

Subject : Science
 Grade : VIII
 Year : 2019-20



Year Planner

Text book used: NCERT

| Month& No. of Teaching Days | Units | Sub Units | Objectives | Activities Planned | Evaluation |
|-----------------------------|---|---|--|--|---|
| March-April/15 | <p>Biology: L.1 - Crop Production & Management</p> <p>Chemistry: L.3- Synthetic Fibres & Plastics</p> | <ul style="list-style-type: none"> • Agricultural practices • Basic practices of crop production • Preparation of soil • Sowing • Adding manure & fertilizers • Irrigation, Harvesting & Storage • Synthetic fibres & their types • Characteristics of Synthetic fibres • Plastics – characteristic properties • Plastics and the Environment | <p>Students will be able to:</p> <ul style="list-style-type: none"> • classify crops based on different factors • describe the different practices followed in agriculture • explain the nitrogen cycle and nitrogen fixation • give a brief outline of animal husbandry <p>Students will be able to:</p> <ul style="list-style-type: none"> • comprehend the properties of different synthetic fibres • recognize the difference between thermoplastics & thermosetting plastics • generalize the characteristics of plastics • suggest steps to reduce environmental degradation due to plastics | <p>Videos on modern techniques of agriculture</p> <ul style="list-style-type: none"> • flame test • Testing various materials – for action of water, reaction on heating, effect of flame, etc | <p>Worksheet -1</p> |
| June/15 | <p>Biology: L-8- Cell - Structure and Functions</p> | <ul style="list-style-type: none"> • Discovery of the cell • Cell structure & functions • Cell number, shape & size • Parts of the cell | <p>Students will be able to:</p> <ul style="list-style-type: none"> • explain discovery of the cell • recognize the cell as basic unit of life • describe the structure of the cell and the functions of cell organelles | <ul style="list-style-type: none"> • Use of microscope • Preparation of a slide • Observation of permanent slides | <p>Worksheet-2</p> <p>Slip Test 1</p> |

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| | | Comparison of Plant and Animal cells | <ul style="list-style-type: none"> recognize the variety seen in cell structure. differentiate between plant and animal cells describe the nature of the cell membrane draw & label plant and animal cells | | |
| | Physics: L-11- Force and Pressure | <ul style="list-style-type: none"> Force – A push or a Pull Exploring forces Force can change the state of motion & the shape of an object Contact forces & Non-contact forces Pressure exerted by liquids and gases Atmospheric pressure | Students will be able to: <ul style="list-style-type: none"> define force & pressure discuss the effects of force describe the different types of force explain how liquids and gases exerts pressure list the applications of pressure in daily life | <ul style="list-style-type: none"> To show the presence of atmospheric pressure <ul style="list-style-type: none"> Activity to show liquids exert pressure in all directions | |
| | Chemistry: L-18 Pollution of Air & Water | <ul style="list-style-type: none"> Air pollution & Water pollution How does air and water get polluted? Case study – The Taj Mahal Greenhouse effect Water purification | Students will be able to: <ul style="list-style-type: none"> identify the various natural or man-made causes of pollution devise methods to control and reduce pollution explain the Greenhouse effect describe methods to purify water | <ul style="list-style-type: none"> Videos on pollution To test the quality of water from various sources using litmus papers | |
| July/24 | Physics: L-12- Friction | <ul style="list-style-type: none"> Force of friction Factors affecting friction Friction: A necessary evil | Students will be able to: <ul style="list-style-type: none"> define force of friction distinguish between different types of friction | <ul style="list-style-type: none"> Demonstration of friction between rough/smooth surfaces of moving objects in contact | Worksheet 3 Slip test 2 |

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| | | <ul style="list-style-type: none"> Increasing and reducing friction wheels Fluid friction | <ul style="list-style-type: none"> list the factors affecting friction discuss the merits & demerits of friction and list some ways to control it | | PT - 1 |
| | Biology: L-2- Microorganisms: Friend & Foe | <ul style="list-style-type: none"> Where do microorganisms live? Microorganisms and us Harmful microorganisms Food preservation Nitrogen fixation Nitrogen cycle | <p>Students will be able to:</p> <ul style="list-style-type: none"> classify microorganisms describe the different ways in which microbes are useful list the disease caused by microbes in humans, animals & plants explain how food can be preserved generalize the steps in the nitrogen cycle | <ul style="list-style-type: none"> Setting of curd Yeast fermentation Observation of drop of water under the microscope Observation of different slides of microbes | |
| August/22 | Physics: L.14- Chemical Effects of Electric Current | <ul style="list-style-type: none"> Do liquids conduct electricity? Chemical effects of electric current Electroplating | <p>Students will be able to:</p> <ul style="list-style-type: none"> explain the chemical effects of electricity describe the process of electrolysis list the uses of electrolysis & electroplating | <ul style="list-style-type: none"> To test the conductivity of lemon juice & vinegar Electrolysis of water Electroplating | Slip test 3 Worksheet 4 Slip test 4 |
| | Biology: L-7- Conservation of Plants & Animals | <ul style="list-style-type: none"> Deforestation & its causes Conservation of forest and wildlife Endemic species Wildlife sanctuary National park Red Data Book Migration Reforestation | <p>Students will be able to:</p> <ul style="list-style-type: none"> explain what biodiversity is and why it should be preserved understand the role of forests in protecting biodiversity describe the effects of deforestation list the animals that are in danger <p>explain how wild life is conserved</p> | Chart making- Endangered plants & animals | Worksheet 5 Subject Enrichment Assessment-I |

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| September/ 18 | Revision | | | | Revision Worksheet 1 Half Yearly Examinations (PT-2) |
| October /17 | Chemistry: L.4- Materials: Metals & Non-Metals | <ul style="list-style-type: none"> Physical properties of Metals & Non-Metals Chemical properties of Metals & Non-Metals Uses of Metals & Non-Metals | Students will be able to: <ul style="list-style-type: none"> identify the physical properties of metals & non-metals recognize & differentiate the properties of metals & non-metals understand the importance of displacement reaction list the uses of metals & non-metals | <ul style="list-style-type: none"> Activity to show malleability, conductivity, sonority of metals & non-metals Lab activities: Reaction of metals and Non-metals with oxygen and water | Worksheet 6 |
| | Biology: L.10- Reaching the Age of Adolescence | <ul style="list-style-type: none"> Adolescence and Puberty Changes at Puberty Secondary sexual characters Role of hormones in initiating reproductive function Reproductive phase of life in Humans Role of hormones in completing the life history of insects & frog Reproductive health Say “NO” to Drugs | Students will be able to: <ul style="list-style-type: none"> describe the changes that occur during puberty name the hormones & their functions learn how to maintain physical, mental & social health during adolescence list the ill effects of drugs explain how sex of the child is determined | <ul style="list-style-type: none"> Posters on ‘Say No to Drugs’ | |
| November/22 | Physics: L.16- Light | <ul style="list-style-type: none"> What makes things visible Laws of reflection | Students will be able to: <ul style="list-style-type: none"> explain about the nature of images formed by a plane mirror demonstrate the laws of reflection | <ul style="list-style-type: none"> Display of eye model Dispersion of light by a prism | Worksheet 7 |

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| | | <ul style="list-style-type: none"> Regular & diffused reflection Reflected light can be reflected again Multiple images Sunlight – White or Coloured What is inside our eyes? Care of the Eyes Braille System | <ul style="list-style-type: none"> explain how light is refracted & dispersed identify parts of the human eye and their functions discuss vision and defects of the eye list measures to have good eye sight | <ul style="list-style-type: none"> Calculating the number of images | Slip test 5 |
| | Physics: L.13- Sound | <ul style="list-style-type: none"> Sound is produced by a vibrating body & humans Sound needs a medium for propagation Amplitude, Time Period & Frequency of a vibration Audible & Inaudible sounds Noise pollution | <p>Students will be able to:</p> <ul style="list-style-type: none"> explain how sound is produced describe the characteristics of sound explain how humans produce and recognizes sounds discuss the effects of noise pollution & list ways to reduce it | <ul style="list-style-type: none"> Demonstrating – Vibration is the cause of sound Display of lab model of an ear | Worksheet 8 |
| | Biology: L.9- Reproduction in Animals | <ul style="list-style-type: none"> Modes of reproduction Sexual reproduction Male and Female Reproductive organs | <p>Students will be able to:</p> <ul style="list-style-type: none"> distinguish between asexual and sexual reproduction Explain how sexual reproduction occurs. | <ul style="list-style-type: none"> Study of Sexual reproduction in Human beings | |
| December/20 | Chemistry: L.6- Combustion and Flame | <ul style="list-style-type: none"> What is combustion? How do we control fire? Types of combustion Flame and structure Fuel and its efficiency | <p>Students will be able to:</p> <ul style="list-style-type: none"> List the conditions necessary for combustion Identify different sources and types of fuel | <ul style="list-style-type: none"> Experiments with candles- combustion of a wax candle Necessity of ignition temperature | Worksheet 9 Slip Test 6 |

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| | | | <ul style="list-style-type: none"> • Generalize how fire can be controlled • Explain how fire extinguisher works • Recognize the zones in a candle flame • Compare the efficiency of different fuels | <ul style="list-style-type: none"> • Structure of a flame | |
| | Physics: L.17- Stars & Solar System | <ul style="list-style-type: none"> • The Moon • The Stars • Constellations • The Solar System • Some other members of the Solar System Artificial satellites | Students will be able to: <ul style="list-style-type: none"> • identify and recognize a few constellations • recognize the objects present in the solar system • list the characteristic features of planets • explain about the features of artificial satellites | <ul style="list-style-type: none"> • Collect three facts about space & celestial bodies | Worksheet - 10 |
| January /19 | Chemistry: L-5- Coal & Petroleum | <ul style="list-style-type: none"> • Coal • Story of coal • Petroleum • Natural gas Some Natural Resources are limited | Students will be able to: <ul style="list-style-type: none"> • name & describe major kinds of natural resources • describe how coal & petroleum are formed • explain how fossil fuels pollute the environment • discuss how natural resources meet human needs | Project – Recycling of paper | Worksheet 11 PT- 3 |
| | Physics: L-15- Some Natural Phenomena | <ul style="list-style-type: none"> • Lightning • Charging by rubbing • Types of charges and their interaction • Transfer of charge • Lightning safety | Students will be able to: <ul style="list-style-type: none"> • explain how lightning is produced in nature • discuss different ways of charging an object • describe how earthquakes occur | <ul style="list-style-type: none"> • Experiment to show positive & negative charge using comb & paper • Discussion on Sparks | Subject Enrichment Assessment-II |

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| | | <ul style="list-style-type: none"> • Earthquakes – causes and protection against it. | <ul style="list-style-type: none"> • list safety measures to be taken during & after earthquakes | | |
| February/15 | Revision | | | | Revision worksheet 2 Annual examinations |