

# Curriculum Plan For Science

Session – 2023-24

Class-VII (Based on N C E R T)

Month	Content/Theme	Project/Activity	Oral Work	Written Work
April	<b>Ch-1</b> <b>Nutrition in plants</b> <ul style="list-style-type: none"> <li>• Different modes of nutrition in plants.</li> <li>• Special modes of nutrition.</li> <li>• Importance of mineral nutrition in plants.</li> </ul>	<b>Video-</b> Food making process in plants. <b>Activity-</b> To show the presence of starch in leaf.	<b>*Oral</b> Questioning <b>*NCERT Exemplar</b> Discussion	<b>*NCERT Exercise</b> <b>*Key words-</b> Autotrophic, Saprophytic, Host, Parasite, Insectivorous, Photosynthesis, Stomata, Chlorophyll. <b>Diagram-</b> <ul style="list-style-type: none"> <li>• Section of leaf</li> <li>• Stoma</li> <li>• Diagram showing photosynthesis</li> <li>• Cell</li> </ul>
	<b>Ch-2</b> <b>Nutrition in animals</b> <ul style="list-style-type: none"> <li>• Classification of animals based on their food habits.</li> <li>• Holozoic nutrition</li> <li>• Digestion in human beings.</li> <li>• Nutrition in grass eating animals.</li> </ul>	<b>Video-</b> Digestion in Human <b>Activity-</b> Effect of saliva on starch.	<b>*Oral</b> Questioning <b>*NCERT Exemplar</b> Discussion	<b>*NCERT Exercise</b> <b>*Key words-</b> Absorption, Assimilation, Amino acid, Bile, Cellulose, Pseudopodia, Villi, Ruminant, Glycerol, Pancreas <b>Diagram-</b> <ul style="list-style-type: none"> <li>• Human Digestive system</li> <li>• Digestive system of ruminant</li> <li>•</li> </ul>
May	<b>Ch-3</b> <b>Fiber to fabric</b> <ul style="list-style-type: none"> <li>• Natural fibers obtained from animals.</li> <li>• The process of extraction of wool and silk.</li> <li>• Health problems of workers engaged in wool and silk industries</li> </ul>	<b>Video-</b> Process of Extraction of silk <b>Activity-</b> Collection of different samples woollen and silk cloth	<b>*Oral</b> Questioning <b>*NCERT Exemplar</b> Discussion	<b>*NCERT Exercise</b> <b>*Key words-</b> Fleece, Reeling, Sericulture, Shearing, Scouring. <b>Diagram</b> <ul style="list-style-type: none"> <li>• Life cycle of silk moth</li> </ul>
July	<b>Ch-4</b> <b>Heat</b> <ul style="list-style-type: none"> <li>• Heat as a form of energy</li> <li>• Temperature and its measurement</li> <li>• Mechanism of heat transfer</li> <li>• Application of conduction, convection and radiation</li> </ul>	<b>Video-</b> Transfer of heat <b>Activity-</b> Experiment to show that hot and cold or relative	<b>*Oral</b> Questioning <b>*NCERT Exemplar</b> Discussion	<b>*NCERT Exercise</b> <b>*Key words</b> Conduction, Convection, radiation, land breeze, sea breeze

	<b>Ch-6 Physical and chemical changes</b> <ul style="list-style-type: none"> <li>• Matter</li> <li>• Physical Chemical Change</li> <li>• Rusting of Iron</li> <li>• Crystallisation process</li> <li>• Different types of chemical reaction</li> </ul>	<b>Video-</b> Introduction of Chemical Formulae <b>Activity-</b> Experiment involving Chemical Reactions like rusting of iron, neutralisation	<b>*Oral</b> Questioning <b>*NCERT Exemplar</b> Discussion	<b>*NCERT Exercise</b> <b>*Key words</b> Crystallisation, Galvanisation, Rusting
	<b>Ch-7 Weather, Climate and Adaptations of animals</b> <ul style="list-style-type: none"> <li>• Weather</li> <li>• Climate</li> <li>• The influence of climate on animal adaptations</li> </ul>	<b>Video-</b> Adaptations of Animals to different climate <b>Activity-</b> Find Out greener ways to maintain comfortable room temperature. So that energy is conserved	<b>*Oral</b> Questioning <b>*NCERT Exemplar</b> Discussion	<b>*NCERT Exercise</b> <b>*Key words</b> Adaptation, Migration, Camouflage, Tropical region
August	<b>Ch-9 Soil</b> <ul style="list-style-type: none"> <li>• Soil formation</li> <li>• Soil profile</li> <li>• Different Constituents of soil</li> <li>• Soil Distribution and crops in India.</li> <li>• Different Kinds of soil</li> </ul>	<b>Video-</b> Absorption of water by soil <b>Activity-</b> Study the texture of sandy, loamy and clayey soil.	<b>*Oral</b> Questioning <b>*NCERT Exemplar</b> Discussion	<b>*NCERT Exercise</b> <b>*Key words</b> Humus, Percolation, Water Retention. <b>Diagram-</b> <ul style="list-style-type: none"> <li>• Soil Profile</li> </ul>
	<b>Ch-10 Respiration in organisms</b> <ul style="list-style-type: none"> <li>• Respiration and breathing</li> <li>• Aerobic and Anaerobic</li> <li>• Respiration</li> <li>• Respiratory System in Humans</li> <li>• Breathing in other animals</li> <li>• Plant respiration</li> </ul>	<b>Video-</b> Mechanism of breathing in human beings <b>Activity-</b> Discuss with students about different respiratory tract diseases. Some of these are listed below <ul style="list-style-type: none"> <li>• Common cold</li> <li>• Bronchitis</li> <li>• Pneumonia</li> </ul>	<b>*Oral</b> Questioning <b>*NCERT Exemplar</b> Discussion	<b>*NCERT Exercise</b> <b>*Key words</b> Spiracles , Trachae, Ribs, Diaphragm, Gills, Lungs, Inhalation <b>Diagram-</b> <ul style="list-style-type: none"> <li>• Human Respiratory System</li> <li>• Roots absorb air from the soil.</li> </ul>
September	<b>Ch-16 Water : A precious resource</b> <ul style="list-style-type: none"> <li>• Water as a resource for life</li> <li>• Forms of water and their sources.</li> <li>• Scarcity of water and its conservation</li> </ul>	<b>Video-</b> Depletion of water table <b>Activity-</b> Discussions- Case study of people living in conditions of extreme scarcity of water, how they use water in a judicious way.	<b>*Oral</b> Questioning <b>*NCERT Exemplar</b> Discussion	<b>*NCERT Exercise</b> <b>*Key words</b> Aquifer, Drip Irrigation, Infiltration water table, recharge <b>Diagram-</b> Water Cycle

**REVISION AND TERM-1 EXAMINATION**

October	<p><b>Ch-5</b> <b>Acids, Bases and salts</b></p> <ul style="list-style-type: none"> <li>• Acids and bases</li> <li>• Indicators and their colour changes on different chemicals</li> <li>• Neutralization</li> <li>• Salts</li> <li>• Uses of acids and bases</li> </ul>	<p><b>Video-</b> Neutralization in everyday life</p> <p><b>Activity-</b> Testing solutions of common substances like sugar salt, vinegar, Lime juice etc with turmeric, litmus, china, rose, etc</p>	<p><b>*Oral</b> Questioning <b>*NCERT Exemplar</b> Discussion</p>	<p><b>*NCERT Exercise</b> <b>*Key words</b> Acid, Base, Salt, Indicator, Neutralisation</p>
	<p><b>Ch-11</b> <b>Transportation in animals and plants</b></p>	<p><b>Video-</b> Transport of substances in plants</p> <p><b>Activity-</b> Translocation of water in stoma, demonstration of transpiration. Discussion on dialysis and importance.</p>	<p><b>*Oral</b> Questioning <b>*NCERT Exemplar</b> Discussion</p>	<p><b>*NCERT Exercise</b> <b>*Key words</b> Artery, Blood Vessels, Capillary, Dialysis, Phloem, Plasma, Platelets, Tissue, Vein, Xylem. <b>Diagrams-</b></p> <ul style="list-style-type: none"> <li>• Schematic diagram of circulation</li> <li>• Section of human heart</li> <li>• Human Excretory system</li> </ul>
November	<p><b>Ch-8</b> <b>Winds, Storms and Cyclones</b></p> <ul style="list-style-type: none"> <li>• Air exerts pressure</li> <li>• Air expands on heating</li> <li>• Wind currents are generated due to uneven heating on earth</li> <li>• Thunderstorm and cyclones</li> </ul>	<p><b>Video-</b> Wind currents are generated due to uneven heating on the earth</p> <p><b>Activity-</b> Make a model of an anemometer.</p>	<p><b>*Oral</b> Questioning <b>*NCERT Exemplar</b> Discussion</p>	<p><b>*NCERT Exercise</b> <b>*Key words</b> Anemometer, Cyclone, Hurricane, Tornado, Typhoon, Thunderstorms. <b>Diagrams-</b></p> <ul style="list-style-type: none"> <li>• Formation of a cyclone</li> </ul>
	<p><b>Ch-12 : Reproduction in plants</b></p> <ul style="list-style-type: none"> <li>• Type of reproduction in plants</li> <li>• Asexual reproduction in plants.</li> <li>• Sexual reproduction in plants</li> <li>• Pollination and fertilization</li> <li>• Seed and fruit dispersal</li> </ul>	<p><b>Video-</b> Modes of reproduction</p> <p><b>Activity-</b> Take a mustard/China rose/Petunia flower and separate its reproductive parts study the various parts of a stamen and pistil</p>	<p><b>*Oral</b> Questioning <b>*NCERT Exemplar</b> Discussion</p>	<p><b>*NCERT Exercise</b> <b>*Key words</b> Embryo, Fertilisation, Gametes, Hypha, Ovule, Pollination, Zygote, Sporangium. <b>Diagrams-</b></p> <ul style="list-style-type: none"> <li>• Reproductive parts of flower</li> <li>• Pollination in flower</li> <li>• Leaf of bryophyllum</li> <li>• Reproduction in yeast by budding</li> <li>• Reproduction through spore formation in fungus,</li> <li>• Fertilization in plants</li> </ul>

December	<b>Ch-13</b> <b>Motion and time</b> <ul style="list-style-type: none"> <li>• Slow and fast motion</li> <li>• Uniform and non-uniform motion</li> <li>• Measurement of time</li> <li>• Plot a ‘distance – time graph’</li> </ul>	<b>Video-</b> Different types of motion <b>Activity-</b> Make a model of a sand clock which can measure a time interval of 2 minutes	<b>*Oral</b> Questioning <b>*NCERT Exemplar</b> Discussion	<b>*NCERT Exercise</b> <b>*Key words</b> Oscillation, Simple pendulum, Graphs, Time period, Unit of time, Uniform motion, Non uniform motion.
	<b>Ch-14</b> <b>Electric current and ITS Effects</b> <ul style="list-style-type: none"> <li>• Importance of electricity</li> <li>• Heating effect of electric current</li> <li>• Magnetic effect of electric current</li> <li>• Practical applications of electricity</li> </ul>	<b>Video-</b> Heating effect of electric current <b>Activity-</b> Identifying situations in daily life where electromagnets are used	<b>*Oral</b> Questioning <b>*NCERT Exemplar</b> Discussion	<b>*NCERT Exercise</b> <b>*Key words</b> Battery, Fuse, Electric Bell, Heating effect of current, Magnetic effect of current. <b>Diagram-</b> An Electromagnet, Circuit of a Electric bell, Symbols for same electric circuit components.
January	<b>Ch-15</b> <b>Light</b> <ul style="list-style-type: none"> <li>• Rectilinear propagation of light</li> <li>• Reflection of Light\</li> <li>• Spherical mirrors and lenses</li> <li>• Dispersion of light</li> </ul>	<b>Video-</b> Images formed by lenses <b>Activity-</b> Making the disc and rotating it. <ul style="list-style-type: none"> <li>• Open ended activities allowing Children to explore images formed by different objects, and recording observation. Focused discussions on real and virtual images</li> </ul>	<b>*Oral</b> Questioning <b>*NCERT Exemplar</b> Discussion	<b>*NCERT Exercise</b> <b>*Key words</b> Concave lens, Concave mirror, Prism, Real image, Virtual, Magnifying glass, <b>Diagram-</b> Concave and convex lens. Concave and convex mirror
	<b>Ch-17 :</b> <b>Forests : Our Lifeline</b> <ul style="list-style-type: none"> <li>• Key functions of forest</li> <li>• Conserving and managing forests</li> </ul>	<b>Video-</b> Interdependence of plants and animals in forests. <b>Activity-</b> Case study of forests	<b>*Oral</b> Questioning <b>*NCERT Exemplar</b> Discussion	<b>*NCERT Exercise</b> <b>*Key words</b> Canopy, Crown, Under storey, Humus
February	<b>Ch-18 :</b> <b>Waste water story</b>	<b>Video-</b> Treatment of polluted water . <b>Activity-</b> Survey of the neighborhood, identifying location with open drains, stagnant water and possible contamination of ground water by sewage	<b>*Oral</b> Questioning <b>*NCERT Exemplar</b> Discussion	<b>*NCERT Exercise</b> <b>*Key words</b> Aeration. Biogas, Contaminant, Sludge, Sewerage
<b>REVISION AND TERM-II EXAMINATION</b>				