DELHI PUBLIC SCHOOL JAMMU
SESSION – 2024-25
YEARLY SYLLABUS BIFURCATION

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** **Practical: Dispersion of light through prism.**
6	NOVEMBER	**PREBOARD-I**

7	**DECEMBER**	**PREBOARD-II**
8	**JANUARY**	**PREBOARD-III**
9	**FEBRUARY**	**FINAL EXAM**
10	**MARCH**	**FINAL EXAM**

SYLLABUS FOR FA-1
1.Light (up to reflection)

SYLLABUS FOR FA-II
1.Light (complete)

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
4.Magnetic effects of current
+ Practicals

PRE-BOARD-II
1.Light
2.Human Eye and Colourful World
3.Electricity
4.Magnetic effects of current
+ Practicals

PREBOARD-III
1.Light
2.Human Eye and Colourful World
3.Electricity
4.Magnetic effects of current
+ 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 slow 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**	**Chemical Reactions and Equations** **Activity: To identify types of chemical reactions involved.**
2	**MAY/JUNE**	**Acids, Bases and Salts** **Activity: To determine with the help of an activity that all hydrogen containing compounds are not acids.**

3	**JULY**	**Acids, Bases and Salts (Contd.) + Practicals** **Practical: To determine pH of various samples.**
4	**AUGUST**	**Metals and Non-metals** **Activity: To differentiate between metals and non-metals on the basis of their physical properties**
5	**SEPTEMBER**	**Metals and Non-Metals (Contd.)+ Practicals.** **Activity: To study the displacement reactions of various Metals.**
6	**OCTOBER**	**Carbon and its compounds.** **Activity: To study flame test to distinguish between saturated & unsaturated hydrocarbons**
7	**NOVEMBER**	**PREBOARD-I**
8	**DECEMBER**	**PREBOARD-II**
9	**JANUARY**	**PREBOARD-III**
10	**FEBRUARY**	**FINAL EXAM**
11	**MARCH**	**FINAL EXAM**

SYLLABUS FOR FA-1

1. Chemical Reactions and Equations

SYLLABUS FOR FA-2

1. Chemical Reactions & Equations
2. Acids, Bases &Salts

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
4. Carbon and its Compounds.

PREBOARD -II

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

PREBOARD -III

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

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.
2.To determine pH of various samples.

PRACTICALS (FINAL)

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.

2.To determine pH of various samples.

3.Performing and observing the following reactions and classify them into:
i) Action of water on quicklime
ii) Action of heat on ferrous sulphate crystals
iii) Iron nails kept in copper sulphate solution
iv) Reaction between sodium sulphate and barium chloride solutions

a.Combination reaction
b.Decomposition reaction

c.Displacement reaction
d.Double displacement reaction

4.Observing the action of Zn, Fe, Cu and Al metals on the following salt solutions:
a) $ZnSO_4(aq)$ b) $FeSO_4(aq)$
c) $CuSO_4(aq)$ d) $Al_2(SO_4)_3(aq)$
Arranging Zn, Fe, Cu and Al (metals) in decreasing order of reactivity based on the above result.

5.To study the following properties of acetic acid
i) Odour
ii) Solubility in water
iii) Effect on litmus
iv) Reaction with sodium bicarbonate

6.To study the comparative Cleansing action of a sample of soap in soft and hard water.

BIOLOGY:

S.No	**MONTH**	**CHAPTER/TOPIC**
1	**April**	**Life Processes (Nutrition &Respiration)** **Activity:To show/study the structure of a leaf.**
2	**May+June**	**Life Processes** **(Transportation &Excretion)** **Practical: Prepare a temporary mount of a leaf peel to show stomata .**
3	**July**	**Control and Co-ordination in Plants and Animals** **Revision Test : Sense organs and Tropic Movements**
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 *Amoeba,* and (b) Budding in Yeast and Hydra with the help of prepared slides.**
6	**October**	**Heredity** **Practical: Identification of a different parts of an embryo of a dicot seed(Pea, gram or red Kidney bean).** **Our Environment** **Revision Test: Waste Management**
7	**November**	**PREBOARD-1**
8	**December**	**PREBOARD-II**
9	**January**	**PREBOARD-III**
10	**February**	**FINAL EXAM**
11	**March**	**FINAL EXAM**

SYLLABUS FOR FA-1
1.Life Processes

SYLLABUS FOR FA-II
1.Control and coordination in Plants and Animals

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?
4.Heredity
5.Our Environment
+**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**

PRE-BOARD-III

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).