

**DELHI PUBLIC SCHOOL JAMMU**  
**SESSION - 2023-24**

**YEARLY SYLLABUS**

**CLASS-X**

**SUBJECT : SCIENCE**

➤ **OBJECTIVES:-**

- To provide the broader objectives of science that is process, skill, knowledge, curiosity etc.
- To encourage and enable students to develop inquiring minds and curiosity about science and nature.
- To communicate scientific ideas, arguments, and practical experiences accurately in a variety of ways.
- To think analytically, critically and creatively to solve problems.
- To acquire knowledge, conceptual understanding and skills to solve problems and make informed decisions in scientific contents.
- To understand the nature of science, and technology and society including the benefits and limitations of science and its applications in developments.
- To enable the learner to review, organize and edit their own work and work done by peers.
- To develop skills of scientific inquiry to design and evaluate scientific evidence to draw conclusions.

**PHYSICS:**

S.No	MONTH	CHAPTER/ TOPIC
1	April	Light(Reflection)  *Activity: To find the focal length of concave mirror.
2	May	Light(Refraction)  *Activity: To find the focal length of convex lens.
3	June/ July	Light (Full Chapter)  Revision test based on Light.
4	August/September	Human Eye  Practical: Refraction through rectangular glass slab.
5	October	Electricity

		<b>Practical: Dispersion of light through prism.</b>
<b>6</b>	<b>November</b>	<b>Magnetic Effects of current</b> <b>Practical: Ohm's law verification</b>
<b>7</b>	<b>December</b>	<b>Revision :</b> <b>Light</b> <b>Human eye &amp; colorful world</b> <b>Magnetic effects of current</b> <b>Practical: Resistance in series and parallel using Ohm's law.</b>
<b>8</b>	<b>January</b>	<b>Revision</b>
<b>9</b>	<b>February</b>	<b>Preboard-1</b>
<b>10</b>	<b>March</b>	<b>Preboard-II</b>

### **SYLLABUS FOR FA-1**

1.Light (up to reflection)

### **SYLLABUS FOR HALF YEARLY**

1.Light

2. Human Eye and Colourful World

**+Practicals**

### **PRE-BOARD-I**

1.Light

2.Human Eye and Colourful World

3.Electricity

## + Practicals

### PRE-BOARD-II

1. Electricity
2. Magnetic effects of current
3. Human eye & colourful
4. Light

## + Practicals

### PRACTICAL'S COVERED APRIL + MAY

1. Determination of the focal length of (i) Concave Mirror (ii) Convex Lens by obtaining the image of distant object.
2. Finding the image distance for varying object distance in case of a convex lens and drawing corresponding ray diagrams to show the nature of image formed.

### AUGUST AND SEPTEMBER

1. Tracing the path of the 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.
2. Tracing the path of the rays of light through a glass prism.

### NOVEMBER

1. Studying the potential difference ( $v$ ) across a resistor on the current ( $I$ ) passing through it and determine its resistance. Also plotting a graph between  $v$  and  $I$ .
2. Determination of the equivalent resistance of two resistors when connected in (a) series and (b) parallel.

### ENRICHMENT ACTIVITY

1. Ohm's law and study various electrical devices connected in Ohm's Law
2. Faraday's law of electromagnetic induction and its experimental verification

### CHEMISTRY :

S.No	MONTH	CHAPTER/TOPIC
1	April	<b>Chemical Reactions and Equations</b> <b>Activity: To identify types of chemical reactions involved.</b>
2	May+June	<b>Chemical Reactions and Equations + Acids, Bases and Salts</b>

		<b>Revision Test</b>
<b>3</b>	<b>July</b>	<b>Acids, Bases and Salts (Contd.)</b>  <b>Practical: To determine pH of various samples.</b>
<b>4</b>	<b>August</b>	<b>Acids, bases and Salts (Contd.) + Practicals</b> <b>Activity: To determine with the help of activity that all hydrogen containing compounds are not acids.</b>
<b>5</b>	<b>September</b>	<b>Metals and Non Metals</b>  <b>Activity: To differentiate between metals and non-metals on the basis of physical properties.</b>
<b>6</b>	<b>October</b>	<b>Metals and Non Metals (Contd.) + Practicals</b>  <b>Activity: To study the displacement reactions of various Metals.</b>
<b>7</b>	<b>November</b>	<b>Carbon and its Compounds.</b>  <b>Activity: To study flame test to distinguish between saturated &amp; unsaturated hydrocarbons.</b>
<b>8</b>	<b>December</b>	<b>Carbon and it's compounds</b>  <b>Revision Test</b>
<b>9</b>	<b>January</b>	<b>Revision</b>
<b>10</b>	<b>February</b>	<b>Preboard-I</b>
<b>11.</b>	<b>March</b>	<b>Preboard-II</b>

### **SYLLABUS FOR FA-1**

1. Chemical Reactions and Equations

### **SYLLABUS FOR HALF YEARLY**

1. Chemical Reactions and Equations

2. Acids, Bases and Salts + Practicals

3. Metals and Non-Metals

### **PRE-BOARD-I**

1. Chemical Reactions and Equations

- 2.Acids, Bases and Salts + Practicals
- 3.Metals and Non-Metals + Practicals

### **PREBOARD -II**

1. Chemical Reactions and Equations
- 2.Acids, Bases and Salts + Practicals
- 3.Metals and Non-Metals + Practicals
4. Carbon and it's Compounds.

### **PRACTICALS (HALF YEARLY)**

1. To study the properties of acids and bases (HCl and NaOH) by their reaction with
  - a) Litmus solution (Blue/Red)
  - b) Zinc metal
  - c) Solid sodium carbonate.

### **PRACTICALS (FINAL )**

- 1.To study the following properties of acetic acid
  - i) Odour ii) Solubility in water iii) Effect on litmus iv) Reaction with sodium bicarbonate
2. To study the comparative Cleansing action of a sample of soap in soft and hard water.

### **BIOLOGY:**

<b>S.No</b>	<b>MONTH</b>	<b>CHAPTER/TOPIC</b>
<b>1</b>	<b>April</b>	<b>Life Processes (Nutrition &amp;Respiration)</b> <b>Activity:To show/study the structure of a leaf.</b>
<b>2</b>	<b>May+June</b>	<b>Life Processes</b> <b>(Transportation&amp;Excretion)</b> <b>Practical: Prepare a temporary mount of a leaf peel to show stomata .</b>
<b>3</b>	<b>July</b>	<b>Control and Co-ordination in Plants and Animals</b> <b>Revision Test : Sense organs and Tropic Movements</b>

4	August	Control and Co-ordination in Plants & Animals Group Discussion: Plant/ Animal Hormones
5	September	How Do Organisms Reproduce? Practical: To study (a) binary fission in <i>Amoeba</i> , and (b) Budding in Yeast and Hydra with the help of prepared slides.
6	October	How Do Organisms Reproduce?(Contd.) Revision Test : Asexual Reproduction & its types
7	November	Heredity Practical: Identification of a different parts of an embryo of a dicot seed( Pea, gram or red Kidney bean).
8	December	Our Environment Revision Test: Waste Management
9	January	Revision
10	February	Preboard-I
11.	March	Preboard-II

### **SYLLABUS FOR FA-1**

1.Life Processes

### **SYLLABUS FOR HALF YEARLY**

1.Life Processes

2. Control and Co-ordination in Plants and Animals

**+Practicals**

### **PRE BOARD-I**

1.Life Processes

2.Control and Co-ordination in Plants and Animal

3.How do Organisms Reproduce?

## + Practicals

### **PRE-BOARD-II**

- 1.Life Processes
- 2.Control and Co-ordination in Plants and Animal
- 3.How do Organisms Reproduce?
- 4.Heredity
- 5.Our Environment

### +Practicals

### **PRACTICAL:**

- 1.Experimentally show that carbon dioxide is given out during Respiration.
- 2.Prepare a temporary mount of a leaf peel to show stomata.
- 3.Studying (a) binary fission in *Amoeba*, and (b) Budding in yeast and Hydra with the help of prepared slides.
- 4.Identification of a different parts of an embryo of a dicot seed (Pea, gram or red kidney bean).