



# HOLIDAY HOMEWORK

CLASS IX, SESSION: 2025-26



HANSRAJ PUBLIC SCHOOL SECTOR-6, PANCHKULA

### Message from the Principal



#### Dear Children

Success is no accident, it is hard work, perseverance, learning, studying, sacrifice and most of all love for what we are doing or learning to do

Hansraj has once again proved this with the outstanding result exhibited by class X and XII students. It gives me an immense sense of pride and satisfaction to see all Hansarians consistently display excellence in multiple fields be it academics, sports extra curriculars or innovation. I take up this opportunity to congratulate all the stakeholders of the school for this noteworthy success. It is their positive and collaborative partnership that has led the school to scale higher goals.

The last few weeks saw the country go through unprecedented upheavals. The lesson to be learnt from the experience is to face sudden challenges posed by life with a strength of mind and belief in ourselves. And then nothing can stop us from achieving success.

The present session began eventfully and now it is time for much awaited summer vacations.

As we embark on our well-deserved break, I encourage you to utilize these holidays productively.

Here are some suggestions:

Read: Explore new books, authors, or genres.

Learn: Acquire new skills or hobbies.

Reflect: Think about your goals and aspirations.

Relax: Recharge and rejuvenate.

Give back: Engage in community service or volunteer work.

Explore: Travel to new places with your family, explore unfamiliar cuisines, customs and cultures.

Family time: Visit your grandparents, spend quality time with them and your family.

Exercise: Go for nature walks, do Yoga and practice a sport.

The Holiday Homework has been planned for you, with much thought so as to help you enjoy putting in practice what you have learnt. The projects included are research based with the aim to extend your knowledge, thinking skills and creativity. As always, the holiday homework will be assessed and the best ones will receive recognition. I wish you all the luck for it.

Make the most of your break and return refreshed and motivated!

Jai Hind

Jaya Bhardwaj Principal

### **ENGLISH COMMUNICATIVE**

# Icons and Ions of Transformation and Change Instructions:

### Choose any 2 of the 6 themes below.

For each theme, complete one creative task using the suggested format.

- Work neatly on A3 ivory sheets to present the work
- Add captions, short write-ups (100–150 words) wherever required.
- Be original and imaginative!

### 1. CHILDREN - Voices for a Better Tomorrow

Task:

Create a poster or comic strip titled "The World I Want for Every Child."

Include:

Speech bubbles/dialogues

A slogan or quote

Visuals showing education, safety/ happiness

### 2. ENVIRONMENT - Nature Speaks

Task:

Make a collage or mind map on "How Nature Inspires Poets."

Include:

Images of natural elements (mountains, rivers, trees)

Quotes/lines from poets like Wordsworth, Keats, Frost

A short Limerick/ Haiku poem about the Earth

### 3. ADVENTURE - Into the Unknown

Task:

Design a travel brochure or comic strip titled "An Adventure with a Twist."

You could base it in a forest, space, desert, or virtual world.

Include:

A short narrative

Drawings /images

Imaginative place, names and dialogue

### 4. TECHNOLOGY - Past, Present, Future

Task:

Create an infographic or timeline poster on "From Quills to Chatbots: How English Learning Changed."

Include:

Shakespeare → Printing press → Radios → YouTube → Al

Quotes by Shakespeare, Frost, or a modern-day writer

Your view: Is technology a help or a distraction?

Write an article in about 250 words, supporting your view

### 5. EMOTIONAL QUOTIENT - Inside Out

Task:

Make a mind map or emoji-based comic titled "Me and My Emotions."

Include:

Five key emotions you face as a student

A 1-line personal reflection or quote for each

Any poem or story character who helped you understand feelings.

### 6. VALUES - Walking with the Greats

Task:

Create a collage or illustrated dialogue script between Robert Frost and a modern student discussing life choices and values.

Title: "The Road I Took"

Include:

Speech bubbles or cutouts

A few lines from "The Road Not Taken"

Your own 4-line poem on choices

### To be done by all:

a) Make a "Wall of Change" on A3 size sheet, create a vocabulary poster with 8–10 powerful words like resilience, innovation, empathy, transformation.

Add a quote, synonym, and image for each.

b) English Workbook: attempt the following:

Unit 3: Future Time Reference

Unit 4: Modals

c) BBC COMPACTA: Reading Comprehension:

Attempt the following passages in the book itself:

CA4, page12

CA5, page 16

## **HINDI**

# निर्देश :- सारा कार्य A4 साइज शीट पर या स्क्रैप फाइल में करें।

- 1. व्याकरण
- नीचे दिए गए व्याकरण अभ्यास में से Q3 को अपनी हिंदी व्याकरण पुस्तिका में करें, 1 & 2 अपनी हिंदी पाठ्य पुस्तिका में करें:-
- 1.व्याकरण पुस्तिका में से 20 शब्द अनुस्वार के और 20 शब्द अनुनासिक के शब्द लिखे।
- 2. विराम चिह्न और उनके नाम लिखें और प्रत्येक के दो-दो उदाहरण भी लिखें।
- 3. व्याकरण पुस्तिका का पृष्ठ नंबर 62, 63, 72,73, 377,378 करें।
- ॥) रचनात्मक लेखन

नीचे दिए गए विषयों में से किसी दो विषयों पर रचनात्मक लेख लिखें (150-200 शब्दों में):

- 1. "अगर में एक वैज्ञानिक होता..."
- 2. "मेरा प्रिय प्रेरणास्पद व्यक्तित्व (Icon)"
- 3. "भविष्य की द्निया कल्पना और विज्ञान का मेल"

लक्ष्यः रचनात्मकता, भाषा-श्द्धता और भावों की अभिव्यक्ति पर ध्यान दें।

3. परियोजना कार्य (Project Work) – विषय: "Icons and Ions"

निम्निलिखित क्षेत्रों में सफलता की ऊंचाइयों को छूती महिलाओं और पुरुषों के विषय में विस्तृत जानकारी चित्र सहित चार्ट तैयार करें।

नोट:- हर क्षेत्र को अनुक्रमांक के आधार पर विभाजित किया गया है ।अपने अनुक्रमांक के अनुसार परियोजना कार्य करें।

- 1.अन्क्रमांक 1-5 पर्वतारोही
- 2. अनुक्रमांक 6-10 साहित्य
- 3. अन्क्रमांक 11-15 राजनीति
- 4. अनुक्रमांक 16-20 भारतीय आरक्षी सेवा
- 5 अन्क्रमांक 21-25 खेल जगत
- 6 अनुक्रमांक 26-30 स्वतंत्रता सेनानी
- 7 अन्क्रमांक 31-35 व्यापार जगत

# 8 अनुक्रमांक 36 से अंत तक विज्ञान क्षेत्र

### विषय स्पष्टीकरणः

Icons — प्रेरक व्यक्तित्व, महान वैज्ञानिक, लेखक, स्वतंत्रता सेनानी या समाज सुधारक।
Ions — विज्ञान की दृष्टि से -- विज्ञान के नवीन प्रयोग, तकनीकी विकास आदि।
परियोजना का प्रारूप: (उदाहरण)

शीर्षक: "Icons and Ions – विज्ञान और प्रेरणा का संगम"

### निर्देश:

1. एक 'Icon' और एक 'Ion' पर कार्य करें। उदाहरण:

Icon: महात्मा गांधी, या कोई स्थानीय नायक।

Ion: कोई रासायनिक तत्व जैसे – कोई वैज्ञानिक उपकरण/प्रयोग जैसे मोबाइल, रोबोटिक्स, आर्टिफिशियल इंटेलिजेंस।

2. प्रस्तुति का रूप:

चित्र, चार्ट, कोटेशन, और रचनात्मक डिजाइन का प्रयोग करें। प्रत्येक भाग में 1 पृष्ठ वर्णनात्मक लेखन और 1 पृष्ठ चित्र/डायग्राम रखें।

# 3. प्रस्तावित अन्भागः

परिचय (Icons और Ions की संकल्पना) चुने गए Icon का जीवन परिचय और प्रेरणा चुने गए Ion या तकनीक की भूमिका और महत्त्व दोनों के बीच संबंध (कैसे विज्ञान और जीवन मूल्यों का मेल हो सकता है?) निष्कर्ष (आपकी सीख और विचार)

# महत्वपूर्ण निर्देश:

कार्य स्वच्छ, रचनात्मक एवं मौलिक होना चाहिए। समय पर जमा करने पर अंक प्रदान किए जाएंगे। उत्कृष्ट कार्य को विद्यालय की प्रदर्शनी में प्रदर्शित किया जाएगा।

### **MATHEMATICS**

Statistics is an important branch which provides a systematic way to understand and interpret data, leading to informed decisions and a deeper understanding of various phenomena. Many mathematicians have given their great contribution in the field of statistics. C.R. Rao, a renowned statistician, is known for his work on estimation theory and the Cramer-Rao inequality. P.C. Mahalanobis, considered the "Father of Statistics" in India, is best known for the Mahalanobis distance and his role in developing India's statistical system.

- 1) Each child will make a collage on these mathematicians and their contributions in the field of statistics.
- 2) Project: Sustainable Development of a local Community/Town
  Students will work in groups to design and propose a sustainable development
  plan for a local community or town like data collection on population growth, water usage,
  energy consumption and waste management. . They will apply mathematical concepts to
  analyze data and how it is impacting our environment as well as social and economic
  aspects of our community.

Graphical Representation: Create graph (Bar graph, Histogram or Pie-chart) and charts to visualize the data and identify trends for the last five years (2021 to 2025).

	SECTION-A	SECTION-B	SECTION-C	SECTION-D
GROUPS NAME	OLONOIV /	OLONOIV B	OLONON O	OLONOIV D
MATHS MASTER	Roll nos. 4, 41,	Roll nos.3, 25,	Roll nos.1 -	Roll nos.1 - 5
	26, 9, 24	16, 35, 24	5	
GEOMETRY	Roll nos. 11, 1, 3,	Roll nos.2, 37,	Roll nos. 6 -	Roll nos. 6 - 10
GANG	22,34	20, 10,39	10	
THE PROBLEM	Roll nos. 17,	Roll nos.13,	Roll nos.11 -	Roll nos. 11 - 15
SOLVER	19,32, 25,2, 30	11,9, 2, 15	15	
ALGEBRA ALL-	Roll nos. 5, 27,	Roll nos.7,	Roll nos.16 -	Roll nos. 16 - 20
STAR	31, 23, 7, 33	8,36,30,40	20	
NUMBER NINJA	Roll nos. 8,	Roll nos.23, 22,	Roll nos.21 -	Roll nos. 21 - 25
	13,15, 40, 12, 38	14, 28, 5, 18	25	
EQUATION	Roll nos. 10, 18,	Roll nos.4,	Roll nos.26 -	Roll nos. 26 - 30
EXPERTS	29, 39, 28	12,17,27,34	30	
CALCULATION	Roll nos. 6,	Roll nos.38,	Roll nos.31 -	Roll nos. 31 - 35
CRUSADERS	21,20, 36,35	31,6, 1	35	
PI-ONEERS	Roll nos. 14,	Roll nos.29, 32,	Roll nos. 36	Roll nos. 36
	16,37	33, 19, 26	onward	onward

3) Do the following questions:

1. Express 
$$0.6+0.\overline{7}+0.4\overline{7}$$
 in the form  $\frac{p}{q}$ , where p and q are integers and  $q \neq 0$ .

2. Simplify: 
$$\frac{7\sqrt{3}}{\sqrt{10}+\sqrt{3}} - \frac{2\sqrt{5}}{\sqrt{6}+\sqrt{5}} - \frac{3\sqrt{2}}{\sqrt{15}+3\sqrt{2}}$$
.

3. If 
$$\sqrt{2} = 1.414$$
,  $\sqrt{3} = 1.732$ , then find the value of  $\frac{4}{3\sqrt{3} - 2\sqrt{2}} + \frac{3}{3\sqrt{3} + 2\sqrt{2}}$ .

4. If 
$$a = \frac{3 + \sqrt{5}}{2}$$
, then find the value of  $a^2 + \frac{1}{a^2}$ .

5. If 
$$x = \frac{\sqrt{3} + \sqrt{2}}{\sqrt{3} - \sqrt{2}}$$
 and  $y = \frac{\sqrt{3} - \sqrt{2}}{\sqrt{3} + \sqrt{2}}$ , then find the value of  $x^2 + y^2$ .  
6. Simplify: (256)

7. Find the value of 
$$\frac{4}{(216)^{-\frac{2}{3}}} + \frac{1}{(256)^{-\frac{3}{4}}} + \frac{2}{(243)^{-\frac{1}{5}}}$$

- 8. The area of a triangle is 48 cm<sup>2</sup>. If its base is 12 cm, find its altitude.
- 9. The hypotenuse of an isosceles right triangle is 10 cm. Find its area.
- 10. The sides of a triangle are 35cm, 54cm and 61cm respectively. Find the length of its longest altitude.

# संस्कृतम्

- संस्कृतभाषायां एका पत्रिकायाः निर्माणं कुर्वन्तु।
   शीर्षकः- संस्कृतस्य विद्वांसः।
- 2. रामायणस्य महाभारतस्य च एकं श्लोकं चित्रसहितं चार्टमध्ये लिखत।
- 3. संस्कृतस्य एका सूक्तिः सचित्रं ए-3 शीर्ट मध्ये लिखत।
- 4. अधोलिखितानां महर्षिणां एकं 'मॉडल' निर्माणं कुर्वन्तु। अनुक्रमांकः-
  - 1-10 ( महर्षिः वाल्मीकिः, वेदव्यासः, कालिदासः, भासः, भारवि)
  - 11-20 (माघः, दण्डी, अश्वघोषः, श्रीहर्षः, महर्षिः पाणिनी)
  - 21-30 ( भवभूतिः, कौटिल्यः, भरतमुनिः, बाणभट्टः, विष्णुशर्मा)
  - 31-40 ( रामभद्राचार्य, भर्तृहरि, जयदेव, वरदराज: आचार्य:, भट्टोजीदीक्षित)

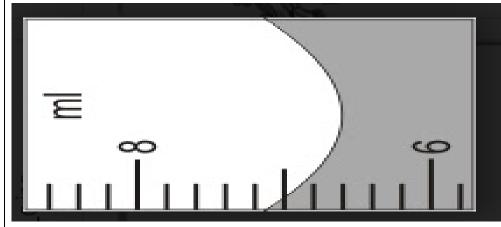
# **SCIENCE**

Q.N	Chemistry	Chapter 1 Matter in our surrounding		
		Attempt the worksheet and	d attached the pages in th	ne Chemistry notebook.
1	People sometimes a	add salt to the water in which eggs are to be		
	boiled. What is the MAIN reason for this?			
			7	
	Option A	Option B	Option C	Option D
	Adding salt to the	Adding salt to the water increases its	Adding salt to the water	Adding salt to the water kills micro
	water before the	boiling point and cooks the egg better.	reduces the water	organisms making the egg safer to
	egg is cooked		temperature cooking the	eat.
	makes the egg		egg faster.	
	tastier.			
2	2 Rama suspects that the LPG cylinder is leaking, and immediately turns the cylinder valve to the OFF position. What			he OFF position. What should she do
	next?			
	Option A	Option B	Option C	Option D
	Switch on all	Switch off all lights.	Open all the windows.	Close all the windows.
	lights.			
	ugnis.			

3	A lump of bread dough in a baking tin contains air and carbon dioxide released by the yeast cells. When heated the dough rises to about twice its size. In this case, the increase in temperature has resulted in		Before Baking  After Baking	
	Option A an increase in volume while the pressure remained constant.	Option B an increase of pressure while the volume remained constant.	Option C an increase in both volume and pressure.	Option D a decrease in both volume and pressure.
4	When a substance changes from LIQUID to GASEOUS state, it is said to EVAPORATE. Some substances change from SOLID to GASEOUS state without passing through the LIQUID state. They are then said to			l ubstances change from SOLID to
	Option A evaporate.	Option B condense.	Option C diffuse.	Option D sublime.
5	Both AIR CONDITIO	NERS and AIR COOLERS can be used to coo	l rooms. What is the main dif	ference in the effect they produce?
	Option A They are basically the same, but air conditioners cool much more.	Option B Air conditioners control the humidity of the room also, unlike air coolers.	Option C They are basically the same, but air conditioners are meant for light use only.	Option D They are basically the same, but air coolers can be used only for a few hours at a stretch.

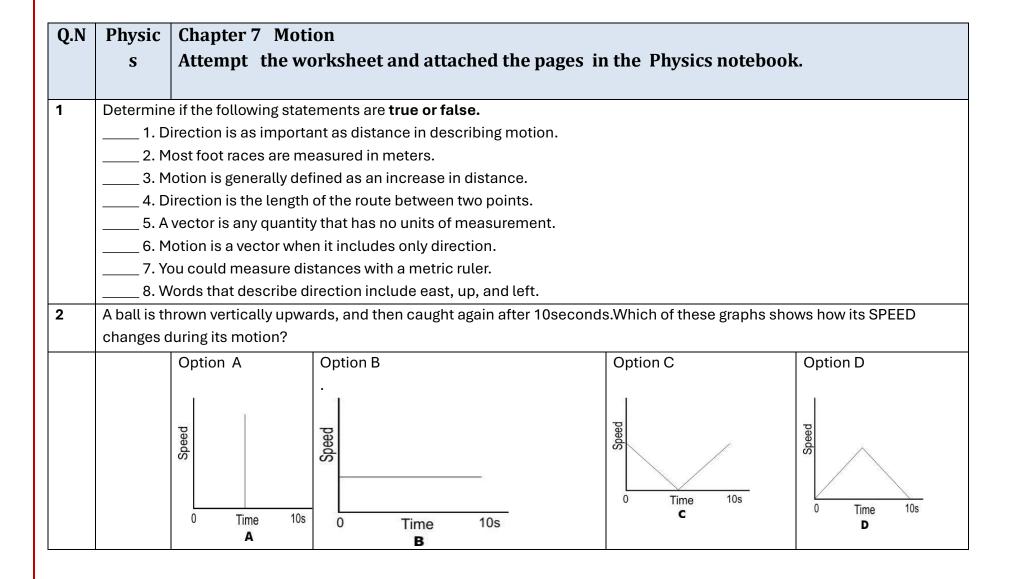
6	Mercury can vaporize if heated. This means that with enough heat mercury can			
	Option A	Option B	Option C	Option D
	be destroyed	become water vapour	be changed into a gas	change from a liquid to a solid.
		o test whether adding a substance (called an f these variables will help her arrive at a conc	•	he freezing point of the water.
	<del>  </del>			
	Option A	Option B	Option C	Option D
	Option A  Amount of water	Option B Amount of anti-freeze added to the water	Option C Temperature at which the	'
	•	'	'	'
	Amount of water	'	Temperature at which the	Type of thermometer used to make

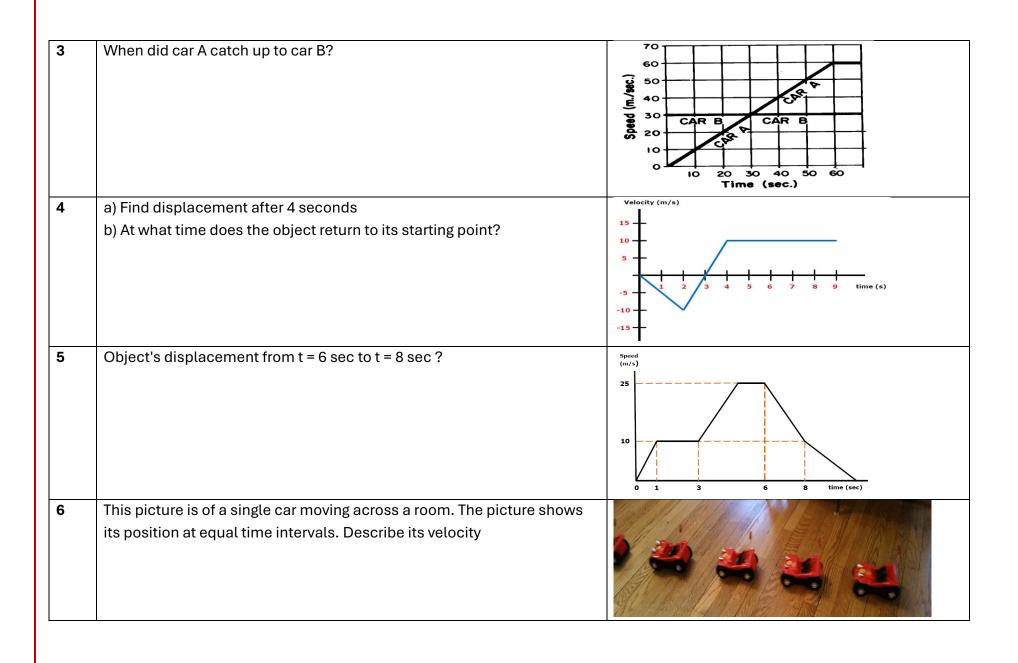
The figure shows the amount of water in a graduated test-tube. The curved surface

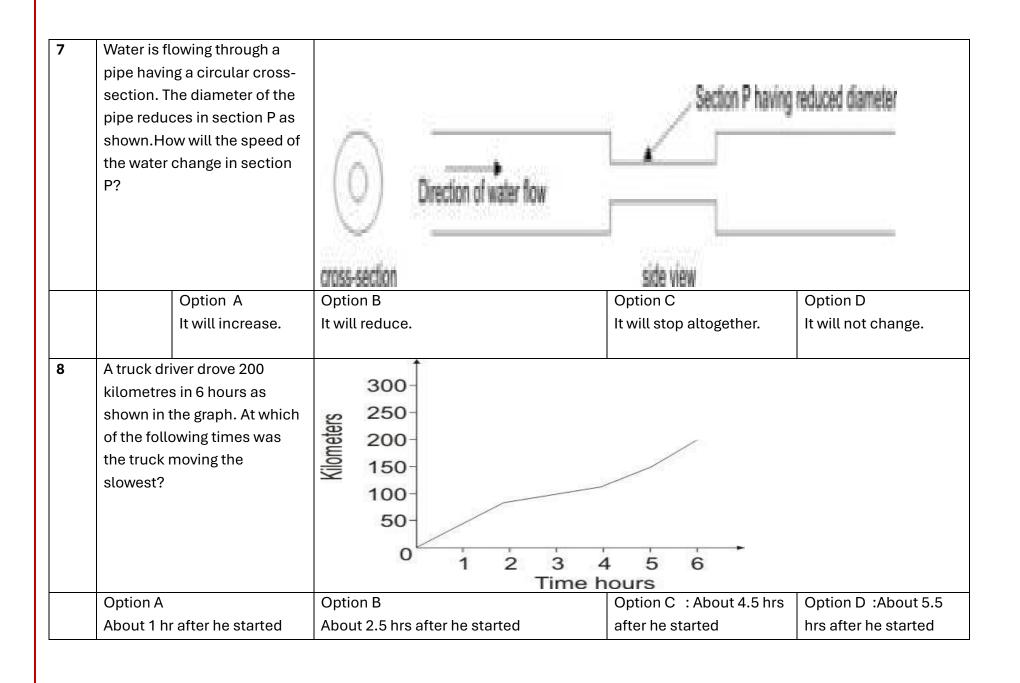


shown is called the meniscus. What is the correct reading of the volume of liquid?

	7.1 ml		1 -	Option D
		7.2 ml	6.8 ml	6.6 ml
)	Many modern tanks	for water and liquid fuels are made spherica	al in nature. What could be th	e reason behind this?
	Option A It is easier to build spherical tanks compared to tanks of other shapes.	Option B For a given surface area, spherical tanks enclose maximum volume.	Option C It is easier to transport spherical tanks when repairs, etc. are required.	Option D Liquids get preserved better when they are stored in spherical tanks.
0	Setup P below shows an egg being boiled. In setup Q, a similar arrangement is used, but inside an apparatus which creates near-vacuum conditions. Will the egg in setup Q get cooked faster?		Egg in water  Flame  Near vacuum	
	Option A Yes, lower pressure lowers the boiling point, so the water and egg will boil earlier than setup P.	Option B  No, lower pressure raises the boiling point, so the water and egg will boil later than setup P.	Option C No, lower pressure lowers the boiling point; the water will boil away quickly but the egg will not boil	Option D Yes, lower pressure raises the boiling point, so the water will get hotter and the egg will boil faster
.1	Which phase change	e at standard temperature and pressure rep	resents sublimation?	
	Option A CO(s) - CO(g)	Option B H(I) - H(g)	Option C CO(I) - CO(g)	<b>Option D</b> H(s) - H(l)







Q.N	Biology	Chapter 5 The Fundamental Unit of Life			
A	Do the Back Exercise Questions (Q1 to Q10) from Page 59 of the NCERT textbook in your Biology Notebook.				
В		Workbook Fingertip solve the following in the workbook itself.			
		CQs and Assertion-Reasoning questions Page 76 to Page 88 se-Based Questions (Page 90 – Column 2) &Page 91			
С	Research project: Topic: Ions and Icons of Change  Prepare a short research project on A4 sheets on any one of the following scientists who contributed to the discovery of the				
	cell:				
	- Robert E	rown			
	- Schleiden and Schwann				
	- Purkinje				
	Include the following in your project:				
	- A brief biography of the scientist(s)				
	- Their key	contribution to cell biology			
	- The sign	ificance of their discovery in today's context			
	- Use of p	ictures or visuals (optional)			

### **SOCIAL SCIENCE**

Social Science is the study of human society, relationships, and the world we live in. It helps us understand history, geography, political systems, economies, and the social structures that shape our everyday lives.

This holiday homework is an opportunity to explore the real-world applications of what we learn in class. Through this we aim to Develop critical thinking about social issues, Understand the forces of change in history and society and Appreciate the role of individuals and ideas in shaping the world.

#### PART-A

### **HISTORY**

Attempt the following questions in the fair notebook.

- Q1. Design a revolutionary newspaper front page from the perspective of a Jacobin.
- What headlines and articles would reflect their ideology?
- Q2. If you were a member of the First or Second Estate, how would you justify your privileges? What counter-arguments might revolutionaries offer?

### POLITICAL SCIENCE

Prepare a Mind Map on the entire chapter-1 What is Democracy? Why Democracy? GEOGRAPHY

Attempt the following questions in the fair notebook.

- Q.1Why does India have significant physical variations? Explain with the help of suitable examples.
- Q2. Differentiate between eastern Ghat and Western Ghat

### **ECONOMICS**

- 1. Prepare a mind map on chapter-1: The story of village Palampur.
- 2. "Analyze how a change in the availability of land and labour might impact the production of agricultural goods in a country like India. Provide examples to support your answer."

### PART B

### PROJECT WORK ON DISASTER MANAGEMENT

TOPIC: MAN-MADE DISASTERS (Causes: Typical adverse effects, Distribution pattern and possible risk and Reduction measures (Do's and Don'ts for Protection)

### **OBJECTIVES:**

The main objectives of giving project work on Disaster Management to the students are to:

- a. Create awareness in them about different disasters, their consequences and management
- b. Prepare them in advance to face such situations
- c. Ensure their participation in disaster mitigation plans
- d. Enable them to create awareness and preparedness among the community.

### **GUIDELINES**

Every student has to compulsorily undertake one project on Disaster Management.

- The Project Report should be HANDWRITTEN by the students themselves. (minimum 30-35 pages)
- Students can collect a minimum of two case studies.
- ❖ Project must include a comic strip on "Do's and Don'ts during Chemical Disasters".
- ❖Each section should be done on A4 size sheets. Cover page, table of contents, acknowledgements, bibliography, headings and sub −headings are a must. It should be well presented, researched, and pictorial.

### ESSENTIALS OF THE PROJECT

- TITLE PAGE
- ACKNOWLEDGEMENT
- INDEX
- CASE STUDIES
- CONCLUSION
- REFERENCES/ BIBLIOGRAPHY
- TEACHER'S REPORT

Students are required to integrate different forms of art in project work.



### **BOOKS AND SITES FOR REFERENCE**

- Together, towards a Safer India Part II, a textbook on Disaster Management for Class IX Published by CBSE.
- https://ndma.gov.in/

### **EXHIBITION**

Change is the essence of life. It drives progress, transforms societies, and shapes history. In the world of social science, change can be understood through two important aspects: Icons of Change and Ions of Change. Both play a powerful role in revolutionizing ideas, movements, and systems.

### Please Note

As we've explored ions and icons of change in our school diary, you are requested to think beyond the examples given and identify your own ions and icons of change who have made a significant impact in their respective fields.

Get creative and find inspiring individuals who resonate with you!

Roll No 1-10 Sections IXA, IXB, IXC & IXD

Students you have to prepare one chart /Model on the following topics for the exhibition.

**HISTORY** 

Icons of Change

Robespierre, Olympe de Gouges Liberty, Equality, Enlightenment Russian Revolution Lenin, Marx Socialism, Workers' Rights Nazism Hitler, Anne Frank Versailles Treaty, Nazi Ideology Forest Society Birsa Munda Colonial Laws, Tribal Resistance Pastoralists Maasai leaders

IONS of Change:

Ideas of Liberty, Equality, and Fraternity

Enlightenment Thinkers like Rousseau, Voltaire, Montesquieu

Transformation of Nomadic Life

Create Charts or digital slides for each icon and their role.

Analyze how these icons symbolize larger forces (ions) of historical change.

### **GEOGRAPHY**

The Role of Youth in Water Conservation

Icon: Youth activists, school and community leaders

Ion of Change: The growing role of youth activism in raising awareness about water conservation and climate change.

Activity: Create a Water Conservation Pledge Board on a Chart to Encourage Peers to Conserve Water at Home and School.

**POLITICAL SCIENCE** 

The Preamble - The Heart of the Constitution

Icon:

The framers of the Constitution who included the Preamble as the guiding light.

Ion of Change:

The vision of justice, liberty, equality, and fraternity that motivated the creation of the Indian Constitution.

Activity:

Make a Preamble Tree Chart where each leaf explains one value from the Preamble.

### **ECONOMICS**

Make a chart on A-3 sheet / model on any one of the following topics:

- a) Development of Rural economy
- b) Agriculture practices
- c) Education and Health care facilities in villages

# Plants to be bought for Van Mahotsav festival

Class	Name of Plant	Class	Name of Plant
	Lady Palm	X	Ashoka