



# O.P. JINDAL SCHOOL

## SUMMER VACATION HOMEWORK

 **CLASS - IX**



## ENGLISH

### 1. Photo Essay: Unsung Heroes

Document 5 people in your locality who make a difference in everyday life (e.g., gardener, maid, shopkeeper). Write 80–100 words describing each, highlighting their value.

### 2. Storyboard/Comic Strip

Convert any one chapter or poem from your syllabus into a comic style story (more pictures, less words). Focus on theme, emotion, and major events. Add dialogue, narration and colours in about 300 words in A4 white papers.

### 3. Podcast Script Writing

Write a script for a 3-minute podcast episode on one of the following in 300-400 words:

“Why We Need to Read More”

“My Take on Social Media”

“What School Doesn’t Teach Us”

Include intro, content body, and sign-off.

## HINDI

1. ‘दो बैलों की कथा’ पशु-पक्षियों की पीड़ा और उनके अधिकारों की ओर संकेत करती है। एक लेख लिखिए जिसमें आप यह बताएं कि आज के समाज में पशुओं के साथ कैसा व्यवहार होना चाहिए और हमें उनसे क्या सीख लेनी चाहिए?
2. ‘कबीर के विचार आज भी कितने प्रासंगिक हैं?’ - इस विषय पर एक संवाद (संवाद लेखन) तैयार कीजिए जिसमें एक छात्र और उसके दादा-दादी के बीच कबीर की साखियों की चर्चा हो रही हो।
3. आप एक बाल-पत्रिका के संपादक हैं और आपको ‘उपसर्गों का जादू’ विषय पर बच्चों के लिए एक शिक्षाप्रद लेख लिखना है। इस लेख में आप 5 उपसर्गों का उपयोग करते हुए दैनिक जीवन से जुड़े उदाहरणों के साथ रचनात्मक रूप से समझाएं कि वे शब्दों का अर्थ कैसे बदल देते हैं।
4. अपने विद्यालय में ‘प्रत्यय मेला’ का आयोजन किया गया है, जहाँ विद्यार्थियों को प्रत्ययों से बने नए शब्दों की रंगीन पोस्टर पर प्रदर्शनी लगानी है। ऐसा एक पोस्टर बनाने के लिए कल्पना कीजिए और उसमें उपयोग किए गए कम से कम 10 प्रत्ययों से बने शब्दों की सूची दीजिए और उनके अर्थ समझाएं।



# MATHEMATICS

## Objective:

To engage students in meaningful, real-life mathematical explorations that enhance **Cognitive, Social, Emotional, Physical, and Moral development** during summer break.

### 1. Activity: Understanding the Mystery of $\pi$ – A Mathematical Exploration

Prepare a journal addressing the following points:

- Explain why  $\pi$  (pi) is considered an irrational number, even though it is commonly approximated as  $22/7$  (which is a rational number).
- Describe the discovery and historical evolution of  $\pi$ , highlighting the contributions of notable mathematicians who played a role in its discovery.
- Creatively draw  $\pi$  using the values of  $\pi$  (e.g., through a drawing, spiral, or any other mathematical visual).

( Image reference :

[https://cdn.slidesharecdn.com/ss\\_thumbnails/mathprojecthistoryofpi-240910152834-6c06dd21-thumbnail.jpg?width=560&fit=bounds](https://cdn.slidesharecdn.com/ss_thumbnails/mathprojecthistoryofpi-240910152834-6c06dd21-thumbnail.jpg?width=560&fit=bounds))

### 2. Activity: Visualizing Square Root Spiral – An Integration of Geometry and Art

Prepare a mathematically accurate and artistically creative project on the square root spiral. Your Project should include the following:

- Construct a square root spiral beginning from  $\sqrt{2}$  up to  $\sqrt{17}$ , using precise measurements and geometric tools.
- Incorporate Art Integration by creatively embedding the square root spiral into a meaningful visual—such as in the face of a parrot, or within any artistic design of your choice.
- Ensure that the mathematical construction remains clear and distinguishable within the art.
- Label each square root length properly, and present your work neatly and creatively.

(image reference:

<https://i.pinimg.com/originals/11/57/77/115777d8b92e819bb34ab39de962b1c1.jpg>)

## Submission Format :

- All work to be compiled in a well-decorated file.
- Use A4 sheets
- Use visuals (charts, drawings, photos, etc.) wherever applicable
- Submission Deadline: First week after reopening of School.

## SCIENCE

### PHYSICS

#### Case study

Two trains A and B start moving at the same time. The distances travelled by them in given intervals of time are shown below. State which train has uniform motion and which train has non-uniform motion.

| Time    | Distance travelled by train A (in km) | Distance travelled by train B (in km) |
|---------|---------------------------------------|---------------------------------------|
| 6.00 pm | 0                                     | 0                                     |
| 6.15 pm | 10                                    | 15                                    |
| 6.30 pm | 20                                    | 24                                    |
| 6.45 pm | 30                                    | 32                                    |
| 7.00 pm | 40                                    | 38                                    |
| 7.15 pm | 50                                    | 42                                    |
| 7.30 pm | 60                                    | 47                                    |

Plot the graph for uniform and non-uniform motion.

### CHEMISTRY

1. Read about at least five scientists and their contribution in chemistry and write at least 50 words on each scientist.
2. Prepare a project on evaporation which cause cooling.
3. Make a 3D model showing solid, liquid, and gas particles using clay or thermocol balls.

### BIOLOGY

1. **Microscope Sketch & Coloring** – Draw and color a microscope, making it visually appealing while learning the structure.

Or,

**Cell Structure Poster** – Draw or paint a detailed diagram of a cell (plant and animal), showcasing each organelle with artistic representation.

### SOCAL SCIENCE



#### History – Ch.1: The French Revolution

##### Timeline Creation

- Make a colorful timeline showing major events from the chapter on A4 sheets.
- Add minimum of 10 visuals/images with brief descriptions.



#### Civics – Ch.1: What is Democracy? Why Democracy?

##### Cartoon Analysis

- Observe 2 political cartoons (from newspapers or internet). Take a clear print out of each and paste it on your copy.
- Write maximum of 5 sentences on what the cartoon says about democracy or dictatorship or any other form of government)
- Paste your own hand-drawn cartoon showing a democratic situation.





## Geography – Ch.1: Identify the following on the map of India.

- Mark the latitudinal and longitudinal extent of India.
- Draw the Tropic of Cancer and label it.
- The easternmost and westernmost longitudes.
- The neighbouring countries sharing land boundaries with India.
- The place situated on the three seas.
- The strait separating Sri Lanka from India.
- The Himalayas (label the three ranges: Himadri, Himachal, Shiwalik)
- Indo-Gangetic Plains
- Thar Desert
- The Western Ghats and Eastern Ghats
- Deccan Plateau
- Coastal Plains and Islands

2. Make an informative poster showing how different physical features of India support various activities like agriculture, tourism, and settlement.



## Economics – Ch. 1: The Story of Village Palampur

### Rural vs Urban Life (Survey & Report)

- Talk to any 2 people (one from a village, one from a city) about their livelihood and facilities available.
- Write a comparison report with a conclusion: *What can be done to bridge the gap?*

Use photos or hand-drawn illustrations.

## INFORMATION TECHNOLOGY

1. Activity: Elements of communication

**Material required:** Chart paper, colours and pencil

**Procedure:** Make a chart showing the elements of communication in the communication process cycle.

2. Make a list of Do's and Don'ts to avoid body language mistakes as below:

| Sl# | Do's | Don't |
|-----|------|-------|
|     |      |       |

3. Explain the functions of CPU with a neat diagram.
4. Take printout of the Worksheet given in the link below and Complete the same Worksheet Link :

<https://drive.google.com/file/d/15ykJv65ALDwV9h0tBSfI4r7PwE68SDFx/view?usp=sharing>

