

Topic	Expected learning outcomes	Innovative/Art integration/ experimental learning/ interdisciplinary
1.crop production and management	<p>The students will learn :</p> <ol style="list-style-type: none"> <li>1. What is crop and understand the climatic conditions of kharif and rabi crop.</li> <li>2. Compare traditional tools with modern agricultural implements.</li> <li>3. The importance of adding manures and fertilizers to the crop.</li> <li>4. The value of hard work to produce the desired results</li> <li>5. The systematic Approach to get</li> </ol>	<p>Experiential learning: 1.To separate the good and healthy seeds from damaged seeds <b>.To observe the growth of seedlings with manure and fertilizers</b></p> <p>Art integration 1 Paste pictures of various crops like zaid ,kharif and rabi</p> <p>Interdisciplinary: integrated with agriculture</p>

	<p>The desired Results.</p> <p>6. To eradicate Unwanted Things from life That may hinder Their progress.</p> <p>7. The skill of Analysis Through the Activity of seed Germination.</p>	
<p>Ch 2 .microorganisms :friends and foe</p>	<p>Students will:</p> <ol style="list-style-type: none"> <li>1. identify the various microorganisms and their structure.</li> <li>2. aware about the harms and benefits of microorganisms.</li> <li>3. Get the knowledge about the commercial uses of microbes.</li> <li>4. Why children are given vaccination.</li> <li>5. Appreciate the</li> </ol>	<p>Experiential learning :To show the presence of microorganisms in soil and water</p> <ol style="list-style-type: none"> <li>2.To show that Carbondioxide is released during fermentation</li> <li>3.will show slides of microorganisms</li> </ol> <p>Interdisciplinary; integrated with environment</p>

	<p>importance of microbes in industries like alcohol, wine, bread, bakery.</p> <p>6. Realise their importance in medicines such as antibiotics, vaccines</p>	
3.synthetic fibers and plastics	<p>1.Learner will be able to Define the term fiber yarn and fabric</p> <p>2.learner will able to define the term monomer ,polymer and polymerization</p> <p>3.Apply the knowledge of the properties of synthetic fibers before selecting the fibers for a particular purpose.</p>	<p>Experiential learning</p> <p>1.To compare the tensile strength of different fibres of the same thickness and same length</p> <p>2 To compare the water absorbing capacity of different fibres like natural and synthetic</p> <p>Interdisciplinary : integrated with environmental literacy</p>
4.metals and non metals	<p>. Students will infer that metals are generally hard only with some exceptions</p> <p>Like sodium,potassium and lithium,and non-metals are soft</p>	<p>Experiential learning :to show that metals are good conductors of electricity and non metals are bad conductor of electricity</p> <p>2 TO SHOW that metals react with oxygen to form basic oxides</p> <p>3.mentor will show the burning of magnesium ribbon ,Ash collected and tested with litmus</p> <p>Art integration: Make a wind chime to demonstrate the sonority of metals .</p>

	<p>and brittle.</p> <p>. metals are good conductors of heat and electricity where as non-metals are not</p> <p>. students will infer that metals are malleable and non-metals are brittle</p> <p>. <b>Students</b> will comprehend that different metals will react differently with water they will understand that reactive metals react with acids and bases to form hydrogen gas.</p> <p>. They will see displacement reactions are those reactions in which a more reactive metal</p>	
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	<p>displaces a less reactive metal from its salt solution</p> <p>. Students will know the reactivity series and why the metals have different reactivity speeds</p> <p>.students will recognize the uses of metals and non-metals in daily life.</p>	
5.coal and petroleum	<p>.Learners will Learn about the formation of available natural resources like coal and petroleum</p> <p>.They will come to know the</p>	<p>Art integration : Make a poster on the uses of alternate sources of energy</p> <p>Experiential learning: The learners will take an account of the fuel consumption in homes like LPG ,petrol/diesel or the CNG</p> <p>2 learners will mark the places in India where super thermal power plant and petroleum refineries are located</p>

	<p>different products and uses of the same.</p> <p>. They will be able to learn About the judicious use of the available resources and Will create awareness in the society.</p>	<p>Interdisciplinary : integrated with sst</p>
<p>6.combustion and flame</p>	<p>1.Learners will recall the process of combustion and the conditions needed for it.</p> <p>2. They will differentiate and analyse the types of combustion occurring in real life.</p> <p>3. They will understand regarding the working of fire extinguishers.</p> <p>4. they will be able to analyse the cleaner fuel, that</p>	<p>Experiential learning:  1.To show that oxygen is necessary for combustion of the substance.  2.to find whether the given substance is combustible or non combustible</p> <p>Art integration  :  Make a model of a greenhouse</p>

	is least expensive .	
7.conservaion of plants and animals	<p>The students will learn</p> <p>1.About deforestation, its brief report in the notebook regarding various factors disturbing the biodiversity of their area.</p> <p>causes and consequences.</p> <p>2. To appreciate the use of recycled paper.</p> <p>3. To define and differentiate between different protected areas.</p> <p>4. Importance of flora and fauna in the ecosystem and also learn the value of conservation of wildlife.</p>	<p>Interdisciplinary: Make a report on endangered species and present it in the class (Integrated with sst)</p> <p>2 Red Data book information</p>
8.cell structure and functions	Learner will learn and understood about cell	<p>Experiential learning: 1.To observe onion peel cells under the compound microscope</p>

	<p>and structural organization of cell.</p> <p>2. Skills like observational and experimental will be developed in the students and values like division of labor and team work (as all the organelles divide the work among themselves), leadership (as nucleus work as controlling unit), obedience (as all Organelles obey the command of controlling unit) were inculcated among the students.</p> <p>3. Students will be able to identify that cuts and wound heals due to the process of cell division</p> <p>4They will able to analyze that formation of one organelle lead the formation of other organelle which inculcated the value of coordination, obedience etc.</p>	<p>2 To observe cells from the inner lining of cheek</p> <p>Art integration : Draw diagrams of plant cell and animal cell.</p>
<p>9.Reproduction in animals</p>	<p>Students will :</p> <p>1. Understand male and female reproductive system</p> <p>2. Differentiate</p>	<p>Experiential learning: Look out for the clusters of frog eggs floating in water and write down the color and size of eggs</p> <p>Innovative 1 In the group of four, collect information related to cloning</p>

	<p>Between oviparous and Viviparous animals.</p> <p>3. Learn about IVF Technique and test tube Babies.</p> <p>4. How do babies Develop inside the Mother?</p> <p>5. Why does our body Change when we reach Our teen age.</p> <p>6. How sex of the baby Is determined.</p> <p>7. Some animals lay Eggs while some give Birth to young ones.</p>	<p>technique.write content for a blog on its advantages</p>
<p>10.Reaching the age of adolescence</p>	<p>They will be Able to understand about the various functions performed by different endocrine glands, Changes during puberty, Secondary sexual</p>	<p>Experiential learning : to study the average rate of growth in the height of boys and girls with respect to age and predict the height at the end of growth period</p> <p>2 and make a graph of above.</p> <p>Interdisciplinary: integrated with maths</p>

	<p>character.</p> <p>2.They will be able to relate their concepts with puberty and adolescence.</p> <p>3.They will be aware about adolescent problems.</p> <p>1. what-is adolescence</p> <p>2 the noticeable changes that occur during puberty such as-increase in height, body shape, change in voice of males, appearance of pimples</p> <p>Mental and emotional maturity bodily changes during adolescence</p>	
<p>11.Force and pressure</p>	<p>1. Students will be aware about the different types of forces and their effects.</p> <p>2. Students will know the difference between mass</p>	<p>Experiential learning:</p> <p>1.To show that electrostatic force is a non contact force</p> <p>2 To show that pressure increases with depth</p>

	<p>and weight.</p> <p>4. They will be aware about the factors affecting pressure.</p> <p>5. Students can use the equipments based on fluid pressure like syringe, piston etc.</p> <p>6. They know about the working of vacuum cleaner.</p> <p>7. Students can take necessary measure to reduce pressure of their school bags on their shoulders.</p> <p>8. They will be able to select the suitable equipments for their work for example they will use sharp knife for cutting fruits and vegetables to increase pressure whereas bags with broader belts for reducing pressure.</p>	<p>3 To show that liquids exert equal pressure at the same depth</p> <p>Art integration : Play the game search to win in class –will be organized by the teacher</p> <p>Interdisciplinary : integrated with maths ( numericals of topic pressure)</p>
<p>12.Friction</p>	<p>1. Students will be acquainted with the different types of friction.</p> <p>2. They will realize that friction cannot be zero.</p>	<p>Experiential learning: To show that rolling friction is less than sliding friction in magnitude</p> <p>Integrated with maths (interdisciplinary)</p>

	<p>3. They will be aware about the various techniques of increasing and reducing friction.</p> <p>4. They will take proper care of their belongings by using necessary steps like oiling and greasing, proper air pressure etc.</p>	
<p>Ch 13Sound</p>	<p>1. Students will come to know how sound propagates in the medium and reaches to us .</p> <p>2. They can make their own musical instruments and study the different sounds produced by them.</p> <p>3. They will make aware about the differences of sound and reason for it.</p> <p>4. They will come to know how ear enables us to listen sound.</p> <p>5. They will be aware about</p>	<p>Experiential learning : 1.To show that sound is produced by vibrating object</p> <p>2.To show that sound can travel the liquids and solids</p> <p>Art integration: Draw structure of human ear</p> <p>Interdisciplinary : integrated with AI ( robots and sound )</p>

	<p>the short term and the long term harmful effects of noise pollution.</p>	
14.chemical effects of electric current	<ol style="list-style-type: none"> <li>1. Students will be aware about the condition of formation of ions.</li> <li>2. They will identify conducting and non conducting liquids.</li> <li>3. They will be aware about the uses of electroplating and arrange the set up for the process.</li> <li>4. They will verify that water is made up of hydrogen and oxygen by testing of gases.</li> <li>5. They will know how metal can be purified.</li> <li>6. They will make an electric pen and explain its working.</li> <li>7. Through research work they will be able to know and understand the health hazards associated with electroplating and the preventive methods.</li> </ol>	<p>Experiential learning:</p> <ol style="list-style-type: none"> <li>1.To show them how we can make tester</li> <li>2 TO show that distilled water is a bad conductor of electricity</li> <li>3.To study the chemical effects of electric current</li> <li>4.To perform electroplating of an object with copper</li> </ol>
15 some natural phenomenon	<ol style="list-style-type: none"> <li>1. Students will come to know that static charge can be Produced by rubbing two different objects.</li> </ol>	<p>Experiential learning:</p> <ol style="list-style-type: none"> <li>1.To show that like charges repel each other</li> <li>2 To show that unlike charged attract each other</li> <li>3.Sure test of electrification</li> </ol>

	<p>2. the charge can be detected by using electroscope.</p> <p>3. They will be able to understand the causes of earthquake and lightning.</p> <p>4. They will be aware about the safety measures that can be taken in case of natural disaster.</p>	<p>Interdisciplinary: Use the internet to find out about the huge damage to life and property caused by earthquakes .prepare a report on the suffering of people due to earthquakes (Integrated with English )</p>
16.Light	<p>1. Students will apply the phenomenon of multiple reflection in daily life.</p> <p>2. They will verify the laws of reflection of light.</p> <p>3. They will know the structure of human eye and functions performed by its different parts.</p> <p>4. They will be aware of the causes of various eye disorders and their correction.</p>	<p>Experiential learning: 1 To study the reflection of light using a plane mirror 2 To verify the laws of reflection</p> <p>Art integration :1 structure of human eye</p> <p>Interdisciplinary: Integrated with English ( prepare a questionnaire for the interview of the famous American singer strive wonder)</p> <p>2 integrated with maths ( calculation of number of images)</p>
17.Stars and solar system	<p>Students will be able to understand the different phases of moon Define universe and astronomy</p>	<p>Interdisciplinary: integrated with GK</p>

	<p>Classify celestial objects based on their properties</p> <p>Identify names of commonly known constellations</p>	
18Pollution of air and water	<p>Learners will be able to define the terms pollution and pollutants.</p> <p>Learners will analyse the impacts of air and water pollution.</p> <p>Learner will be environment sensitive</p> <p>Learner will learn to be balanced in the harsh situations and be stable</p>	<p>Interdisciplinary: Integrated with sst ( like discussion about ozone hole )</p> <p>Experiential learning</p> <p>1 Learners will make A note of the smoke ,fumes dust ,dirty odour in the air at different spots like school neighbourhood outskirts of city</p> <p>2 learners will tabulate the list of the common pollutants in the air and water separately and find the information on the sources and effects on the health of humans and the environment</p>