



# VIDYAVATI

## PUBLIC CENTRAL SCHOOL

Affiliated to CBSE, New Delhi  
(Aff. No.: 1030656)



**Summer Vacation  
Homework**

**Class X**

**Dear Parents,**

**Greetings from Vidyavati Public Central School!**

As we approach the summer break, it is important to ensure that our students remain meaningfully engaged with their learning while also enjoying a well-deserved period of rest and rejuvenation. The Summer Vacation Homework for Classes IX to XII has been thoughtfully designed to promote **creativity, independent thinking, and application-based learning**, while maintaining a healthy balance with relaxation.

Kindly take note of the following guidelines:

- Encourage your ward to complete the assigned work **independently**, with sincerity and creativity.
- All homework should be **neatly presented on A-4 sheets** and **compiled systematically in a single, well-organized file** for all subjects.
- Ensure that the work reflects **clarity, proper labeling, and thoughtful effort**, rather than mere completion.
- All assignments must be **completed and submitted to the respective subject teachers on the first day of school after the summer vacation**.
- Students are advised to **plan their work in advance** and avoid last-minute rush.
- For any queries or assistance, students/parents may **contact the respective subject teacher or the academic coordinator**.

We sincerely appreciate your support in guiding your ward to utilize this time productively and develop a sense of responsibility towards self-learning.

Wishing you and your family a **safe, happy, and refreshing summer vacation!**

**Warm regards,  
Principal  
Vidyavati Public Central School**

## English & Social Science

**Objective:** To encourage students to critically evaluate India's journey since independence and envision its future, while applying their understanding of Social Science concepts and demonstrating their English language skills.

**Project Title:** India@100 – My Vision, My Voice

### Tasks

#### 1. Vision Journal – A Letter to the Future

Write a letter addressed to a student living in the year 2047. Take help from following points.

- Reflect on the current state of Indian democracy, youth participation, and major social challenges.
- Share your hopes and dreams for India in 2047, focusing on areas like social equality, digital governance, environmental sustainability, etc.
- Conclude with an inspiring message or quote.

#### 2. Creative Historical Rewriting – "If I Were There..."

- Select a significant event in Indian history (e.g., Partition of India, Quit India Movement, Jallianwala Bagh massacre).
- Reimagine the event by placing yourself in the historical moment.
- Write a first-person narrative, describing your emotions, experiences, and what you would have done differently.

#### 3. Podcast Planning – India Talks

- Conceptualize a 2-minute podcast episode titled:
  - **"India@100: The Road So Far"**
- Prepare and record a brief script where you, as the host, reflect on India's progress and ongoing challenges.

## Mathematics

### PROJECT:

#### 1. On Real Numbers

- (a) Classification between numbers and group all the type of numbers according to size of numbers
- (b) Find all the prime number between 1 to 2000
- (c) Relation between HCF and LCM and given number with 5 example
- (d) Properties of irrational numbers and how to represent a irrational number on number line
- (e) Write last five year question from your board exam of Real numbers and solve all. (Mcq, assertion and reason, case based)

#### 2. On polynomial

- (a) Draw the graph of a standard quadratic polynomial.
- (b) What is the meaning of zeroes of a quadratic polynomial.
- (c) What is the relation between the zeroes and the Coefficient show with 5 example
- (d) Write all the questions which appears in your board exam from 2020 to 2024 and solve. (Mcq, assertion and reason, case based)

#### 3. Write 4 Indian mathematicians name and full information and their work in the field of mathematics

## Hindi

**कार्य :** 1: अपनी पसंद की कोई दो कविताएँ/पद्य (किसी भी कवि की) चुनिए।  
प्रत्येक के नीचे:

- उसका सरल भावार्थ (3-4 पंक्तियों में) अपने शब्दों में लिखिए।
- बताइए कि उस कविता से आपको क्या संदेश या शिक्षा मिली।

2: समाज या जीवन की किसी स्थिति को दर्शाते हुए एक रचनात्मक चित्र बनाइए।

(जैसे – ईमानदारी, दिखावा, नेतृत्व, सामाजिक व्यवहार आदि)

चित्र के साथ 4-5 पंक्तियों में उसका संदेश/भाव लिखिए।

3: किसी एक विषय पर (जैसे – प्रकृति, मित्रता, सत्य, समाज, जीवन आदि)

8-10 पंक्तियों की एक स्वरचित कविता लिखिए।

4: अपने घर या आसपास के क्षेत्र का अवलोकन कीजिए और पता लगाइए:

- समाज/नगर में कौन-कौन से कार्य (सफाई, जल व्यवस्था, सड़क, रोशनी आदि) हो रहे हैं।
- इन कार्यों में हमारी (नागरिक के रूप में) क्या भूमिका हो सकती है?
- अपने विचार 6-8 पंक्तियों में लिखिए।

## Science

### Task: Science in My Home

This summer, observe your home environment carefully and discover how science is a part of your daily life.

#### What You Need to Do:

1. Choose any three different aspects from your home, such as:
  - Kitchen appliances (refrigerator, microwave, mixer, induction cooktop, etc.)
  - Water systems (RO purifier, storage tanks, taps, drainage, etc.)
  - Electricity usage (fans, LED bulbs, inverter, wiring, switches, etc.)
  - Materials used (wood, plastic, steel, glass, furniture, etc.)
  - Indoor plants
  - Cleaning agents (soaps, detergents, phenyl, etc.)

#### For Each Selected Aspect, Explain the Following:

- **Introduction:**  
What is it? Where and how is it used in your home?
- **Scientific Principle:**  
Explain the science behind it in simple terms.  
(*Example: A refrigerator works on the principle of heat transfer and evaporation.*)
- **Working/Process:**  
Describe briefly how it works or functions.
- **Diagram/Picture:**  
Draw a labeled diagram or paste a relevant picture.
- **Interesting Facts:**  
Write 2–3 fun or surprising facts related to it.

## Artificial Intelligence

### Activity 1: AI in Healthcare – How AI Can Help Doctors Diagnose Diseases

#### 🔗 Objective:

To explore how AI is revolutionizing healthcare by assisting doctors in diagnosing diseases with accuracy and speed.

#### 🔗 Instructions:

**Research:** Find at least two AI-powered tools or technologies used in medical diagnosis (e.g., AI for detecting cancer, COVID-19, or eye diseases).

**Describe:** Explain how these AI systems work, their benefits, and any challenges they face.

**Imagine the Future:** If you could design an AI healthcare tool, what would it do? Write a 100-word description of your idea.

**Submission:** Print out your report and attach it to your homework file.

### Activity 2: Learn AI Through Games

#### 🔗 Objective:

To engage students in learning AI concepts through interactive platforms.

#### 🔗 Instructions:

Visit the website: [AI for Oceans on Code.org](#) OR [Teachable Machine by Google](#)

Complete the activity:

- If using AI for Oceans, train an AI model to clean up the ocean.
- If using Teachable Machine, create a simple AI model that recognizes hand gestures or objects.

**Capture Proof:** Take a screenshot of your completed task.

**Submission:** Print and attach the screenshot/certificate to your holiday homework file.