

INFANT JESUS CONVENT SCHOOL
ANNUAL PLAN
SCIENCE
CLASS: VIII

MONTH/NO OF DAYS	TOPIC: SUB TOPIC	OBJECTIVES	AIDS/ACTIVITIES	MULTIPLE INTELLIGENCE SKILLS	LEARNING OUTCOME
<p style="text-align: center;">APRIL No of Days: 17</p>	<p><u>TOPIC</u> <u>FOOD</u></p> <ul style="list-style-type: none"> • Crop Production & Management • Microorganisms- Friend and foe <p><u>SUB-TOPICS</u></p> <ul style="list-style-type: none"> • Basic Practices of Crop Production • Preparation of soil • Agricultural Implements • Preparation of soil • Sowing • Adding manure and fertilizers • Irrigation • Protecting from weeds • Harvesting • Storage • Food from Animals • Microorganisms 	<p>Students will be able to:</p> <ul style="list-style-type: none"> • Classify the major crops based on the time they are sown in the field. • Sequence the tasks involved in cultivating the crop. • Compare the advantages of major tools used for tilling, ploughing and sowing. • Identify commonly known food items based on their sources to define animal husbandry • List four major categories of microorganisms • Differentiate between microorganisms and viruses 	<p>KNOWLEDGE:</p> <ul style="list-style-type: none"> • Mind map: Agricultural Practices • Cover Page: Draw the major categories of microorganisms. <p>SKILLS: Observation Problem solving skill Critical and Creative thinking</p> <p>APPLICATION:</p> <ul style="list-style-type: none"> • Illustrate the uses of microorganism in daily Life (Paste pictures for the same) • Grow wheat grass and write its importance 	<ul style="list-style-type: none"> • Visual and spatial • Interpersonal • Intrapersonal 	<p>Students will be able to:</p> <ul style="list-style-type: none"> • Classifies materials and organisms based on properties / characteristics. • Draws labelled diagram / flow charts, • Apply the use of microbes in our daily life. • Makes efforts to protect environment, e.g., using resources judiciously. • Conducts simple investigations to seek answers to queries.

	<ul style="list-style-type: none"> • Microorganisms and Us • Friendly microbes • Harmful microorganisms • Food preservation • Nitrogen cycle 	<ul style="list-style-type: none"> • Explain the role of micro-organisms (friend and foe) • List various methods of preserving food • Illustrate nitrogen cycle • Apply acquired knowledge of the concept in daily life. 	UNDERSTANDING: <ul style="list-style-type: none"> • Distinguish between modern and traditional methods of farming. • Identify the various methods of food preservation. 		
MAY No of Days: 12	REVISION OF PT1				
CONDUCTION OF PT – 1					
JULY No of Days: 23	TOPIC NATURAL RESOURCES <ul style="list-style-type: none"> • Coal and Petroleum MATERIAL <ul style="list-style-type: none"> • Combustion and flame THE WORLD OF LIVING <ul style="list-style-type: none"> • Conservation of plants and animals SUB-TOPIC <ul style="list-style-type: none"> • Natural resources • Coal • Story of coal • Coke, coal tar and coal gas • Petroleum 	Students will be able to: <ul style="list-style-type: none"> • Remember the origin and importance of fossil fuels. • Differentiate between combustible and non-combustible substances. • Understand the formation of petroleum and coal. • List the useful products & by-products of processing of coal and petroleum. • Classify different constituents of 	KNOWLEDGE: <ul style="list-style-type: none"> • Mind map (fossil fuels). • Crossword • Map work: Mark the National parks and sanctuaries on the physical map of India SKILLS: Observation Classification Creative thinking Problem solving skill	<ul style="list-style-type: none"> • Visual and spatial • Bodily-Kinesthetic Intelligence • Intrapersonal • Naturalistic 	Students will be able to: <ul style="list-style-type: none"> • Explains properties / characteristics of materials in order to classify them • Conducts simple investigations on his/her own in order to seek answers to queries. • Differentiates materials on the basis of their properties. • Makes efforts to apply to daily life the understanding

	<ul style="list-style-type: none"> • Refining of Petroleum • Natural Gas • Some Natural Resources are Limited • What is combustion • How do we control fire? • Types of Combustion • Flame • Structure of a flame • What is a fuel? • Fuel efficiency • Burning of Fuels Leads to Harmful products. 	<p>petroleum according to their use.</p> <ul style="list-style-type: none"> • Plan suitable methods to conserve fossil fuels. • Define combustion and explain the necessary conditions for combustion to take place. • Create awareness on Ignition temperature of a substance. • Explain how a fire can be extinguished. • Comprehend on flame and its zones. • Calculate calorific value • List the harmful effects of burning fuel on individual and on environment. • List causes and consequences of deforestation • Conservation of forest and wildlife • Describe flora and fauna • Gain knowledge about endemic and endangered species. • Cite sanctuaries and national parks in India. 	<ul style="list-style-type: none"> • Collage formation to represent the uses of Products obtained from petroleum refineries. • Comprehend the need of conserving the extinct and endemic species. <p>UNDERSTANDING:</p> <ul style="list-style-type: none"> • Compare types of combustion. • Discuss the process of formation of coal and petroleum • Discuss the threats to biodiversity. 		<p>of environment and steps to conserve it, in order to contribute to the protection of the environment,</p> <ul style="list-style-type: none"> • Constructs models using materials from surroundings and explains their working in order to demonstrate scientific knowledge and understanding of how it works. • Comprehend the need to conserve flora and fauna • Explain the effects of deforestation on the environment & methods adopted to conserve forests. • List the methods to
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AUGUST No of Days: 23	<p><u>TOPIC</u> MOVING THINGS, PEOPLE AND IDEAS</p> <ul style="list-style-type: none"> • Force and Pressure • Friction <p><u>SUB-TOPIC</u></p> <ul style="list-style-type: none"> • Force-Push or Pull • Forces are due to an Interaction • Exploring Forces • Effects of Force • Contact forces • Non-contact forces • Pressure • Pressure exerted by liquids and gases • Atmospheric Pressure • Force of Friction • Factors affecting Friction • Friction : A Necessary Evil • Increasing and Reducing Friction • Wheels Reduce Friction • Fluid Friction 	<p>Students will be able to:</p> <ul style="list-style-type: none"> • Classify the common actions of push/pull • To find net resultant force when the force is applied in any direction • Cite examples from daily life to predict the changes brought about by force. • Compare contact and non-contact forces. • Derive the formula & units of pressure with its factors & explore this formula in day to day life • Demonstrate the properties, effects & advantages of pressure due to air & liquid. • Relate frictional force with the force applied. 	<p>KNOWLEDGE:</p> <ul style="list-style-type: none"> • Mind map: Force and its types • Cover Page: List the cases in which friction is one of the forces acting on an object. <p>SKILLS: Observation Classification Creative thinking Problem solving skill</p> <p>APPLICATION:</p> <ul style="list-style-type: none"> • To show that liquid pressure depends only upon the height of the liquid column and not the volume of the liquid • Apply necessary techniques to increase & decrease friction. • Poem: Appreciate the importance of friction. 	<ul style="list-style-type: none"> • Visual and spatial • Bodily-Kinesthetic Intelligence • Intrapersonal • Naturalistic 	<p>Students will be able to:</p> <ul style="list-style-type: none"> • Explains processes and phenomenon • Classifies materials and organisms based on properties / characteristics • Illustrate the actions of push/pull as force applied • Assess everyday actions of motion as an interaction between two objects. • Recognize & classify the types of forces & able to list the examples with simple activities. • Discover & compare the properties of

		<ul style="list-style-type: none"> • Identify the factors affecting friction. • Classify the type of friction according to their functions. • Illustrate advantages and disadvantages of friction • Understand the methods to minimize and maximize friction • Describe fluid friction 	UNDERSTANDING: <ul style="list-style-type: none"> • Solve the numerical on pressure. • Identify the types of friction 		air and liquid pressure <ul style="list-style-type: none"> • Relate friction force and the factors that contribute to friction force. • Inculcate the scientific temper regarding observation and interpretations • Justify friction as necessary evil & identify the methods to minimize or maximize friction. • Explains Fluid Friction
SEPTEMBER No of Days: 05	REVISION: TERM 1				
CONDUCTION OF TERM 1 ASSESSMENT					
	TOPIC THE WORLD OF LIVING <ul style="list-style-type: none"> • Reproduction in animals • Reaching the age of adolescence SUB-TOPIC	Students will be able to: <ul style="list-style-type: none"> • Differentiate between asexual and sexual reproduction • Describe the process of fertilization 	KNOWLEDGE: <ul style="list-style-type: none"> • Mind map(Modes of reproduction) • State the changes seen in the body. SKILLS: Observation Classification	<ul style="list-style-type: none"> • Visual and spatial • Intrapersonal • Logical-Mathematical Intelligence 	Students will be able to: <ul style="list-style-type: none"> • Explains processes and phenomena in order to relate to science behind the phenomena/proce

<p>OCTOBER No of Days: 22</p>	<ul style="list-style-type: none"> • Modes of reproduction • Sexual reproduction • Male and Female reproductive organ • Fertilisation • Viviparous and oviparous animals • Development of an embryo • Young Ones to Adults • Asexual reproduction • Puberty & adolescence • Changes at puberty • Secondary Sexual Characters • Role of Hormones in Initiating Reproductive Function • Reproductive Phase of Life in Humans • How is the Sex of the Baby Determined? • Hormones other than Sex Hormones • Role of Hormones in Completing the 	<ul style="list-style-type: none"> • Differentiate between internal and external fertilization • Distinguish between viviparous and oviparous animals • Describe the process of embryo and foetus formation. • Explain metamorphosis • Define adolescence • Identify the changes at puberty • Define endocrine system and differentiate between gland and hormone. • Explore the 6 glands of endocrine system, their functions and connection between endocrine system and puberty. • Explain the role of hormones • Understand sex determination of the baby. • Elucidate the need for a balanced diet in order to explain the nutritional 	<p>Creative thinking</p> <p>APPLICATION:</p> <ul style="list-style-type: none"> • Identification of hydra and Amoeba through permanent slides. • Pictorial representation of male and female reproductive organs • Show the diagrammatic illustration of glands where they are located. <p>UNDERSTANDING:</p> <ul style="list-style-type: none"> • Classify animals based on their ability to give birth or lay eggs • Select proper methods/aids to resolve the problems faced by the adolescents and figure out the consequences of health risks. 		<p>asses and develop scientific thinking skills</p> <ul style="list-style-type: none"> • Draws labelled diagram human reproductive organs. • Applies learning of scientific concepts in daily life • Classifies materials and organisms based on properties / characteristics. • Conducts simple investigations on his/her own in order to seek answers to queries.
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	<p>Life History of Insects and Frogs</p> <ul style="list-style-type: none"> Adolescent Health 	needs of adolescents.			
<p>NOVEMBER No of Days: 22</p>	<p>TOPIC MOVING THINGS, PEOPLE AND IDEAS</p> <ul style="list-style-type: none"> Sound Chemical effects of Electric Current <p>SUB-TOPIC</p> <ul style="list-style-type: none"> What is Sound? Sound is Produced by a Vibrating Body Sound Produced by Humans Sound Needs a Medium for Propagation We Hear Sound through Our Ears Amplitude, Time Period and Frequency of a Vibration Audible and Inaudible Sounds Noise and Music Noise Pollution Conductors and insulators Do Liquids Conduct Electricity? 	<p>Students will be able to:</p> <ul style="list-style-type: none"> Explain the production, propagation of sound in the medium. Describe the characteristics of vibrations and sound waves Comprehend audible and inaudible sound. Explain the structure and function of human ear with the help of diagram Explain the process of conduction (in liquids) of electricity Describe the chemical effects of electric current Illustrate the applications of electroplating. 	<p>KNOWLEDGE:</p> <ul style="list-style-type: none"> Cover Page: List examples of body moving in, to and fro motion Mind map (Effects of electric current) <p>SKILLS: Observation Classification Creative thinking Problem solving</p> <p>APPLICATION:</p> <ul style="list-style-type: none"> Relate the quality by interpreting the graphical representation of the sound waves. Illustrate the applications of electrolysis. Demonstration of chemical effects of current <p>UNDERSTANDING:</p> <ul style="list-style-type: none"> Describe the characteristics of vibrations and sound waves. To suggest ways of safe disposal 	<ul style="list-style-type: none"> Visual and spatial Logical-Mathematical Intelligence 	<p>Students will be able to:</p> <ul style="list-style-type: none"> Show the relation between loudness and amplitude and pitch and frequency with the help of graphs. List out the harmful effects of noise pollution and choose the correct ways to reduce it. Inculcate the scientific temper regarding observation and interpretations Identify the application of electroplating industrially and day to day life.

	<ul style="list-style-type: none"> Chemical Effects of Electric Current Electroplating 		of the conducting solution.		
DECEMBER No of Days: 12	REVISION OF PT-2				
CONDUCTION OF PT-2 ASSESSMENT					
JANUARY No of Days: 18	<p>TOPIC NATURAL PHENOMENA</p> <ul style="list-style-type: none"> Some Natural Phenomena <p>SUB-TOPIC</p> <ul style="list-style-type: none"> Lightning Charging by Rubbing Types of Charges and Their Interaction Transfer of Charge The Story of Lightning Lightning Safety Earthquakes 	<p>Students will be able to:</p> <ul style="list-style-type: none"> Distinguish between current & static electricity. Explain the types & origin of charges. Explain the principle of an electroscope. Describe the reasons for atmospheric electricity & earthquake. Prepare the list of measures to be taken during lightning & earthquake. 	<p>KNOWLEDGE:</p> <ul style="list-style-type: none"> Crossword <p>SKILLS:</p> <p>Observation Classification Creative thinking Problem solving</p> <p>APPLICATION:</p> <ul style="list-style-type: none"> Sketching on Safety tips to be followed before and after a big natural disaster. <p>UNDERSTANDING:</p> <ul style="list-style-type: none"> Understand the disasters causes and consequences 	<ul style="list-style-type: none"> Visual and spatial Logical-Mathematical Intelligence 	<p>Students will be able to:</p> <ul style="list-style-type: none"> Differentiates between charges. Describes the working of an electroscope. Explain the reasons behind lightning & earthquake. List the safety measures to be taken during these natural phenomena

<p>FEBRUARY No of Days: 23</p>	<p>TOPIC NATURAL PHENOMENA</p> <ul style="list-style-type: none"> • Light <p>SUB-TOPIC</p> <ul style="list-style-type: none"> • Light • Laws of reflection • Regular and Diffused Reflection • Reflected Light Can be Reflected Again • Multiple Images • Sunlight — White or Coloured • What is inside Our Eyes? • Care of eyes • Visually Challenged Persons Can Read and Write • What is the Braille System? 	<p>Students will be able to:</p> <ul style="list-style-type: none"> • Explain the laws of reflection • Describe the nature of image formed by a plane mirror • Explain diffused and regular reflection. • Explain the dispersion of light with the help of prism and discuss the formation of rainbow. • Explore the parts of human eye and their functions. • Identify the various defects of vision and analyse its root cause and correction. • Choose the correct measures to take care of eye. 	<p>KNOWLEDGE:</p> <ul style="list-style-type: none"> • Cover Page (Properties of light) <p>SKILLS:</p> <p>Observation Classification Creative thinking Problem solving</p> <p>APPLICATION:</p> <ul style="list-style-type: none"> • To verify Laws of Reflection. <p>UNDERSTANDING:</p> <ul style="list-style-type: none"> • To study the mirror images when plane mirror is in horizontal and vertical position. 	<ul style="list-style-type: none"> • Visual and spatial • Logical-Mathematical Intelligence 	<p>Students will be able to:</p> <ul style="list-style-type: none"> • Demonstrate an experiment to prove the laws of reflection. • Name & review the location of different parts of the human eye with the help of diagram. • Differentiate the defects of human eye and suggest correction for the defective vision. • Recall the dot positions in Braille and list the correct measures to be taken for eye care.
<p>REVISION FINAL TERM</p>					
<p>MARCH</p>	<p>CONDUCTION OF FINAL ASSESSMENT</p>				