

DSB INTERNATIONAL PUBLIC SCHOOL

Summer Holiday

Assignment

CLASS IX | ACADEMIC SESSION 2026-27



A MESSAGE TO STUDENTS

"Vacations are a wonderful time to relax, refresh your mind, and explore new ideas. Complete each task sincerely and neatly. Try to connect your learning with daily life experiences."



Read Daily



Practice Writing



Family Time



Stay Healthy



Warm Regards, Your Teachers

हिन्दी

अनिवार्य कार्य (Mandatory)

निबंध लेखन

विषय: "यदि मैं भारत का प्रधानमंत्री होता/होती"

- ✓ शिक्षा और स्वास्थ्य सुधार
- ✓ पर्यावरण संरक्षण
- ✓ डिजिटल इंडिया पहल

वैकल्पिक कार्य (Optional - Choose One)

- ★ अवकाश डायरी: चित्रों के साथ छुट्टियों के अनुभव।
- ★ भाषा कौशल: अखबार से 5 नए शब्द, अर्थ और वाक्य।
- ★ पुस्तक पठन: किसी प्रसिद्ध कहानी का सारांश लेखन।

निर्देश: कार्य सुंदर लिखावट में करें और स्कूल खुलने के पहले दिन जमा करें।

ENGLISH ASSIGNMENT

Bio-sketch: Sudha Murthy

Prepare a detailed project file with pictures covering:

- Introduction: Who is she?
- Early Life & Education
- Career & Professional Journey
- Social Work & Philanthropy
- Famous Books authored
- Awards, Achievements & Reflection

Presentation matters! Use a creative project file.



SCIENCE: LAB AT HOME



Activity 1: Chemistry

Topic: Chromatography

Materials: Filter paper, sketch pens, water. Observe colour separation and record results.



Activity 2: Biology

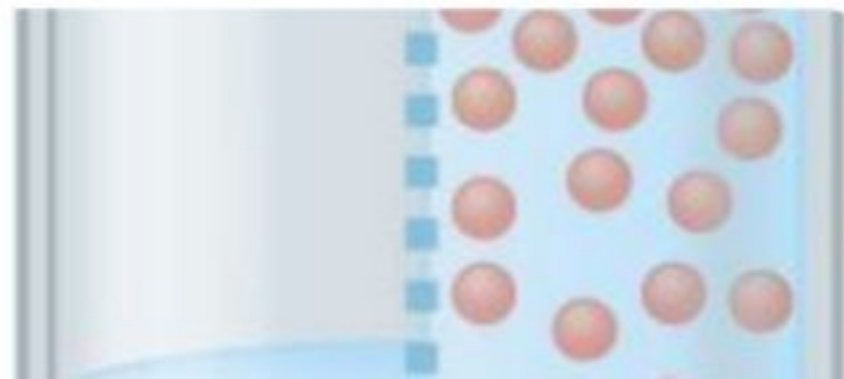
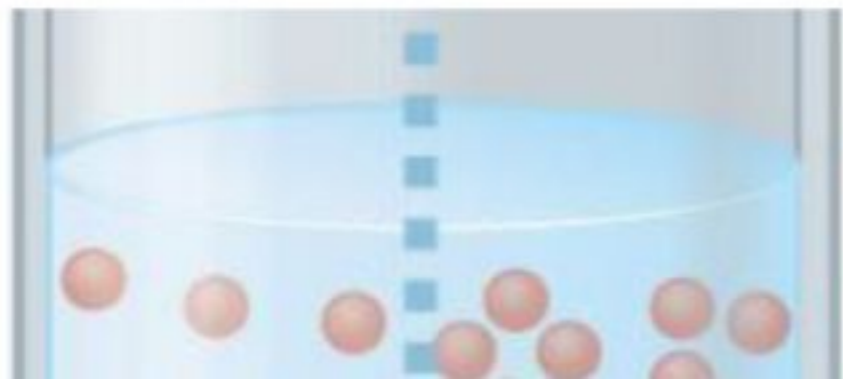
Topic: Osmosis

Use raisins/grapes in Plain (Hypotonic), Salt (Hypertonic), and Isotonic water. Observe changes.



Requirements

Include: Aim, Materials, Procedure, Observation, Conclusion, and Viva questions with photos.



SCIENCE: COMPETENCY FOCUS

Contextual Questions	Core Scientific Concept
Why are IV saline drips given instead of pure water?	Osmotic Pressure in Blood Cells
Why are pickles preserved in high amounts of salt?	Exosmosis in Hypertonic Solutions
What happens if a living cell loses its nucleus?	Control Centre & Cellular Metabolism
How does the rigid cell wall benefit plants over animals?	Structural Integrity vs. Flexibility
Explain 'Division of Labour' within a single cell.	Organelle Specialization & Efficiency

Answer these critical thinking questions in your science notebook.

MATHEMATICS: PROJECT FILE



Choose ONE Major Topic

1. Rational Numbers in Real Life

Examples in finance, measurements, and sports.
Include tables and diagrams.

2. Numbers & Expressions Around Us

Applications of Polynomials in area, perimeter, and science.

File Structure: Title → Certificate → Index → Introduction → Methodology → Analysis → Conclusion.

MATHEMATICS: CASE STUDIES

Solve the following 8 Case Studies in a separate thin notebook. These relate mathematics to real-world scenarios:

CS 1

Rocket Launch
(Exponents)

CS 2

Number Game (Irrational)

CS 3

Business Shares
(Polynomials)

CS 4

Ancestral Plot (Perimeter)

CS 5

Rect. Garden
(Factorisation)

CS 6

Son's School
(Coordinates)

CS 7

Grid Painting (Geometry)

CS 8

Playground (Triangles)

Refer to the shared PDF for detailed questions of each case study.



SOCIAL SCIENCE

Case Study: Tehri Dam Project

- Mapping:** Uttarakhand map marking Bhagirathi river.
- Profile:** Dam height, type, and power capacity.
- Impact Analysis:** Tourism vs. Seismic risks.
- Local Perspective:** Significance to Rishikesh & Ganga basin.

Creative Choice: 4-5 Page File OR Infographic Poster OR 3D Working Model.

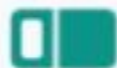
ARTS & CRAFT: CREATIVE HANDS



Boys Section

Decorate **FIVE Handkerchiefs** using acrylic colours.

Focus on patterns and neatness.



Girls Section

Decorate a **Pillow Cover** using acrylic colours.

Create a floral or geometric masterpiece.

Bring your completed work on the day of reopening.

PASSION PROJECT: DISCOVER YOUR FUTURE

This project is designed to help you identify your true interests and align them with future career paths.

-  **Research:** Subjects & Skills connected to your passion.
-  **Career Mapping:** Related professions and role models.
-  **Engagement:** Document your weekly practice/tutorials.

Portfolio Structure

Submit as Scrapbook, PPT, or Video Portfolio:

Cover Page + About My Passion + Weekly Engagement Log +
Subjects Connected + Careers Related + Future Goals + Role Models +
Reflection.





Have a Wonderful Summer Break!

"Your passion may begin as a hobby today, but with consistency and dedication, it can become your future."

EXPLORE | CREATE | REFLECT | GROW



DSB INTERNATIONAL PUBLIC SCHOOL
GUMANIWALA RISHIKESH (UTTARAKHAND)

 Summer vacation Science Assignment 

Class-IX

Learn by Doing: Activity-Based Science at Home

General Instructions

- *Perform all activities at home using safe, easily available materials.*
- *Record each activity neatly in your science lab manual.*
- *Each activity must include:*
- *Aim | Materials Required | Procedure | Observation | Conclusion | Viva Questions*
- *Draw neat diagrams or paste clear photos taken by you while performing the activity.*

ACTIVITY- 1 (CHEMISTRY)

SEPARATION OF MIXTURES AT HOME

PAPER CHROMATOGRAPHY (Using Sketch Pens)

Aim- To investigate and demonstrate separation methods using easily available household substances

Materials Required:

- **Filter paper strip or blotting paper strip**
- **Sketch pen (black/brown)**
- **Water**

Procedure:

1. **Draw a dot with sketch pen near bottom of strip.**

2. Place strip in glass with little water (dot above water).
3. Wait and observe colour separation.

Observation:

1. Write what happens to the ink spot when the solvent rises up the paper.

2. What changes do you notice in the colour spot as the solvent moves up the paper?

Conclusion:

Explain why the ink spot separates into different colours during chromatography.

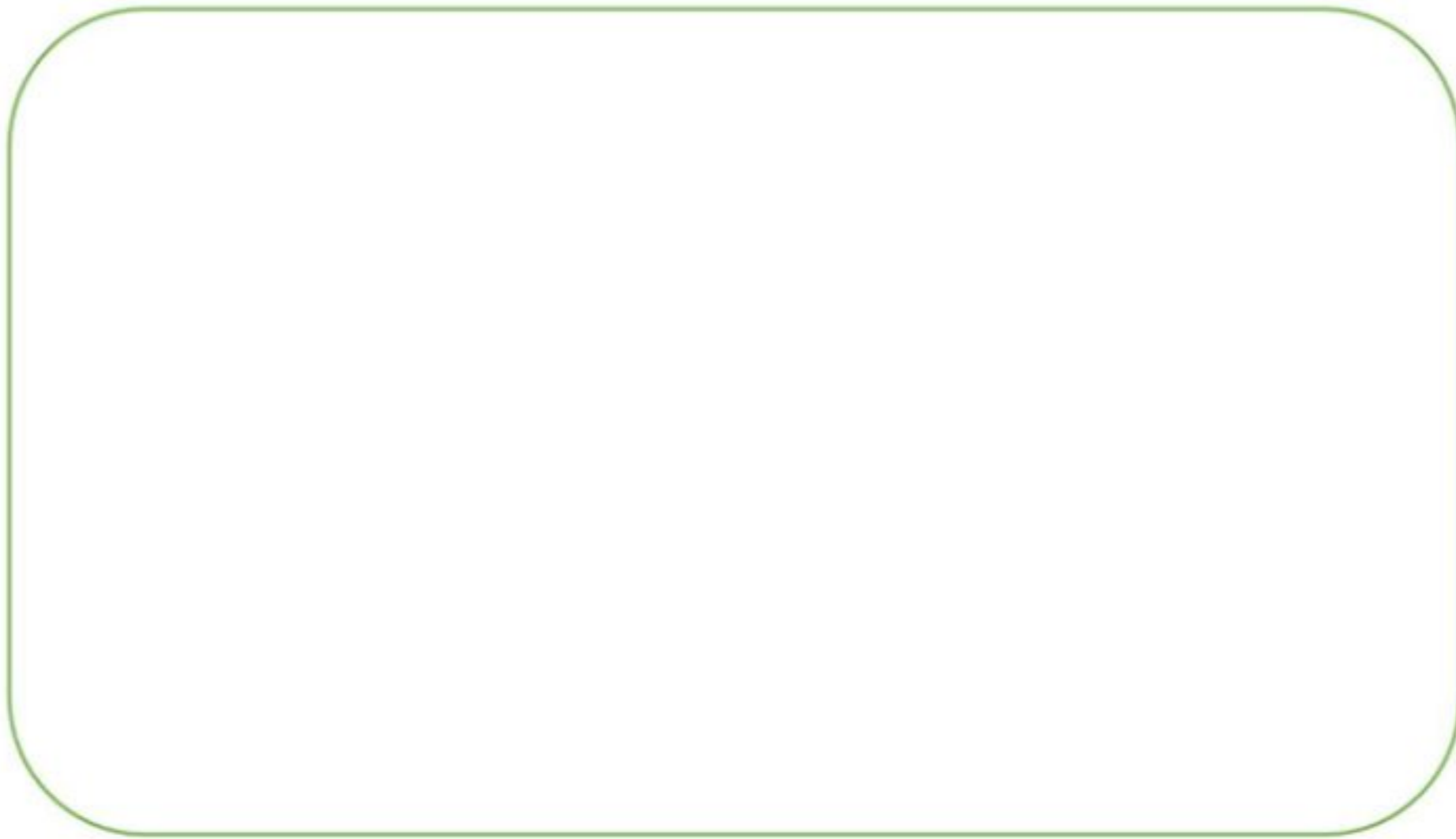
Viva Questions:

1. Write down the principle on which chromatography is based.

2. Why do different colours move at different speeds?

2. **Where is chromatography used in daily life?**

3. **Paste a picture/photo of your activity.**



ACTIVITY- 2 (BIOLOGY)

Learning by Doing: Hypertonic, Hypotonic & Isotonic solutions

Aim: To understand the concept of osmosis by performing hands-on activities using household materials.

Materials Required:

- 4-5 raisins and grapes
- 3 bowls
- Water
- Salt / Sugar
- Spoon
- Notebook

Procedure:

- **Bowl A – Plain Water (Hypotonic) ○ Add only water.**

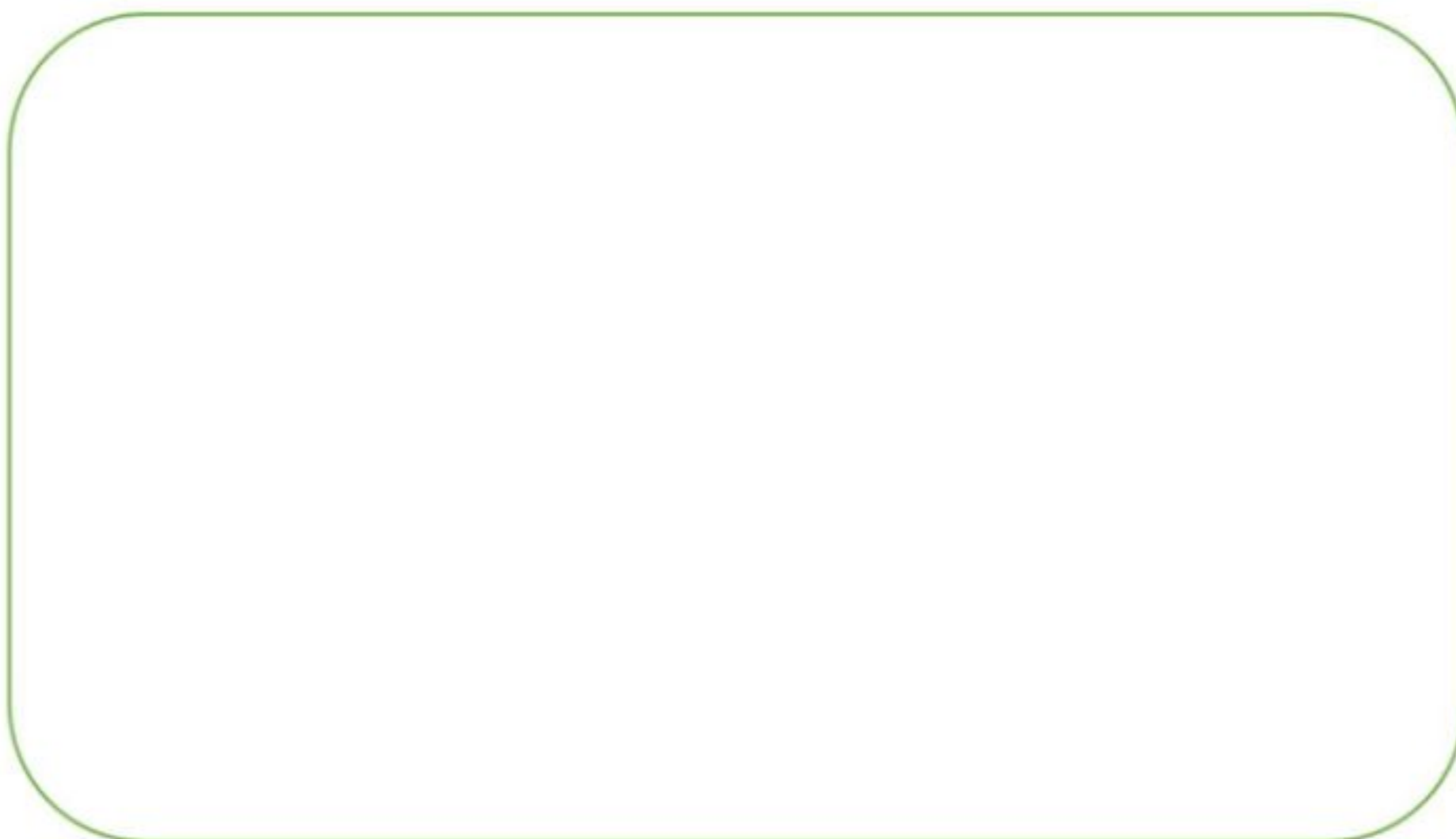
- **Bowl B – Strong Salt/Sugar Solution (Hypertonic)** ○ Add 2–3 spoons of salt/sugar in water and mix well.
- **Bowl C – Mild Salt/Sugar Solution (Nearly Isotonic)** ○ Add very little salt/sugar.
- Put 4-5 raisins in A bowl , grapes in B bowl and grapes in C bowl.
- Leave for 6–8 hours (or overnight).

Observation:

Write your own observation:

Conclusion:

Write your own conclusion based on what you observed:



- **Paste a picture/photo of your activity.**

Viva Questions:

1. Why did raisins swell in Bowl A and grapes shrinks in Bowl B?

2. What is hypertonic, hypotonic and Isotonic solution?

3. Write applications of osmosis in our daily life.

COMPETENCY BASED QUESTIONS:

Instruction-☞ While answering, focus on WHY and HOW, not just WHAT.

☞ Try to connect your answer with real-life situations.

Biology

1. Why are IV saline drips given instead of pure water? How is this related to osmosis?

2. Why are pickles preserved in salt? Explain using the concept of hypertonic solution?

3. Why do plants wilt in salty soil? Explain at the cellular level.

4. The nucleus is often called the "control centre" of the cell. What might happen if a cell loses its nucleus?

5. "Division of labour increases efficiency." Explain this statement in the context of cells with examples.

6. Plant cells are rigid while animal cells are flexible. How does this difference help plants and animals in their lifestyle?
