

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

**CLASS-IX**  
**SUBJECT SCIENCE**

**OBJECTIVES:-**

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

**SUBJECT : PHYSICS**

<b>S.NO. MONTH</b>		<b>NAME OF THE LESSON/TOPIC</b>
1	APRIL	Motion Activity: To study how position and time is related with each other using graphical method.
2	MAY	Motion and its numericals (Contd.) Revision Test
3	JUNE+JULY	Force and laws of Motion Activity: To verify Newton's three laws of motion.
4	AUGUST	Work and Energy Revision Test
5	SEPTEMBER	Work and Energy Activity: To verify Archimedes' principle.

6	OCTOBER	Gravitation Revision Test
7	NOVEMBER	Floatation and its numericals Revision Test : Numericals
8	DECEMBER	Sound Activity: To verify laws of Reflection of sound.
9	JAN	Revision
10	FEBRUARY	FINAL EXAM
11.	MARCH	FINAL EXAM

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

1.Motion

### **SYLLABUS FOR FA-II**

**2.Force and laws of motion**

### **SYLLABUS FOR HALF YEARLY EXAMINATION**

1. Motion,
2. Force Laws of Motion

### **SYLLABUS FOR FA-III**

1.Gravitation

### **SYLLABUS FOR FA-IV**

1.Floatation

### **SYLLABUS FOR FINAL EXAMINATION**

1. Gravitation and Floatation
2. Work and Energy.
3. Motion
4. Force & Laws of motion

## 5. Sound

### **SUBJECT ENRICHMENT :(HALF YEARLY)**

1. Determine the density of solid by using spring balance and a measuring cylinder.
2. Establishing the relation between the loss in weight of a solid when immersed in a tap water and strongly salt water, with the weight of water displaced by it by taking at least two different solids.

### **(FINAL EXAMINATION)**

1. Determine the speed of a pulse propagated through a stretched string/slinky.
2. Verification of Laws of Reflection by sound.

### **SUBJECT : CHEMISTRY**

S.NO.	MONTH	NAME OF THE LESSON/TOPIC
1	APRIL	Matter in our surroundings Activity: To study the characteristics of particles of matter.
2	MAY	Matter in our surroundings (Contd.) Practical: To determine the melting point of ice & boiling point of water.
3	JULY	Is matter around us pure? Activity: To differentiate between solution, colloidal and suspension on the basis of properties.
4	AUGUST	Is matter around us Pure (Contd.) Activity: To classify the changes around us as physical and chemical changes.
5	SEPTEMBER	Atoms and Molecules Activity: To verify the law of conservation of mass.
6	OCTOBER	Atoms and Molecules (Contd.) Activity: To calculate the atomic number and mass number of an element.
7	NOVEMBER	Structure of the Atom Activity : To study the different models of atom
8	DECEMBER	Structure of Atom (Contd.) Assignment on Isotopes and Isobars
9	JANUARY	Revision Test
10	FEBRUARY	FINAL EXAM

11	MARCH	FINAL EXAM
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### **SYLLABUS FOR FA-I**

1.Matter in our surroundings

### **SYLLABUS FOR FA-II**

1.Is matter around us pure

### **SYLLABUS FOR HALF YEARLY EXAMINATION**

1.Matter in our surroundings

2.Is Matter around us Pure

### **SYLLABUS FOR FA-III**

1.Atoms and molecules

### **SYLLABUS FOR FA-IV**

1.Structure of the atom

### **SYLLABUS FOR FINAL EXAMINATION**

1.Matter in our surroundings

2.Is Matter around us Pure + Practicals

3.Atoms and Molecules + Practicals

4.Structure of the Atom

### **ENRICHMENT ACTIVITIES**

#### **HALF YEARLY**

#### **1. To prepare:**

- a) a true solution of common salt, sugar and alum in water.
- b) a suspension of soil, chalk powder and fine sand in water.
- c) a colloidal solution of starch in water and egg albumin in water and distinguish between these on the basis of:
  - a. transparency
  - b. filtration criterion
  - c. stability

#### **2. Preparation of:**

- a) A mixture
- b) A compound

Using iron filings and sulphur powder and distinguishing between these on the basis of:

- (i) Appearance, i.e., homogeneity and heterogeneity
- (ii) Behaviour towards a magnet
- (iii) Behaviour towards carbon disulphide as a solvent
- (iv) Effect of heat

### FINAL EXAMINATION

1. To determine the melting point of ice and boiling point of water.
2. To carry out the following reactions and classify them as physical or chemical changes.
  - a) Iron with copper sulphate solution in water.
  - b) Burning of magnesium ribbon in air.
  - c) Zinc with dilute sulphuric acid.
  - d) Heating of copper sulphate crystals.
  - e) Sodium sulphate with barium chloride in the form of their solutions in water.
3. To verify the law of conservation of mass.

### SUBJECT : BIOLOGY

S. No.	MONTH	NAME OF THE LESSON/TOPIC
1	APRIL	The Fundamental unit of life Activity: To study the process of osmosis in raisins.
2	MAY	Fundamental unit of life cell (contd.) Practical: Preparation of stained mounts of onion peel and draw labelled diagrams.
3	JULY	Tissues Practical: To study plant tissues from prepared slides/ diagrams.
4	AUGUST	Tissues(contd.) Practical: To study animal tissues from prepared slides/ diagrams.
5	SEPTEMBER	Tissues Revision Test
6	OCTOBER	Improvement in food Resources Activity : Project report on nutrient Management
7	NOVEMBER	Improvement in food Resources
8	DECEMBER	Improvement in food Resources

9	JANUARY	Revision
10	FEBRUARY	FINAL EXAM
11	MARCH	FINAL EXAM

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

1.Fundamental unit of life

### **SYLLABUS FOR FA-II**

1.Fundamental unit of life

### **SYLLABUS FOR HALF YEARLY EXAMINATION**

1.Fundamental unit of life

2.Tissues

### **SYLLABUS FOR FA-III**

1.Tissues

### **SYLLABUS FOR FA-IV**

1. Tissues

### **SYLLABUS FOR FINAL EXAMINATION**

1.Fundamental unit of life

2.Tissues

3.Improvement in food resources

### **PRACTICALS:**

1Preparation of stained mounts of onion peel and draw labelled diagrams.

2. Identification of Parenchyma, Collenchyma and sclerenchyma tissues in plants, striped, smooth and cardiac muscles fibres and nerve cells in animals, from prepared slides. Draw their labeled diagrams.