the three modes of transfer of heat • To study the concept of acids, bases and salts • To study different indicators and their color changes on different substances. • To understand neutralization • Students will be able to describe the differences between a physical and chemical change. 	<p>KNOWLEDGE:</p> <ul style="list-style-type: none"> • Identify the three modes of transfer of heat. • Understands the physical properties of Acids, Bases and Salts. • Illustrate and classify Physical and chemical change. <p>SKILL:</p> <ul style="list-style-type: none"> • Cartoon making • Hands on learning • Baking <p>APPLICATION:</p> <ul style="list-style-type: none"> • Study the effects of acid and bases on different indicators. • Applies in daily life <p>UNDERSTANDING:</p> <ul style="list-style-type: none"> • Students apply the knowledge in their real-life applications. 	<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>Students will be able to:</p> <ul style="list-style-type: none"> • Measure and calculate Temperature , explains modes of transfer of heat, differentiates materials as conductors and insulators. • Differentiate acidic, basic, neutral substances, conduct simple investigations to seek answers for flower colors as acid base indicator • writing word equation for chemical reactions • Classify physical and chemical changes.
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<p style="text-align: center;">AUGUST No of Days: 23</p>	<p>CH-17 Forests: Our Lifeline (Only for activity assessment) L-10 Respiration in Organisms Types of respiration Respiration in human beings, aquatic animals and insects</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> Identify different layers of forests. Learn and understand various components of forests. Explain the process of respiration in human beings, fish, insects. 	<p>KNOWLEDGE:</p> <ul style="list-style-type: none"> Learn about balance of oxygen and carbon dioxide. Differentiate between aerobic and anaerobic respiration. <p>SKILL:</p> <ul style="list-style-type: none"> Document making Hands on learning Drawing skill Observation <p>APPLICATION:</p> <ul style="list-style-type: none"> Conduct research and prepare a case study with evidence on the forests of Odisha. Apply in daily life applications. <p>UNDERSTANDING:</p> <ul style="list-style-type: none"> Importance of forests. Know and explain about the processes involved during respiration. 	<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>Students will be able to:</p> <ul style="list-style-type: none"> Make efforts to protect the environment Make use of available resources. Plant more trees Explain the processes and phenomena organs and systems in human, plants and animals; write word equation for aerobic and anaerobic respiration.
<p>SEPTEMBER No of Days: 05</p>	<p>REVISION: TERM-1</p>				

CONDUCTION OF TERM-1 ASSESSMENT (Second Week of September)

<p align="center">OCTOBER No of Days: 22</p>	<p>L-11 Transportation in Animals and Plants Circulatory system Excretory system</p> <p>L-12 Reproduction in Plants Modes of reproduction Fertilization Seed dispersal</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> • Understands about circulatory system, excretory system and about the transportation of water and minerals • Differentiates between sexual and asexual reproduction in plants. • Identifies the male and female reproductive parts of flower • Illustrate the unisexual and bisexual flower • Explain fertilization and seed dispersal 	<p>KNOWLEDGE:</p> <ul style="list-style-type: none"> • Identify the process involved in circulation of blood in heart, kidneys of human • Know about sexual and asexual reproduction of plants, fertilization, formation of fruit and seed. <p>SKILL:</p> <ul style="list-style-type: none"> • Diagram making • Experimenting, • Communicating • Observing qualities <p>APPLICATION:</p> <ul style="list-style-type: none"> • Infographic Activity: Find out about blood groups and their importance. • Practical: To study the reproductive parts of a flower. <p>UNDERSTANDING:</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>Students will be able to:</p> <ul style="list-style-type: none"> • Explain the processes and phenomena organs and systems in human, plants and animals. • Explain the processes and phenomena circulatory system, excretory system in humans. • Draw the diagram for structure of heart, excretory system. • Differentiate unisexual and bisexual flowers. • Explain the modes of reproduction in plants.
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			<ul style="list-style-type: none"> • Relate in daily life applications. • Learn to reproduce new plants using vegetative parts of plants 		<ul style="list-style-type: none"> • Identify unisexual and bisexual flowers.
<p>NOVEMBER No of Days: 22</p>	<p>L-13 Motion and time Speed Distance time graph</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> • To define speed. • To calculate speed using its formula and state the units • To study the technique of measuring time using periodic movements. • To represent motion of objects in a distance-time graph. 	<p>KNOWLEDGE:</p> <ul style="list-style-type: none"> • Draw the Distance time graphs. • Identify the speed of the object. <p>SKILL:</p> <ul style="list-style-type: none"> • Scientific skills • Problem solving • Mathematical calculation • Critical thinking • Experimentation <p>APPLICATION:</p> <ul style="list-style-type: none"> • To study the Motion of a simple pendulum and calculate its Time period. 	<p>Naturalist Intelligence</p> <p>Logical-Mathematical Intelligence</p> <p>Interpersonal Intelligence</p> <p>Visual-Spatial Intelligence.</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> • Measure and calculate speed of moving objects. • Calculate time period of simple pendulum. • Plots interprets the graph; distance time graph.

		<ul style="list-style-type: none"> To study the motion of objects using distance time graph 	<ul style="list-style-type: none"> Apply Knowledge in real life to find out the speed and distance covered of vehicles. <p>UNDERSTANDING:</p> <ul style="list-style-type: none"> Create distance vs. time graphs Use, Record and analyze data in a lab 		
<p>DECEMBER No of Days: 12</p>	<p>L-14 Electric current and its Effects Symbols of electrical components. Connections of electrical components in a simple circuit diagram. Effects of electric current.</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> Learn about electric current, circuit Identify various electrical components Make connections in an electrical circuit. Understand effects of electric current. Learn ecofriendly ways to save energy. 	<p>KNOWLEDGE:</p> <ul style="list-style-type: none"> Know the concept of electric current Identify the symbols of electronic components Understand the basic concept of effects of electric current. <p>SKILL:</p> <ul style="list-style-type: none"> Drawing skill Experimentation Scientific skills Problem solving Mathematical calculation Critical thinking <p>APPLICATION:</p> <ul style="list-style-type: none"> Identify the effects of electric current in 	<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>Students will be able to:</p> <ul style="list-style-type: none"> Explain heating and magnetic effect of electric current. Draw electric circuits, Constructs and explains working of electromagnet and electric bell.

			<p>various daily life applications.</p> <ul style="list-style-type: none"> • Write the working of any two such applications explain about each effect of electric current in each case <p>UNDERSTANDING:</p> <ul style="list-style-type: none"> • Draw electric circuit using the symbols of electrical components • Make electromagnet • Explain the concept of effects of electric current. 		
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REVISION: PT-2

CONDUCTION OF PT-2 ASSESSMENT

<p align="center">JANUARY No of Days: 18</p>	<p>L-15 Light Reflection of light from plane mirror. Spherical mirrors.</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> • Differentiate the concave and convex mirror • Explain about the rainbow formation. 	<p>KNOWLEDGE:</p> <ul style="list-style-type: none"> • Understand the properties of light • Identify and illustrate the types of mirror and lenses. <p>SKILL:</p> <ul style="list-style-type: none"> • Observing qualities, • Communicating 	<p>Naturalist Intelligence</p> <p>Logical-Mathematical Intelligence</p> <p>Interpersonal Intelligence</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> • Apply learning of scientific concepts in day-to-day life. • Identify mirrors and lenses on the
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		<ul style="list-style-type: none"> Apply in daily life applications. 	<ul style="list-style-type: none"> Eco friendly Scientific skills <p>APPLICATION:</p> <ul style="list-style-type: none"> Practical: To identify the spherical mirrors (Concave and Convex) and study their characteristics. <p>UNDERSTANDING: Explain the applications of mirrors and lenses and natural phenomenon related to light.</p>	<p>Visual-Spatial Intelligence.</p> <p>Existential Intelligence</p> <p>Linguistic Intelligence</p>	<p>basis of observable features.</p> <ul style="list-style-type: none"> Differentiate the images formed by mirrors and lenses. Conducts simple investigations to seek answers- white light consists of seven colors.
<p>FEBRUARY</p> <p>No of Days: 23</p>	<p>L-18 Waste water story</p> <p>Waste water treatment plant</p> <p>Water saving habits</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> Learn and understand importance of water and to avoid wastage of water. Understand the processes of waste water treatment. Practices sustainable habits for conservation 	<p>KNOWLEDGE:</p> <ul style="list-style-type: none"> Know the availability and importance of water. <p>SKILL:</p> <ul style="list-style-type: none"> Observing qualities Experimenting, Communicating Eco friendly Scientific skills <p>APPLICATION</p> <ul style="list-style-type: none"> To reuse the waste water by adopting 	<p>Naturalist Intelligence</p> <p>Logical-Mathematical Intelligence</p> <p>Interpersonal Intelligence</p> <p>Visual-Spatial Intelligence.</p> <p>Existential Intelligence</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> Sensitize others with consequences of wasting water, suggesting methods for treatment of polluted water for reuse. Follow good practices at

			innovative and ecofriendly technique for purifying waste water.	Linguistic Intelligence	public places.
	REVISION: TERM-2				
MARCH	CONDUCTION OF TERM-2 ASSESSMENT				