

**P.M. English Medium School, Dhinoj**  
**Yearly Plan – Grade 6**  
**Academic Session 2024-25**

**Subject: Science**

**Subject Teacher: Tejal Prajapati**

**Term 1**

| Month | No. of Teaching Days | Chapter Details  | Experiments  | Activity   | Learning outcomes   | Field Trip |
|-------|----------------------|--|--|--|---|------------|
| April | 21                   | <p><b>Chapter 1</b><br/>Components of food</p> <p><b>Chapter 7</b><br/>Motion and measurement of distances</p> | <p><b>Experiment No. 1</b><br/>To test the presence of starch, protein and fat in the given sample of food.</p> <p><b>Experiment No. 11</b><br/>To measure the thickness of a coin</p> | <p><b>Chapter 1 Components of food</b><br/> <b>Activity 1:</b><br/>Some common meals of different regions/states [Table-1.1]<br/> <b>Activity 2:</b> Test for starch in food item.<br/> <b>Activity 3:</b> Test for proteins in food item.<br/> <b>Activity 4:</b> Test for fats in food item.<br/> <b>Activity 5:</b> Nutrients present in some food items [Table-1.2].<br/> <b>Activity 6:</b> To observe the presence of water in fruits and vegetables.<br/> <b>Activity 7:</b> To make a diet plan.</p> <p><b>Chapter 7 Motion and measurement of distances</b><br/> <b>Activity 1:</b></p> | <p><b>Chapter 1 Components of food</b><br/>           -To define nutrients and list out various nutrients in a food item.<br/>           -To experiment and test the presence of starch, protein and carbohydrates in the given food item.<br/>           -To list out the importance of various nutrients (carbohydrates, proteins, fats, vitamins and minerals).<br/>           -To list the importance of water and dietary fibre in diet.<br/>           -To define balanced diet<br/>           -To interpret the need and importance of balanced diet<br/>           -To design a balanced diet plan in order to provide body sufficient nutrients it needs to function properly.<br/>           -To define deficiency diseases.<br/>           -To name the diseases caused by deficiency of different vitamins and minerals<br/>           -To list the symptoms of deficiency diseases and their prevention.</p> |            |

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|      |    |   |  | <p>Measuring length and breadth of classroom using foot[Table-7.1].</p> <p><b>Activity 2:</b> Measuring width of a table using handspan[Table-7.2].</p> <p><b>Activity 3:</b> Measurement of height using handspan and cm and comparing the two.[Table-7.3]</p> <p><b>Activity 4:</b> Measuring the length of a curved line.</p> | <p>-To hypothesize consequences of eliminating any one major nutrients in order to make a healthy food choice.</p> <p><b>Chapter 7 Motion and measurement of distances</b></p> <p>-Reflect upon different means of transport and some important discoveries like “wheel” and “steam engine”</p> <p>-To define measurement and unit.</p> <p>-To conduct simple investigations to find out the length of various materials using non-standard measurements.</p> <p>-To recognize the importance of standard units of measurement</p> <p>-To differentiate between standard and non-standard units of measurement</p> <p>-To summarize the rules associated with the measurement of length.</p> <p>-To apply scientific inquiry to measure the length of a curved line</p> |  |
| June | 16 | <b>Chapter 7</b><br>Motion and measurement of distances<br>(continue) | <b>Experiment No.12</b><br>To show that air has oxygen | <b>Chapter 7 Motion and measurement of distances</b><br><b>Activity 5:</b> To observe objects at rest and in motion [Table-7.4]  | <b>Chapter 7 Motion and measurement of distances</b><br>-To distinguish between rest and motion in order to classify objects as in motion or at rest.   |  |

**Chapter 11**  
Air around us  
[Project]

**Activity 6:**  
To identify various types of motion.

**Chapter 11 Air around us**

**Activity 1:** To make a firki of your own

**Activity 2:** To observe air occupies space

**Activity 3:** To show the presence of water vapor in air.

**Activity 4:** To show the presence of oxygen in air.

**Activity 5:** To observe the presence of Carbon dioxide in air.

**Activity 6:** Observing presence of dust in air with sunlight

**Activity 7:** To observe water contains air.

**Activity 8:** To observe soil has air in it.

-To recognize different types of motion (rectilinear, curvilinear, circular and periodic)

-To find out the similarities and differences between the two objects based on the types of motion

**Chapter 11 Air around us**

- Understanding and analyzing the concept of the properties of air such as air is found everywhere, air occupies space, air is

colourless, air has no smell.

- Application of concept of properties of air in our everyday life and testing the concept in our everyday life.

- Understanding the fact that air is a mixture of gases like nitrogen, oxygen, carbon dioxide, water vapour and few other

gases along with dust and smoke. Describing its importance.

-Analyzing the harmful effect of dust and smoke in our everyday life and solving the problems.

-Understanding the concept how oxygen is available in air and verifying the presence of oxygen in air and its importance in our life.

-Understanding the concept of presence of water vapour in air and testing the presence of water vapour in air and knowing its importance in the environment.

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|      |    |   |  |   | <ul style="list-style-type: none"> <li>-Understanding the importance of nitrogen in the environment and identifying its presence in the air.</li> <li>-Describe the importance of atmosphere in the environment and its impact.</li> <li>-Understanding the concept how air is available in water and analyzing the concept in the environment and few facts that how fishes are able to live in water and we human cannot.</li> <li>-Understanding the concept how air is available in soil and analyzing the concept in the environment.</li> <li>-Understanding the various uses of air and its impact on us.</li> <li>-Understanding the interrelationship between plants and animals in terms of air in the environment.</li> </ul> |               |
| July | 24 | <p><b>Chapter 4</b><br/>Getting to know plants</p> <p><b>Chapter 5</b><br/>Body Movements</p> | <p><b>Chapter 4 Getting to know plants</b><br/><b>Experiment No. 9</b><br/>To study different parts of a leaf.</p> <p><b>Experiment No. 16</b><br/>To show that chlorophyll is necessary for plants</p> <p><b>Experiment No.10</b></p> | <p><b>Chapter 4 Getting to know plants</b><br/><b>Activity 1:</b> Categorize the plants.[Table-4.1]<br/><b>Activity 2:</b> Conduction of water in stem<br/><b>Activity 3:</b> To make an impression of a leaf.<br/><b>Activity 4:</b> To observe transpiration in leaves.<br/><b>Activity 5:</b> To test the presence of starch in leaf<br/><b>Activity 6:</b> To observe<br/>(a) Plant with roots, and<br/>(b) without roots</p> | <p><b>Chapter 4 Getting to know plants</b><br/>- Classifies plants as herbs, shrubs, trees, creeper, climbers.<br/>- Explain the functions of leaf, stem and the process of transpiration<br/><br/>- Define photosynthesis<br/><br/>-Differentiate tap and fibrous roots, parallel and reticulate venation based on their location and function.</p>   | School Garden |

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|        |    |   | <p>To study the different parts of a flower.</p>   | <p><b>Activity 7:</b> To germinate seeds a study the function of roots.<br/> <b>Activity 8:</b> To observe the types of roots and types of leaf venation.<br/> <b>Activity 9:</b> To study the parts of a flower.<br/> <b>Activity 10:</b> To study the male and female parts of a flower</p> <p><b>Chapter 5: Body Movements</b></p> <p><b>Activity 1:</b> Complete Table-5.1<br/> <b>Activity 2:</b> To observe movement in human body-complete table 5.2<br/> <b>Activity 3:</b> Making a ball and socket joint<br/> <b>Activity 4:</b> To observe directions of movement allowed by a hinge joint</p> | <p>-Draw a labeled diagram of different parts of flower and identify them.<br/> -Identify different types of flower based on appearance and aroma.</p> <p><b>Chapter 5: Body Movements</b></p> <p>- How do animals move from place to place? [Table-5.1]<br/> - Human Body and its movement<br/> -Identify the type of joints based on their structure, location and function.<br/> - Draw a labelled diagram of different types of joints.<br/> -Identify the structure and function of the skeletal system.</p> |  |
| August | 19 | <p><b>Chapter 5</b><br/>Body Movements (continue)</p> <p><b>Chapter 8</b><br/>Light, shadows and reflection</p> | <p><b>Chapter 8 Light, shadows and reflection</b><br/> <b>Experiment No.8</b><br/>To show that light travels in a straight line.</p> | <p><b>Chapter 5: Body Movements (continue)</b><br/> <b>Activity 5:</b> To label the skeletal system.<br/> <b>Activity 6:</b> To observe the movement in Earthworm, Fiah, cockroaches, snail, snake.<br/> <b>Chapter 8 Light, shadows and reflection</b></p>   | <p><b>Chapter 5 Body Movements (continue)</b><br/> - Explain the importance of ribcage,<br/> backbone, Shoulder and pelvic bones.<br/> - Exhibit values like coordination to explain the function of the skeletal system.</p>   |  |

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|           |    |                          |                            | <p><b>Activity 1:</b> Observing objects that do or do not allow light to pass through them.</p> <p><b>Activity 2:</b> To observe the condition required for a shadow to form.</p> <p><b>Activity 3:</b> To observe the characteristics of a shadow.</p> <p><b>Activity 4:</b> To make a pin hole camera.</p> <p><b>Activity 5:</b> To observe the image formed by a plane mirror.</p> | <p>- Understand movements in other animals.</p> <p><b>Chapter-8 Light, shadows and reflection</b></p> <p>-Classify objects as luminous and non luminous.</p> <p>- Classify objects as transparent, translucent, and opaque.</p> <p>-Understand the process of formation of shadow and its criteria.</p> <p>-Make a Pinhole camera.</p> <p>- Perform different activities related to light shadows and formation of images.</p> <p>-Understand rectilinear propagation of light.</p> <p>- Explain the process of reflection of light from the plane mirror [regular and irregular reflection].</p> |  |
| September | 10 | Revision and Term I Exam | Chapter : 1,4,5,7,8 and 11 |   |   |  |

**Term 2**

| Month   | No. of Teaching Days | Chapter Details  | Experiments  | Activity  | Learning outcomes  | Field Trip |
|---------|----------------------|--|--|---|--|------------|
| October | 18                   | <p><b>Chapter 2</b><br/>Sorting of Material into Groups [Project]</p> <p><b>Chapter 3</b><br/>Separation of Substances</p> | <p><b>Experiment No. 2</b><br/>To study the solubility of different substances in water.</p> <p><b>Experiment No. 3</b><br/>To separate a mixture of sand and water by decantation and sedimentation method.</p> | <p><b>Chapter 2 Sorting of Material into Groups</b></p> <p><b>Activity 1:</b><br/>To observe the objects and identify the materials they are made of [Table-2.1]</p> <p><b>Activity 2:</b><br/>Observe the different types of objects that are made from the same material [Table-2.2].</p> <p><b>Activity 3:</b><br/>To observe the properties of various materials by using a cloth tumbler.</p> <p><b>Activity 4:</b> Cutting pieces of materials like wood to see if they have luster.</p> <p><b>Activity 5:</b> To observe hardness and softness of materials.</p> | <p><b>Chapter 2 Sorting of Material into Groups</b></p> <ul style="list-style-type: none"> <li>- Sort materials into groups according to their properties.</li> <li>- Insoluble / soluble in water</li> <li>- Transparent / Translucent / Opaque</li> <li>- Hard / soft / Translucent / Opaque</li> <li>- Appearance/ Dull/Shiny</li> <li>- Elaborate on the need of classification.</li> <li>- Differentiate between various properties of metals</li> </ul> <p><b>Chapter 3 Separation of Substances</b></p> <ul style="list-style-type: none"> <li>- Define the terms like condensation, evaporation decantation, sedimentation, solution, saturated solution</li> <li>- Describe churning, hand picking, threshing, filtration and winnowing processes.</li> <li>- Explain different methods of separation of substances.</li> </ul> |            |

**Activity 6:** To observe the solubility by mixing different solid materials in water.

**Activity 7:** To observe the solubility of some common liquids in water.

**Activity 8:** To observe if substances float or sink.

**Activity 9:** To observe the transparency of various objects.

### **Chapter 3 Separation of Substances**

**Activity 1:** To observe identify why do we separate substances?  
[Table-3.1].

**Activity 2:** To observe the separation of substances by handpicking.

**Activity 3:** To observe the separation of



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|          |    |   |   | <p>substances by threshing.</p> <p><b>Activity 4:</b> To observe the separation of substances by winnowing.</p>   |  |                              |
| November | 17 | <p><b>Chapter 3</b><br/>Separation of Substances<br/>[continue]</p> <p><b>Chapter 6</b><br/>The Living Organism – Characteristics and Habitat</p> | <p><b>Experiment No. 6</b><br/>To separate the mixture of sand, salt and iron filings</p> <p><b>Experiment No. 5</b><br/>To make a saturated solution</p> | <p><b>Chapter 3 Separation of Substances</b><br/><b>Activity 5:</b> To observe the separation of substances by sieving.<br/><b>Activity 6:</b> To observe the separation of substances by sedimentation, decantation and filtration.<br/><b>Activity 7:</b> To observe the separation of substances by evaporation.<br/><b>Activity 8:</b> To observe the separation of substances by use of more than one method of separation.<br/><b>Activity 9:</b></p> | <p><b>Chapter 3 Separation of Substances</b><br/>-Apply scientific concept for separating unwanted materials in day to day life.<br/>-Recall the various separation processes when situations come across in the daily life.<br/>- Explain how multiple processes can be employed when the mixture has a soluble and insoluble component.<br/>- To make a saturated solution.<br/>- To observe the effect of heat on solubility of a substance.</p> <p><b>Chapter 6 The Living Organism – Characteristics and Habitat</b><br/>- Understand organism (Definition) and surroundings<br/>- Explain Habitat and Adaptation.<br/>-Classify the organisms on the basis of their Habitat<br/>-Understand acclimatization with examples<br/>-Explain different types and components of Habitat</p> | Science City / Serenity Club |

To make a saturated solution.

**Activity 10:**

To observe the effect of heat on solubility of a substance.

**Activity 11:**

To observe does water dissolve equal amounts of different soluble substances [Table-3.2].

**Chapter 6 The Living Organism – Characteristics and Habitat**

**Activity 1:** To observe animals, plants and other objects found in different surroundings [Table-6.1]

**Activity 2:** To observe the germination of seeds -this is the beginning of life of a new plant.

**Activity 3:** To observe the transpiration in desert plant-cactus.  
(ii) A new plant grows from cutting of a rose plant.

- Learn and understand Adaptations found in Organisms living in various Habitats

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| December | 10 | <p><b>Chapter 6</b><br/>The Living Organism – Characteristics and Habitat [Continue]</p> <p><b>Chapter 9</b><br/>Electricity and Circuits</p> |  | <p><b>Chapter 6 The Living Organism – Characteristics and Habitat</b><br/> <b>Activity 4:</b> To observe how plants respond to light.<br/> <b>Activity 5:</b> To observe the reproduction in plants- (i) A new plant grows from a bud of potato.<br/> <b>Chapter 9: Electricity and Circuits</b><br/> <b>Activity 1:</b> To observe (a) Torch bulb and (b) its inside view.<br/> <b>Activity 2:</b> To observe different arrangements of electric cell and bulb</p> | <p><b>Chapter 6 The Living Organism – Characteristics and Habitat</b></p> <ul style="list-style-type: none"> <li>- List the characteristic features of living organisms</li> <li>- Understand common characteristics of Organisms like growth , respiration etc.</li> <li>- Understand excretion and reproduction.</li> </ul> <p><b>Chapter 9: Electricity and Circuits</b></p> <ul style="list-style-type: none"> <li>- List the uses of electricity using different arrangements of cell, wire and bulb and show how an electric current is produced</li> <li>- Explain how electric circuit is formed .</li> </ul> |  |
| January  | 22 | <p><b>Chapter 9</b><br/>Electricity and Circuits [Continue]<br/> <b>Chapter-10</b><br/>Fun with Magnets</p>                                   | <p><b>Experiment No.7</b><br/>To prove that like poles of magnets repel and unlike poles attract each other.</p> | <p><b>Chapter 9: Electricity and Circuits</b><br/> <b>Activity 3:</b> To make a switch using safety pin and drawing pins.<br/> <b>Activity 4:</b> To observe inside view of a torch.<br/> <b>Activity 5:</b> To make (a) A conduction tester</p>  | <p><b>Chapter 9: Electricity and Circuits</b></p> <ul style="list-style-type: none"> <li>- Differentiate between complete and incomplete circuit with a well labelled figure.</li> <li>- Construct a model of an electric torch and explain its working.</li> <li>- Make an effort to minimize the wastage of electricity.</li> </ul>   |  |

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|  |  |  | <p>(b) Testing whether the bulb glows when the tester is in contact with a key [Table-9.1]</p> <p><b>Chapter-10 Fun with Magnets</b></p> <p><b>Activity 1:</b> Observing effect of magnet - a paper clip hanging in air.</p> <p><b>Activity 2:</b> To observe and find the objects attracted by magnet [Table-10.1].</p> <p><b>Activity 3:</b> To observe magnet rubbed in sand or soil at different locations [Table-10.2].</p> <p><b>Activity 4:</b> To find the poles of a magnet.</p> <p><b>Activity 5:</b> To observe that a freely suspended bar magnet always comes to rest in the same direction.</p> <p><b>Activity 6:</b> To make your own magnet.</p> <p><b>Activity 7:</b> To make a magnetic compass.</p> | <p>- Compare conductors and insulators and discuss about its importance,</p> <p><b>Chapter-10 Fun with Magnets</b></p> <p>- State the story of discovery of natural magnets</p> <p>-Determine which objects are magnetic and which are not.</p> <p>-Observe that magnets have two sides—north and south.</p> <p>-Predict the motion of magnets, based on knowledge that they repel and attract.</p> <p>-Apply the process of identifying main idea and supporting details to show how the force of magnetism works and how it can be useful in everyday life.</p> <p>-Conduct a simple investigation to find out the poles of the magnet.</p> <p>-Apply learning of scientific concepts by using a compass needle for finding direction.</p> <p>-Conduct investigation to find out whether a freely suspended magnet aligns in a particular direction.</p> |  |
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|                 |           |                           |                      | <b>Activity 8:</b> To observe attraction and repulsion in magnets [Table-10.3]. |  |  |
| <b>February</b> | <b>18</b> | Revision and Term II Exam | Chapter : 2,3,6,9,10 |   |  |  |
| <b>March</b>    |           | Term II Exam              |                      |   |  |  |