

INFANT JESUS CONVENT SCHOOL
ANNUAL PLAN
SCIENCE
CLASS: X

MONTH/NO OF DAYS	TOPIC: SUB TOPIC	OBJECTIVES	AIDS/ACTIVITIES	MULTIPLE INTELLIGENCE SKILLS	LEARNING OUTCOME
Extra Classes No of Days:10	<p>CHEMICAL SUBSTANCES-NATURE AND BEHAVIOUR</p> <p>TOPIC: Chapter 1: Chemical reactions and equations</p> <p>SUB-TOPICS</p> <ul style="list-style-type: none"> • Chemical equations • Types of chemical reactions • Combination reactions <p>EFFECTS OF CURRENT</p> <p>TOPIC: Chapter 11: Electricity</p> <p>SUB-TOPICS</p> <ul style="list-style-type: none"> • Electric Current and Circuit 	<p>Learners will be able to:</p> <ul style="list-style-type: none"> • Compare the characteristics of initial & final substances to check whether the change is physical or chemical. • Use chemical symbols & chemical formulae correctly to acquire the skill of writing chemical equations. • Categorize the given reactions as(combination) based on the reactants & products of a chemical reaction. • Evaluate the charge flowing through a conductor in a given time, to calculate current flowing through it. 	<p>KNOWLEDGE:</p> <ul style="list-style-type: none"> • List the chemical changes in a daily life situation. • Draw the symbols of electric components. • Recall the modes of nutrition <p>SKILL:</p> <ul style="list-style-type: none"> • Diagram making • Analyzing • Scientific skill • Problem solving • Creative thinking • Critical thinking <p>APPLICATION:</p> <ul style="list-style-type: none"> • Convert chemical change into word equation • Draw electric circuit using electrical symbols. • Prepare a temporary mount of leaf. 	Naturalist Intelligence Logical- Mathematical Intelligence Interpersonal Intelligence Visual-Spatial Intelligence. Existential Intelligence Linguistic Intelligence	<p>Learners will be able to: -</p> <ul style="list-style-type: none"> • Distinguish between physical and chemical change. • Write chemical equation. • Recall the symbols of elements. • Understand and explain the concept of charge and electric current. • Understand and Calculate potential difference between two points. • Identify and list different types of electrical components

	<ul style="list-style-type: none"> • Electric potential and Potential difference • Circuit diagram <p>TOPIC Chapter 5: Life processes</p> <p>SUB-TOPICS</p> <ul style="list-style-type: none"> • What are life processes? • Nutrition • Autotrophic nutrition 	<ul style="list-style-type: none"> • Determine work done in moving a charge across two points, to calculate potential difference between two points. • Identify the electrical components and their functions. • Define life processes. • Explain modes of nutrition 	<p>UNDERSTANDING:</p> <ul style="list-style-type: none"> • Observe the changes to determine a chemical • Calculate the charge flowing through a conductor in a given time, in order to calculate current flowing through it and potential difference. • Explains processes and phenomena of nutrition 		<ul style="list-style-type: none"> • Understands the importance of life processes. • Describes the modes of nutrition.
<p>APRIL No of Days: 17</p>	<p>CHEMICAL SUBSTANCES-NATURE AND BEHAVIOUR</p> <p>TOPIC: Chapter 1: Chemical reactions and equations</p> <p>SUB-TOPICS</p> <ul style="list-style-type: none"> • Decomposition reaction • Displacement reaction • Double displacement reaction 	<p>Learners will be able to:</p> <ul style="list-style-type: none"> • Categorize the given reactions as(decomposition) based on the reactants & products of a chemical reaction. • Classify the given reaction as displacement or double displacement based on the type of reactants used & products formed. 	<p>KNOWLEDGE:</p> <ul style="list-style-type: none"> • GO (Graphic Organizer) for types of reaction. • Concept map for electricity • Recall various modes of nutrition in plants and animals. <p>SKILL:</p> <ul style="list-style-type: none"> • Diagram making • Analyzing • Scientific skill • Problem solving • Creative thinking • Critical thinking 	<p>Naturalist Intelligence Logical-Mathematical Intelligence Interpersonal Intelligence Visual-Spatial Intelligence. Existential Intelligence</p> <p>Linguistic Intelligence</p>	<p>Learners will be able to: -</p> <ul style="list-style-type: none"> • Write formulae and balance chemical equations. • Classify different types of chemical reactions • Understand and explain the concept of ohms law, resistance and resistivity, • Understand and evaluate the numerical value of, resistance.

EFFECTS OF CURRENT

TOPIC:

Chapter 11:
Electricity

SUB-TOPICS

- Ohm's law
- Factors on which the resistance of a conductor depends.
- Resistance of a system of resistors.
- Resistors in Series
- Resistors in Parallel

TOPIC

Chapter 5: Life processes

SUB-TOPICS

- Heterotrophic nutrition
- Nutrition in amoeba
- Nutrition in human beings

- Understand Ohm's Law and calculate resistance.
- Define resistivity and classify substances as conductors, alloys and Insulators.
- Determine the resultant resistance in a series and a parallel combination.
- Define what are life processes.
- Explain the process of conversion of CO₂ & H₂O into carbohydrates
- Understand step wise nutrition in heterotrophs.

**APPLICATION:
LAB ACTIVITY:**

- Classifying and identifying the types of reactions.
- Studying the dependence of potential difference (V) across a resistor on the current (I) passing through it and determine its resistance. Also plotting a graph between V and I.
- Determination of the equivalent resistance of two resistors when connected in series and parallel.
- 3-D diagrams of Human Digestive system.

UNDERSTANDING:

- Compare and classify different types of reactions
- Solve numerical on ohms law and combination of resistors.
- Explain the various ways of nutrition in plants and animals

- Plot a graph between voltage and current
- Understand and evaluate the equivalent resistance in different combinations.
- Explain the definition of digestion.
- Illustrate the meaning & function of various enzymes involve in digestion
- Arrange sequentially all the steps of digestion of food in humans.

MAY
No of Days: 12

<p>TOPIC Chapter 1: Chemical reactions and equations</p> <p>SUB-TOPICS</p> <ul style="list-style-type: none"> • Oxidation and Reduction reaction • Balancing of equation • Corrosion • Rancidity <p>TOPIC: Chapter 11: Electricity</p> <p>SUB-TOPICS</p> <ul style="list-style-type: none"> • Heating effect of electric current • Electric power <p>TOPIC Chapter 5: Life processes</p> <p>SUB-TOPICS</p> <ul style="list-style-type: none"> • Respiration • Aerobic and anaerobic respiration • Human respiratory system 	<p>Learners will be able to:</p> <ul style="list-style-type: none"> • Predict the reaction as Oxidation or Reduction based on the addition / removal of oxygen / hydrogen. • Apply Law of conservation of mass in order to balance chemical equations. • Observe colour, taste and smell change in articles over time in order to outline the effects of corrosion and rancidity in our surroundings. • Explain and calculate the heating effect of electric current, in order to learn working of appliances. • Calculate power, in order to represent electric consumption in domestic circuits. • Outline and explain the ways of breakdown of 	<p>KNOWLEDGE:</p> <ul style="list-style-type: none"> • Identify the reaction as oxidation or reduction and balance equations. ▪ Observe that heat is produced due to flow of current. • Unify the concept of glucose catabolism <p>SKILL:</p> <ul style="list-style-type: none"> • Diagram making • Analyzing • Scientific skill • Problem solving • Creative thinking <p>APPLICATION:</p> <ul style="list-style-type: none"> • Activity of Balancing of equations • Discover applications of heating effect of electric current like fuse, heaters. • Experimentally show that carbon dioxide is given out during respiration. • 3-D diagrams of human Respiratory System. <p>UNDERSTANDING:</p> <ul style="list-style-type: none"> • Use chemical symbols & 	<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>Learners will be able to: -</p> <ul style="list-style-type: none"> • Balance the chemical reactions • Classify the reactions as oxidation or reduction. • Apply knowledge of oxidation in daily life. • Explain and calculate the heating effect of electric current. • Evaluate the consumption of electric energy. • Interpret the significance of different pathways of break down of glucose in various organisms. • Explain the concept of glucose catabolism in humans
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		glucose by various pathways.	chemical formulae correctly. <ul style="list-style-type: none"> Infer that appliances of higher power consume more energy. Explain and locate the various parts of human respiratory system. 		<ul style="list-style-type: none"> Draw a well labelled diagram of human respiratory system.
REVISION: PT-1					

CONDUCTION OF PT – 1

REMEDIAL CLASSES

<p>JULY No of Days: 23</p>	<p>CHEMICAL SUBSTANCES- NATURE AND BEHAVIOUR</p> <p>TOPIC: Chapter 2: Acid and bases</p> <p>SUB-TOPICS</p> <ul style="list-style-type: none"> Understanding the chemical properties of acids and bases. What do all acids and all bases have in common? How strong are acid or base solutions? 	<p>Learners will be able to: -</p> <ul style="list-style-type: none"> Observe the action of given substances with various indicators, to categorize them as acids or bases. Detect the formation of hydrogen gas when a metal reacts with an acid or a base. Detect the formation of carbon dioxide when a metal carbonate/ bicarbonate reacts with acid. 	<p>KNOWLEDGE:</p> <ul style="list-style-type: none"> To understand the properties of acids bases and salts. Cross word puzzle Components of transport system in human beings. <p>SKILL:</p> <ul style="list-style-type: none"> Diagram making Analyzing Scientific skill Problem solving Creative thinking <p>APPLICATION: LAB ACTIVITY</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>Learners will be able to: -</p> <ul style="list-style-type: none"> Differentiates materials / objects / organisms / phenomena / processes, based on, properties / characteristics Plans and conducts investigations / experiments to arrive at and verify the facts. Relates processes and phenomena
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<ul style="list-style-type: none"> • Importance of pH in Everyday Life • More about salts <p>EFFECTS OF CURRENT</p> <p>TOPIC: Chapter 12: Magnetic effects of current</p> <p>SUB-TOPICS</p> <ul style="list-style-type: none"> • Magnetic field and field lines • Magnetic Field due to a straight current carrying conductor. • Right hand thumb rule. • Magnetic Field lines due to current through a circular loop • Magnetic Field lines due to current in a circular loop. • Force on a current carrying conductor in a magnetic field. • Fleming’s left hand rule. <p>TRANSPORTATION AND EXCRETION</p>	<ul style="list-style-type: none"> • Analyse the reaction taking place between an acid and a base. • Write down the ions present in aqueous solution of an acid or a base. • Detect the strength of given substances based on their position in the pH scale. • Explain the effect of pH change in animals, plants and environment. • Identify the positive and negative radicals present in a salt, in order to predict a salt's family and pH range. • Outline the process of formation of sodium hydroxide. • List the properties & explain the preparation of some important compounds of Sodium. (bleaching powder, baking soda and washing soda) 	<ul style="list-style-type: none"> • A. Finding the pH of the following samples by using pH paper / universal indicator: <ul style="list-style-type: none"> (i) Dilute Hydrochloric Acid (ii) Dilute NaOH solution (iii) Dilute Ethanoic Acid (iv) Lemon juice (v) Water (vi) Dilute Hydrogen Carbonate solution • B. Studying the properties of acids and bases (HCl & NaOH) on the basis of their reaction with: <ul style="list-style-type: none"> (a) Litmus solution b) Zinc metal c) Solid sodium carbonate • To sketch the magnetic field lines around the current carrying conductors. • 3-D diagrams of Human Circulatory and Excretory Systems <p>UNDERSTANDING:</p>		<p>with causes / effects, their functions</p> <ul style="list-style-type: none"> • Explains processes and phenomena • Analyses data in order to interpret the difference between them. • Recall magnets and list their important properties • Conceptualize magnetic field lines and list their properties. • Interpret construction of Solenoid & electro-magnet and their uses. • Comprehend and apply right hand thumb rule to find the direction of magnetic field • Comprehend and apply Fleming’s Left-hand rule for finding direction of force on a
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TOPIC
Ch-5 Life processes

SUB-TOPICS

- Transportation in human beings
- Human heart
- Transportation in plants
- Transport of water, food and other substances.
- Excretion in human beings
- Excretion in plants

- Demonstrate the activity to detect the presence of water of crystallization.
- Draw magnetic field lines for a bar magnet, in order to identify the magnetic field strength at different points around a magnet.
- Represent magnetic field lines for a straight current carrying conductor.
- Draw magnetic field lines for at current carrying circular loop.
- Outline magnetic field lines for at current carrying solenoid, in order to identify the magnetic field strength at different points around it.
- State Fleming's Left-Hand rule.
- Outline the double circulation of blood in fishes.
- Explain the function of xylem and phloem in Plants.

- To identify the nature of the substances used in household activities using olfactory indicators.
- Identify the rules and directions, to find the magnetic field, Force on the current carrying conductor.
- Summarize working of human heart.
- Illustrate the structure and functioning of nephron.

- current carrying conductor.
- Compare and contrast the structure and function of vein and artery. Emphasize on the Importance of lymphatic system.
- Discover the mechanism of transport of water in plants.
- Identify various waste products
- Understanding the importance of filtration and removal of liquid
- Waste (urine) through kidney
- Find out the waste products of plants & Mechanism of their removal.
- Discover the impact of less intake

		<ul style="list-style-type: none"> • Explain the function of transpiration in order to explain how water travels up in plants. • Explain the function of phloem & ATP, in order to explain how food is transported in Plants. • Describe the function of blood vessels, arteries, platelets & lymph in human body. • Understands the process of excretion in various levels of organisms. 			of water on excretory system.
<p>AUGUST</p> <p>No of Days: 23</p>	<p>CHEMICAL SUBSTANCES-NATURE AND BEHAVIOUR</p> <p>TOPIC: Chapter -3 Metals and Non- metals</p> <p>SUB-TOPICS</p> <ul style="list-style-type: none"> • Physical and chemical properties of metals and non-metals • Reactivity series 	<p>Learners will be able to: -</p> <ul style="list-style-type: none"> • Classify metals and non-metals based on their properties. • Predict the products when metals & non-metals react with oxygen, water, dilute acids in order to write a balanced chemical equation. • Identify the product formed when a metal reacts with a 	<p>KNOWLEDGE:</p> <ul style="list-style-type: none"> • Make a flow chart with chemical reactions for the Extraction of metals. • Examine the advantages and disadvantages of AC and DC. • Get the knowledge oh human endocrine glands and their hormonal secretion. 	<p>Naturalist Intelligence</p> <p>Logical-Mathematical Intelligence</p> <p>Interpersonal Intelligence</p> <p>Visual-Spatial Intelligence.</p> <p>Existential Intelligence</p>	<p>Learners will be able to: -</p> <ul style="list-style-type: none"> • Demonstrate properties of metals and non-metals. • Tabulate the reactivity series of metals. • Draw schematic diagrams for ionic compounds and list the properties

- Formation and properties of ionic compounds
- Basic metallurgical processes
- Corrosion and its prevention.

EFFECTS OF CURRENT

TOPIC:
Chapter 12:
Magnetic effects of current

SUB-TOPICS

- Direct current.
- Alternating current:
- Advantage of AC over DC.
- Domestic electric circuits.

TOPIC

Chapter 6 Control and Coordination

SUB-TOPICS

- Animals nervous system
- Reflex action
- Human brain
- Coordination in plants

- metal salt, to list the metals in order of their reactivity.
- Discuss formation & properties of ionic compounds.
- Analyze the process of getting metals from their oxides, sulphides, carbonates in order to extract them from their ores.
- Explain the process of electrolytic refining.
- Observe corrosion in metal articles & its process in order to develop ways to prevent corrosion.
- Understand DC and AC current.
- Discuss the advantages of AC over DC
- Analyse the significance of neutral, earth and live wire
- Explain short circuiting and overloading.
- Explain the functioning of a neuron, in order to explain how

- SKILL:**
- Diagram making
 - Analyzing
 - Scientific skill
 - Problem solving
 - Creative thinking
- APPLICATION:**
- **LAB ACTIVITY: -**
1.Observing the action of Zn, Fe, Cu and Al metals on the following salt solutions:
i) $ZnSO_4(aq)$
ii) $FeSO_4(aq)$
iii) $CuSO_4(aq)$
iv) $Al_2(SO_4)_3(aq)$
Arranging Zn, Fe, Cu and Al (metals) in the decreasing order of reactivity based on the above result.
 - Draw ionic structures of compound
 - Sketch domestic electric circuit of your house and interpret the advantages of parallel circuit over series circuit.

Linguistic Intelligence

High order thinking skills:
Analysis and synthesis

- Identify various steps in the extraction of metals.
- Choose different separating techniques for obtaining metals from the ores
- Develop ways to prevent corrosion.
- Study advantages of AC over DC.
- Understand domestic electric circuit.
- Know the reason for short circuiting and overloading.
- Differentiate between nervous and endocrine system in animals.
- Explain the importance of reflex actions and its reflex arc.

<ul style="list-style-type: none"> • Hormones in animals. 	<p>electrical signals travel in human body</p> <ul style="list-style-type: none"> • Outline the working of a reflex arc, in order to explain how reflex actions take place in humans • Illustrate the location and functions of different parts of human brain, in order to understand the working of nervous system. • Examine tropic movements in plants, in order to understand how plants respond to environmental triggers like light, gravity, water. • Discuss limitations of electrical impulses, in order to outline the importance and use of hormones • Illustrate the function of endocrine glands in the human body, in order to understand 	<ul style="list-style-type: none"> • To study the phenomenon of phototropism and geotropism in plants • poem on plant hormones <p>UNDERSTANDING:</p> <ul style="list-style-type: none"> • Compare the physical and chemical properties of metals and non-metals. • Infers and analyses the significance of neutral, earth and live wire, in order to understand the formation of a domestic electrical circuit. • Understand the structure and function of human of brain and spinal cord and their role in controlling different activities of human brain. • Infer and analyse the chemical coordination in plants. 		
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		the functioning of hormones.			
SEPTEMBER No of Days: 05	REVISION OF TERM1/PT-2				
CONDUCTION OF TERM 1/PT-2 ASSESSMENT					
OCTOBER No of Days: 22	<p>CHEMICAL SUBSTANCES-NATURE AND BEHAVIOUR</p> <p>TOPIC: Chapter-4 Carbon and its compounds</p> <p>SUB-TOPICS</p> <ul style="list-style-type: none"> • Covalent bonding in carbon compounds. • Versatile nature of carbon. • Saturated and Unsaturated carbon compounds • Homologous series. • Functional groups • Nomenclature of carbon compounds 	<p>Learners will be able to: -</p> <ul style="list-style-type: none"> • Illustrate carbon with 4 valence electrons forming only covalent bonds. • Correlate the bonds formed as single, double, triple to the number of pairs of electrons shared between them. • Draw structures of carbon compounds in order to classify them as saturated or unsaturated. • Classify carbon compounds in homologous series in order to predict their properties. • Identify the functional group, type of bonding, number of C atoms present in a carbon compound, in order 	<p>KNOWLEDGE:</p> <ul style="list-style-type: none"> • List types of covalent bonds • Draw introductory page on properties of light. • Summarise different modes of reproduction in organisms. <p>SKILL:</p> <ul style="list-style-type: none"> • Diagram making • Analyzing • Scientific skill • Problem solving • Creative thinking <p>APPLICATION:</p> <ul style="list-style-type: none"> • Select the compound and tell the functional group. • LAB ACTIVITY: - 1.Determination of the focal length of: i) Concave mirror ii) Convex lens by 	<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>Learners will be able to: -</p> <ul style="list-style-type: none"> • Differentiate and classify the carbon compounds with their properties • Illustrate the structures of carbon compounds. • Understand homologous series. • Identify functional group. • Name the carbon compounds. • Understand the terms related to spherical mirrors and lenses. • Draw the ray diagrams

NATURAL PHENOMENON

TOPIC

Chapter 9: Light – Reflection and Refraction

SUB-TOPICS

- Reflection of light
- spherical mirrors
- Image Formation by Spherical Mirrors
- Representation of Images Formed by Spherical Mirrors Using Ray Diagrams
- Uses of mirrors
- Sign Convention for Reflection by Spherical Mirrors
- Mirror Formula and
- Magnification
- Refraction of light
- Refraction through a Rectangular Glass Slab
- The Refractive Index
- Refraction by Spherical Lenses

to correctly name them.

- State the laws of reflection of light
- Outline the rule of image formation by spherical mirrors in order to complete the ray diagrams by drawing reflected rays.
- Express u , v , f in the mirror formula in order to apply sign convention in solving word problems to find the unknown variable.
- Deduce the nature and size of image by magnification n in order to relate height of object with height of image.
- List the uses of spherical mirrors.
- Explain refraction
- Demonstrate the path of light when it travels through a rectangular glass slab.
- Compare speed of light in one medium with another in order to calculate refractive index.

obtaining the image of a distant object.

- Tracing the path of a ray of light passing through a rectangular glass slab for different angles of incidence. Measure the angle of incidence, angle of refraction, angle of emergence and interpret the result.
- Draw the different modes of reproduction.
- Studying (a) binary fission in Amoeba, and (b) budding in yeast and Hydra with the help of prepared slides.
- Identification of the different parts of an embryo of a dicot seed (Pea, gram or red kidney bean)

UNDERSTANDING:

- Draw dot structures for covalent bonds
- Draw Ray diagrams for different positions of the

- Use mirror formula to solve the numerical.
- Understand sign convention
- Explore the uses of spherical Mirrors.
- Explain the laws of refraction of light.
- Calculate refractive index of different mediums.
- Traces the path of light passing through a glass slab.
- identify the types of lenses and define the terms related to them
- Discover rules for obtaining image formed lenses and draw ray diagrams.
- Investigate the uses of lenses in our day-to-day life, with the help of activity

- Image Formation by Lenses

REPRODUCTION TOPIC

Chapter-7 How do Organisms Reproduce?

SUB-TOPICS

- Do organisms create exact copies of themselves
- The importance of variation
- Modes of reproduction used by single organisms
- Sexual reproduction in flowering plants
- Reproduction in human beings
- Reproductive health.

- Represent the path of incident & reflected light rays from a concave and convex lens, in order to locate the position and nature of image formed.
- Discuss the importance of reproduction for continuity of generation.

objects for mirror and lenses.

- Comprehend sexual reproduction in flowering plants.
- Understand the importance of using birth control.

- Differentiate between reproductive system of male and female.
- Prioritize reproductive health
- Explain the embryo nourishment inside the mother's body.

NOVEMBER
No of Days: 16

CHEMICAL SUBSTANCES-NATURE AND BEHAVIOUR

TOPIC:

Chapter 4:
Carbon and its compounds

SUB-TOPICS

- Chemical properties of carbon compounds
- Some important carbon compounds – ethanol and ethanoic acid
- Soaps and detergents.

NATURAL PHENOMENON TOPIC

Chapter 9: Light – Reflection and Refraction
Chapter 10: : Human Eye and The Colorful World

SUB-TOPICS

- Sign Convention for Spherical Lenses

Learners will be able to: -

- Identify how carbon compounds react with hydrogen in the presence of nickel catalyst.
- Identify how carbon compounds react with chlorine in the presence of sunlight.
- Observe how carbon compounds burn in oxygen, in order to classify them as saturated or unsaturated
- Perform physical and chemical tests in order to distinguish between Ethanol & Ethanoic acid
- Describe the process of micelle formation in order to understand how soaps work
- Express u , v , f in the lens formula in order to apply sign convention in solving word problems to find the unknown variable.

KNOWLEDGE:

- Realize the effect of alcohols on living beings.
- Investigates the uses of lenses in our day-to-day life
- List the parts of eye and state their function
- To impart the knowledge of heredity
- Know about the dominance and recessive nature of characters
- Role of Ozone layer

SKILL:

- Diagram making
- Analyzing
- Scientific skill
- Problem solving
- Creative thinking

APPLICATION:

- **LAB ACTIVITY: -**
1. Study of the following properties of acetic acid (ethanoic acid): i) odour ii) solubility in water iii) effect on litmus iv) reaction

Naturalist Intelligence

Logical-Mathematical Intelligence

Interpersonal Intelligence

Visual-Spatial Intelligence.

Existential Intelligence

Linguistic Intelligence

Learners will be able to: -

- Perform chemical tests in order to distinguish between Ethanol & Ethanoic acid
- Understand the chemical properties of carbon compounds.
- Demonstrates activities for the preparation of soap and for identifying the salts which cause hardness in water.
- Understand sign convention.
- Calculate power of lens.
- Explain the Functions of different parts of the eye, defective eye sight and the correction using different lenses.
- Draw the shape of the prism and

	<ul style="list-style-type: none"> • Lens Formula and Magnification • Power of lens • The human eye • Defects of vision and their correction • Refraction of light through a prism • Dispersion of white light through a prism • Atmospheric refraction • Scattering of light applications in daily life(Excluding color of the sun at sunrise and sunset) <p>HEREDITY TOPIC CHAPTER-8 Heredity</p> <p>SUB-TOPICS</p> <ul style="list-style-type: none"> • Accumulation of variation during reproduction • Heredity • Rules of inheritance of traits-Mendel's contributions • How do these traits get expressed • Sex determination 	<ul style="list-style-type: none"> • Deduce the nature and size of image by magnification n in order to relate height of object with height of image. • List the uses of spherical lenses. • Calculate the power of a lens, in order to determine its power to converge or diverge. • Illustrate the parts and function of human eye, in order to understand how humans see the objects around them • Identify the defects of vision in human eye (myopia, hypermetropia, presbyopia) and their causes, in order to devise a correction method for them • Examine the path of light rays through a prism, in order to determine how light gets deviated when travelling through a prism • Trace the path of white light rays 	<p>with Sodium Hydrogen Carbonate</p> <p>2. Study of the comparative cleaning capacity of a sample of soap in soft and hard water.</p> <ul style="list-style-type: none"> • Tracing the path of the rays of light through a glass prism • Determine the populations phenotypic outcome based on their results from using a punnet square. • Form a monohybrid cross using coloured beads and calculate the phenotypic and genotypic ratios. • Tabulate the dihybrid cross and observe the Genotypic and phenotypic ratios to formulate into Graphic Organization. • Form the Ecological Pyramids and co-relate it with different monuments/ things found in daily life. 		<p>define angle of prism.</p> <ul style="list-style-type: none"> • Trace the path of a ray of light through a glass prism. • Deduce the cause of dispersion. • Deduce the reason for apparent position of star due to refraction and the reason for advanced sunrise and sunset. • Develop concept of scattering of light and Tyndall Effect. • Calculate the phenotypic and Genotypic ratios. • Define the laws of Inheritance • Learn the concept, need and importance of waste management. • Form the Ecological pyramids
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ENVIRONMENT

TOPIC

Chapter 13: Our Environment

SUB-TOPICS:

- Ecosystem- What are its components?
- Food chain and webs
- Ozone layer depletion
- Garbage management

through a prism, in order to determine that white light is made of seven colours.

- Elaborate the process of atmospheric refraction, in order to understand natural phenomena, like twinkling of stars and advanced sunrise and delayed sunset
- Explain the process of scattering of light, in order to understand natural phenomena
- Understand the concept of heredity
- Evaluate the phenotypic and genotypic ratios.
- Define the laws of Inheritance
- Learn the concept, need and importance of waste management.
- Form the Ecological pyramids
- Role of Ozone layer Garbage management.

UNDERSTANDING:

- Describe and compare the properties of alcohols and carboxylic acids.
- Draw the ray diagrams for different positions of the objects.
- Draw the Ray diagrams for Defects of eye and their correction.
- Relate changes in focal length of eye lens to vision of distant and nearby objects.
- Set up a punnet square demonstrating the monohybrid heredity of an offspring, considering the individual parents.
- Infer flow of energy in an ecosystem
- Correlate the food chain in a food web.
- Contrast causes of ozone layer depletion.

- Role of Ozone layer Garbage management.

	REVISION: PT-3
CONDUCTION OF PT-3 ASSESSMENT	
DECEMBER No of Days: 18	REVISION / PREBOARD 1
JANUARY No of Days: 18	REVISION/PREBOARD 2
FEBRUARY No of Days: 3	REMEDIAL CLASSES
MARCH	CLASS X BOARD EXAMS