



SHAMBHU DAYAL GLOBAL SCHOOL
HOLIDAY HOMEWORK (2025-26)
CLASS – IX

ENGLISH	MATHEMATICS
<p>1. Research a Genre of Literature (Roll no 1 to 4) Objective: Explore different literary styles. Task: Choose one genre (e.g., mystery, fantasy, science fiction, historical fiction). Instructions: Define the genre. List popular authors/books in this genre. Describe common themes and elements. Write a short original story in that genre (1 page) Length: 10 pages.</p> <p>2. Speech Writing and Analysis (Roll no 5 to 8) Objective: Understand effective speech techniques. Task: Research a famous speech (e.g., “I Have a Dream” by Martin Luther King Jr.). Instructions: Write a summary of the speech. Highlight rhetorical devices (repetition, emotion, direct address). Write your own short speech (150–200 words) on a social issue. Length: 10 pages.</p> <p>3. Mythology in Literature (Roll no 9 to 12) Objective: Understand how mythological stories influence modern literature. Task: Choose a mythological story from any culture (Greek, Indian, Norse, etc.). Instructions: Retell the myth briefly. Identify its themes or morals. Find a modern book or movie inspired by a myth and compare them. Length: 10 pages.</p> <p>4. Language and Gender (Roll no 13 to 16) Objective: Analyze how language reflects or challenges gender roles. Instructions: Observe how male and female characters are described in textbooks, novels, or ads. Note any patterns in word choice. Write a reflection on how language can promote gender equality. Length: 10 pages.</p> <p>5. English Around the World (Roll no 16 to 20) Objective: Learn about regional variations of English. Task: Research how English is used in 3 different countries (e.g., UK, USA, India). Instructions:</p>	<p>Projects:-</p> <ol style="list-style-type: none">Construct a square root spiralRepresent irrational number $\sqrt{2}$ on the number line.Represent irrational number $\sqrt{8.3}$ on the number line.Classifying real number: make a classification table of different types of real numbers.Exploring Decimal Expansion: demonstrate the difference between terminating and non-terminating recurring decimals.Algebraic Identities in Real Life: demonstrate the use of identitiesVerify experimentally that if two lines intersect, then<ol style="list-style-type: none">The sum of all four interior angles is 360 degrees.The sum of two adjacent angles is 180 degrees.Design a crossword puzzle using mathematical terms or words.Collect and show various objects of congruent shapes.Verify experimentally that a triangle, the longer side has the greater angle opposite to it. <p style="text-align: center;">For File Presentation</p> <ul style="list-style-type: none">Title page with your name, roll number, class, subject.Clear headings and subheadings.Use colourful pens, highlighters, and neat diagrams.Conclusion or what you learned from the project.Do all the given projects in practical file.Bibliography (if external sources are used).

Compare vocabulary, pronunciation, and expressions.
Include examples (e.g., “flat” vs. “apartment”).
Reflect on how culture shapes language.
Length: 10 pages.

6. Word Origins & Etymology (Roll no 21 to 24)

Objective: Learn the history of English words.
Task: Choose 10 common English words.
Instructions:
Research their origin and meaning over time.
Create a “Word Journal” with visuals or fun facts.
Length (10 pages)

7. Book vs. Real Life (Roll no 25 to 28)

Objective: Understand fiction and real-world connections.
Task: Choose a fictional story with a real-world issue (e.g., Malala’s story vs. stories about girls' education).
Instructions:
Compare the fictional treatment and the real event.
Write a reflection on how stories inspire action or awareness.
Length: 10 pages.

8. Create a Travel Brochure Based on a Novel (Roll no 29 to 32)

Objective: Use descriptive language and imagination.
Task: Choose a novel or story with a strong setting (e.g., Around the World in 80 Days).
Instructions:
Create a travel brochure for that setting (fictional or real).
Describe the place, culture, people, and activities using vivid language.
Format: Brochure or poster + 1-page write-up.
Length : 10 pages

9. Environmental Themes in Literature (Roll no 33 to 36)

Objective: Connect literature with environmental awareness.
Task: Read a short story or poem related to nature (e.g., The Snake by D.H. Lawrence).
Instructions:
Analyze the message about nature/environment.
Research a real environmental issue and write a comparative reflection.
Length: 8-10 pages.

10. Famous Letters in History (Roll no 37 to 40)

Objective: Study the art of letter writing and its historical value.
Task: Choose a famous letter (e.g., by Mahatma Gandhi, Anne Frank, or Helen Keller).
Instructions:
Summarize the content and context of the letter.
Write a reply letter as if you were the recipient.

<p>Length: 10 pages</p> <p>NOTE- This project-Portfolio is a compilation of the work that the students will submit in the first week of July.</p> <ul style="list-style-type: none"> • Work must be done on an A4 size sheet and compiled in a folder. • Individually Student has to prepare The Research Project. <p>*The Project must include the following areas:</p> <ul style="list-style-type: none"> * Cover page, Title page, school details. *Abstract and Table Content <ul style="list-style-type: none"> * Statement of purpose/ objectives/Goals * Literature Review * Implication and Contribution to Knowledge (Acknowledgement) * If possible, photograph that Capture the positive experience of the students. * Reference (List of resources) *The following points must be kept for consideration while assessing the project portfolios *Quality of content of the project *Accuracy of information *Adherence to the specified timeline *Content in respect of (spelling, Grammar, Punctuation) *Clarity of thoughts and ideas *Creativity * Knowledge and experience gain 	
SCIENCE	HINDI
<p>Topic: Investigating the Effect of Different Liquids on Seed Germination</p> <p>Explore & record how different liquids (water, milk, soda, and juice) affect the germination rate and growth of seeds.</p> <p>Your investigation must include these points-</p> <p>Aim</p> <p>Theory</p> <p>Materials Required</p> <p>Procedure</p> <p>Observation</p> <p>Conclusion</p> <p>Precautions</p> <p>Scientific Principle involved</p> <p>Record this project in project file</p>	<p>समीक्षा लिखना-</p> <p>कोई एक हिंदी कहानी या उपन्यास पढ़ें (जैसे - मुंशी प्रेमचंद की कहानियाँ) और उसकी समीक्षा लिखें और पोर्टफोलियो फाइल में लगाएं।</p> <p>कहानी का सारांश</p> <p>प्रमुख पात्र</p> <p>शिक्षा या संदेश</p> <p>आपकी राय</p> <p>भारत की एक महान हस्ती</p> <p>किसी एक प्रसिद्ध व्यक्ति (जैसे — ए.पी.जे. अब्दुल कलाम, रानी लक्ष्मीबाई, भगत सिंह आदि) पर एक पृष्ठ का प्रोजेक्ट बनाएँ और पोर्टफोलियो फाइल में लगाएं। जिसमें हो:</p> <p>जीवन परिचय</p> <p>उनके योगदान</p> <p>प्रेरक बातें,</p> <p>चित्र</p>
	<p>अपनी पाठ्य पुस्तक की किसी एक महिला कवयित्री तथा लेखक की समस्त जानकारी उनका चित्र, जीवन मृत्यु, शिक्षा, सामाजिक कार्य, साहित्यिक जीवन आदि की जानकारी देते हुए पेपर पर में लिखें और पोर्टफोलियो फाइल में लगाएं।</p> <p>पोर्टफोलियो फाइल बनाएँ जिसका उदाहरण आपको साथ ही भेजा जा रहा है। (A4 साइज़ रंगीन पेपर पर बनाएं। इस लिंक को देखकर उदाहरण ले सकते हैं।</p> <p>https://youtu.be/JmlQ5EKMIU</p> <p>विशेष सुझाव</p> <p>सभी कार्यों में स्वच्छ लेखन, रचनात्मकता और हिंदी व्याकरण का सही प्रयोग करें।</p> <p>एक होमवर्क फोल्डर/प्रोजेक्ट फाइल बनाएं जिसमें सभी कार्य सजे हुए हों।</p> <p>गृह कार्य पूर होने पर ही अंक प्रदान किए जाएंगे अन्यथा नहीं।</p>

FRENCH	SANSKRIT
<p>TOPIC: “Moi et ma famille – En français!”</p> <p>PART A: Mon Profil -Self-Introduction Create a colorful personal profile in French. Include:</p> <ul style="list-style-type: none"> Nom Âge Nationalité Ville Langues parlées Mes loisirs préférés (at least 3 likes/dislikes) Dessine ou colle ta photo ou avatar <p>Je m'appelle Priya. J'ai 13 ans. Je suis indienne. J'habite à Delhi. Je parle hindi, anglais et un peu français. J'aime la musique et les chiens. Je n'aime pas les maths.</p> <p>PART B: Ma Famille – Family Tree Project Make a simple family tree. Include:</p> <ul style="list-style-type: none"> At least 6 members of your family (draw or paste pictures) Write 1–2 French sentences about each: name, age, relation, profession or interest Example: Voici mon père. Il s'appelle Raj. Il a 40 ans. Il est médecin. <p>PART C: Culture et Vocabulaire</p> <ol style="list-style-type: none"> Make a list of 10 new words from Lessons 1 & 2 with meanings in English. Write 5 sentences using: être / avoir (conjugated properly) <p>Examples: – Je suis élève. – Il a une grande famille</p>	<p>प्रथम पाठ के श्लोक अन्वन्वय तथा अर्थ a/4 परलिखे तथा याद करें याद करने के बाद श्लोक बोलते हुए एक वीडियो बनाएं</p> <p>कक्षा में लिखे गए पत्र के आधार पर एक अन्य पत्र लिख कर ला</p> <p>किसी एक प्रकार का चित्र स्वयं बनाए तथा उससे संबंधित पांच वाक्य संस्कृत में लिखे</p> <p>1 से 50 तक संस्कृत में गिनती लिखे तथा एक से चार तक गिनती तीनों लिंगों में लिखें</p> <p>यह सभी कार्य a4 सीट पर लिखकर सीट चारोंओर सुंदर बॉर्डर बनाकर सजातथा एक पेज पर अपना नाम ग्रीष्मकालीन विषय संस्कृत प्रेषक तथा प्राप्त करता का नाम लिखें</p>
AI	ELEC & HARD
<p>1. AI in Daily Life Journal (Mini Project)</p> <p>Task: Maintain a 5-day journal documenting where and how AI is used in your daily life (smartphone features, social media, shopping recommendations, etc.)</p> <p>Skills Involved: Observation, real-life application, writing</p>	<p>Basic Concepts Revision:</p> <ul style="list-style-type: none"> Create a mind map of the key electronic components introduced in Chapter 1, showing their symbols and basic functions. Write short notes (2-3 sentences each) explaining the difference between conductors, semiconductors, and insulators. <p>Component Identification:</p> <ul style="list-style-type: none"> Find and list 5 electronic devices at home and identify at least 3 electronic components inside each (if visible/known). Draw the circuit symbols for resistors, capacitors, diodes, and transistors.
DATA SCIENCE	PAT
<p>Population Growth Analysis</p> <ul style="list-style-type: none"> Collect population data for your city/state over the last 10 years Create frequency distributions and histograms using Excel or Google Sheets Calculate mean, median, and mode population growth rates 	<p>Practical:- 1 (Do this work in the practical file, it will be included in it)</p> <p>TOPIC: -Planning Age-Appropriate Physical Activity(unit-2)</p> <ul style="list-style-type: none"> Designing two activities to enhance physical strength and coordination.

<ul style="list-style-type: none"> Write a short report on social implications of these trends (housing needs, resource allocation) <p style="text-align: center;">OR</p> <p>Tech Usage Survey</p> <ul style="list-style-type: none"> Design and conduct a survey about technology usage among 20+ peers Create pie charts and bar graphs representing different aspects (hours spent, platforms used) Identify the most common tech-related activities and calculate percentages Present findings using Google Slides or Canva 	<ul style="list-style-type: none"> Planning two activities for developing cognitive skills.
SOCIAL SCIENCE	TOURISM
<p>HISTORY</p> <ol style="list-style-type: none"> Create a timeline of the major events of the French Revolution. Draw or collect pictures representing the key symbols of the French Revolution (e.g., the Bastille, the tricolor flag, the guillotine, Marianne). Research and write a short biography of an important figure of the French Revolution (e.g., Louis XVI, Marie Antoinette, Robespierre, Napoleon). Compare and contrast the French Revolution with another historical revolution you have studied. <p>GEOGRAPHY</p> <ol style="list-style-type: none"> Draw a well-labelled map of India showing its major physiographic divisions. Use different colors to represent each division. Collect pictures of different landforms found in India (mountains, plateaus, plains, deserts, coasts, islands) and create a collage or presentation. 	<p>TOPIC: Tourism Business</p> <p>Instructions: Research and write a research paper (300–400 words) on "The Role of Tourism in India's Economy". Your paper should cover:</p> <ul style="list-style-type: none"> Overview of India's tourism industry: Importance, types of tourism (e.g., cultural, eco-tourism, adventure tourism). Top tourist destinations in India and why they are popular (e.g., Taj Mahal, Goa, Kerala backwaters). Tourism and its impact on India: Social, economic, and environmental impacts. Government initiatives: Discuss any government projects like "Incredible India" or other tourism-related schemes. <p>Format:</p> <ul style="list-style-type: none"> Submit in typed format. <p>Include images of popular tourist destinations.</p>
CLUB	SKILL
<p>MASS MEDIA: Choose any one of the following projects and present your findings in a PowerPoint presentation (8–10 slides) or a short video documentary (2–3 minutes):</p> <ol style="list-style-type: none"> Evolution of Mass Media <ol style="list-style-type: none"> Trace the journey of mass media from traditional (print, radio) to digital platforms. Include examples, images, and global/local influences. Impact of Social Media on Teenagers <ol style="list-style-type: none"> Conduct a small survey (minimum 10 students) to understand screen time, favorite apps, and effects on mental health. Present your data with charts and your analysis. Role of Media During Natural Disasters 	<p>EMBROIDERY :- Take 4 – 5 Hanky Make different design using</p> <ul style="list-style-type: none"> 2 types of flowers 2 types of leaves 1 type of border <p>Don't repeat the design.</p> <p>3D PRINTING:- Draw a design of any animal like (butterfly, fish, owl, turtle) on butter paper.</p>

- a. Choose one major disaster (like Kerala Floods, 2018 or COVID-19 pandemic).
 - b. Show how mass media contributed to information sharing, relief, or panic.
4. Fake News vs. Real News
 - a. Compare a few examples of fake and real news.
 - b. Suggest how one can identify fake news and verify facts.

MOVIE MAKING: CHOOSE A TOPIC

The Case of the Missing Homework
 The Value of Empathy
 A Dream Come True
 The Unexpected Guest

SCRIPT WRITING

Write a script of choosen topic , create characters , make dialogues

ARRANGEMENT

Arrange all the require things to make yoiur scene full according to your story . every scene need to be properly explained

KEY POINTS TO REMEMBER WHILE FILMING

- Shutter speed
- Iso
- Aparture
- White balance
- Camera angles
- It should be silence while taking shot
- Video length must be 2:30 to 3 minutes

While shooting every scene you must be aware about these key points to gain quality of your film

MECHATRONICS:

Objective – Self Balancing Robot using Arduino

Materials Required:

1. Arduino uno board
2. L298N motor driver
3. MPU 6050 sensor
4. 18650 battery holders with on/off switch
5. 18650 batteries
6. Motors with wheels
7. Jumper wires
8. Chassis (can DIY with acrylic, wood, or metal)

Project – The aim is to create a self-balancing robot using Arduino and other materials mentioned. Creating a self-balancing robot using an Arduino Uno is a great project to learn robotics, sensors, and control systems.

Hardware Assembly

1. **Attach motors** to the chassis.
2. Connect the **motor wires** to the motor driver.
3. Mount the **Arduino Uno** and **MPU6050** on the chassis (ideally near the center).
4. **Connect wiring:**
 - a. **MPU6050** to Arduino (I2C):
 - i. VCC → 5V
 - ii. GND → GND
 - iii. SDA → A4
 - iv. SCL → A5
 - b. **Motor driver to Arduino:**
 - i. IN1, IN2, ENA → Digital pins (e.g., 9, 10, 11)
 - ii. IN3, IN4, ENB → Digital pins (e.g., 5, 6, 3)
 - c. **Power the Arduino** and motors from the battery.

3. Software Setup

Libraries Needed

Wire.h (comes with Arduino IDE)

MPU6050.h or I2Cdev.h (use Jeff Rowberg's library for ease of use)

Optional: PID_v1.h for PID control

Steps

Read raw values from MPU6050 (acceleration and gyro).

Use complementary filter or Kalman filter to calculate the tilt angle.

Implement a **PID controller**:

Input: Tilt angle

Output: Motor speed/direction

Setpoint: 0 (upright position)

Tips

- Use a **stable power supply** for motors and Arduino (don't power motors from Arduino's 5V).
- **Mount MPU6050 firmly** to avoid vibration noise.
- **Test on a stand** before full balancing.
- Add serial print/debug info for easier tuning.
- For chassis you need to be creative.
- For reference I have attached a youtube link below the images.

Next Steps (Optional)

- Add Bluetooth for remote control
- Add ultrasonic sensor for obstacle detection
- Upgrade to ESP32 for more features (WiFi, better speed)



For Reference - [Self Balancing Robot using Arduino & MPU 6050 || Step by step Tutorial](#)
[#arduinoproject](#)