KENDRIYA VIDYALAYA NO. 2 KALPAKKAM
Winter Break Homework

Class 3

ENGLISH

•Read ‘A story A day’ and pick out two new words from each story and make an ‘Enrich Vocabulary’ card.
•Complete the MDP of term-2.

MATHS

•Find the length of different objects by using one metre, half metre and quarter metre ropes and enter in the tabular column.
•Complete the MDP of term-2.

हिंदी

•1 से 100 तक संख्या-शब्द (Number Names) एक बार लिखें और याद करें।
•नीचे दिए गए चित्र को देखकर 7–8 वाक्य लिखकर एक छोटी कहानी लिखो।

TWAU

•Draw and colour any 5 different kinds of houses and also find out and write materials used for constructing these types of houses.
•Complete the MDP of term-2.

Class 4

ENGLISH

1. Make a colourful poster on “Traditional Games Of India”. Include Kabaddi, Kho Kho, Gilli Danda, Hekko…

2. Make an Album on “Homophones” with pictures. (Minimum 10 pairs.)

3. Read a story everyday & narrate any one story on the re-opening day.

4. Complete MDP.

HINDI

1. 5 पेज सुलेख लिखो।

2. प्रतिदिन अपनी पाठ्यपुस्तक से एक पृष्ठ पढ़ो।

3. ‘कैमरा’ पाठ से पाँच तुकांत शब्द लिखो।

4. पाँच विलोम शब्द लिखो।

5. ‘कविता का कमाल’ पाठ से पाँच संज्ञा, पाँच क्रिया तथा पाँच विशेषण लिखो।

MATHS

1. Weekly Mini Planner (Life-to-Homework Activities)

Prepare a mini planner for one week. Fill in the Date, Day, Activity, and Time.

Date	Day	Activity	Time

Example Activities: Waking up, brushing, travelling to school, classwork, homework, playtime, revision, bedtime.

2. Make a Model of a Clock (12-Hour or 24-Hour)

- Choose any one type of clock: 12-hour clock or 24-hour clock.
- Use cardboard or chart paper to draw a neat circle.
- Mark all the hours clearly.
- Make movable hands using paper strips.

● Colour and decorate your model neatly.

● Write your name and class at the back of the model.

3- Learn Tables (2 to 15)

TWAU

Make paper pulp from waste paper

● Make a clay diya/toy

● Weave paper strips to make a mat

●Choose any one object you use daily (pencil, bag, shoe, notebook).

⟫Write:

⟫Name of the object

⟫Raw materials used

⟫People who help make it

⟫Why it is useful?

Class 5

English homework

1 What is your state or union territory famous for ? Write or draw any two things (crafts,food,places)

2. dance forms etc and explain why they are special ?

3. Why is it important to protect traditional art forms like glass bangles, embroidery, and paintings? Give any three reasons.

हिंदी गृहकार्य

हिंदी विषय समृद्धिकरण गतिविधियाँ

– "मेरी मनपसंद ऐतिहासिक धरोहर"

निर्देश:

छात्र अपनी पसंद का कोई ऐतिहासिक स्थान चुनें, जैसे – लाल किला, कुतुब मिनार, ताजमहल, हवा महल आदि।

करना है:

स्थल की चित्र बनायें/चिपकाएँ
नीचे लिखें –
1. नाम
2. स्थान
3. किसने बनवाया
4. यह क्यों प्रसिद्ध है
2-हर दिन एक पेज रीडिंग करो और रिकॉर्डिंग भेजना है।

MATHEMATICS

1) Write and learn the multiplication table from 2 to 16.
2) Write 10 questions of each number operations (Addition, Subtraction, Multiplication and Division).
Note-Do all the questions in A4 paper sheet.

TWAU

- Look around your home and write two ways you can save Earth's resources.

Class 6

ENGLISH

1.Draw a Kite and Write a paragraph about 100 words- "I am a kite"
2. Write a biography of a freedom fighter who inspires you most. Include the picture of the personality with your writing.
3. Prepare your Term 2 English MDP- Topic: Create a colourful poster highlighting ways to save water, like turning off taps and fixing leaks.
4. Complete Learner's diary.

हिन्दी

प्रश्न 1 महाराणा प्रताप के बारे मे जानकारी लिखिए ।

प्रश्न 2 महाराणा प्रताप का घोडा चेतक के बारे मे दस(10) पंक्तियाँ लिखिए ।

प्रश्न 3 आपके पसंदीदा स्वतंत्रता सेनानी के बारे मे जानकारी लिखकर उस स्वतंत्रता सेनानी का

संस्कृत

1. संस्कृत में 10 फूलों के नाम चित्र सहित।

2. अक्षरों को तोड़ें -वर्तिका ,पात्रता,पेड़ ,त्रिशूल,द्राक्षा ,श्रमिकः ,यज्ञ,किताब

Maths

Completion of MDP and LEARNERS DIARY

MDP -TOPIC(WATER)

Total usage of water fraction of water used for various purpose and write in fraction and reduce in simplest form

SCIENCE

1.Let us experiment

Take four identical pots filled with soil. Sow a few green gram seeds in each pot. Now, keep these pots in the following conditions for 10 days.

- Pot A: Do not water the soil. Place this pot in direct sunlight.
- Pot B: In direct sunlight and excess water
- Pot C: In complete dark and moist soil
- Pot D: In direct sunlight and moist soil

Fill in the table given below for each pot :

Pot	Condition	Air Available	Sunlight Available	Water Available	Seed Germination (Prediction & Observation)	Possible Reason for Observation

Also write what you learnt from this experiment?

2.Even though a car moves, like many animals, it is not considered a living organism. Give three reasons.

3.Which of the following non-living things listed below were once part of a living thing? Explain briefly.

Butter, Soil, Leather, Wool, Electric bulb, Cooking oil, Salt, Apple, Rubber

4.Write the differences between respiration and breathing.

5.Give one-word answers to the following sentences:

- Anything that has mass and occupies space.

- The process of taking food by organisms.
- The process of getting rid of waste.
- The process of removal of wastes in plants.
- The factors like food, water, light, and temperature to which organisms respond.
- Production of new organisms of their own kind.
- Increase in size along with mass using energy.

6.What type of movement do we see in plants?

TERM 2 MDP Water Conservation

(i)Name some sources of water that can be reused at home.

(ii)What is drip irrigation and how does it differ from traditional watering methods?

(iii)How does drip irrigation contribute to water conservation? Use drawings or paste pictures to explain.

(iv)Write three slogans on water conservation and explain the properties of water.

(v)Find one major water source and explain how it benefits people.

Complete LEARNER'S DIARY .

Social Science

1.Make a list of popular Gods and goddesses in your region and the festivals they are associated with.(You may present your answer in a table or with pictures and short notes).

2.Different names of similar festivals across India about the same date.(Festivals calendar art)

3.Read the National Anthem and its translation in the preliminary pages of the textbook.Where do you see the diversity? And Where the Unity? Write two or three paragraphs on this.

4.Select a few stories from the" Panchatantra" and discuss how their message is still valid today? Do you know of any similar stories from your region?
(Reading skills)

Class 7

ENGLISH

1.Write a letter to your friend sharing how armed forces contribute their lives for the country.
2. Prepare Term 2 English MDP topic- paragraph on Medicinal plants and it's usages.
3. Complete Learner's diary.

4. Write a biography of any women freedom fighter of our country whose sacrifice touched your heart. Include a picture with your writing.

हिन्दी

परियोजना कार्य

पर्यावरण संरक्षण के लिए हम अपने स्तर पर कुछ प्रयास कर सकते हैं ।आप अपने विद्यालय ,आसपास,और घरों में देखिए कि किन-किन कार्यों में प्लास्टिक के थैले का प्रयोग किया जाता है? उन कार्यों की सूची बनाइए । अब इनमें प्रयोग किए जा रहे प्लास्टिक के थैलों के विकल्पों पर विचार कीजिए और लिखिए । (संकेत-----जैसे---हम प्लास्टिक के थैले की जगह कागज या कपड़े के थैले का प्रयोग किन-किन कार्यों में कर सकते हैं?) उसके बारे में लिखिए।

संस्कृत

निम्नलिखित शब्दों का लिंग, विभक्ति और क्रिया लिखिए।
लिंग विभक्ति
शब्द पुल्लिंग लिंग
प्रथम विभक्ति
लघु,मयूरैः ,पुष्पाय ,बालिकानाम् ,उड़ना,नकुलेषु फूल,सीतायै

MATHS

1)ART INTEGRATED PROJECT ON CONGRUENT TRIANGLES
2)MDP- Conservation of animals and plants
Make a table on area covered by forest in all the states of India
Which state has the maximum area?
Which state has a minimum area?

science

1. Prepare the working model of respiratory system, to demonstrate the process inhalation and exhalation using low cost/waste materials

2. Prepare the working model of kaleidoscope, to show the multiple reflections using mirror
3. Poster making on LEAVES – FOOD FACTORIES OF PLANTS
4. ACTIVITY :transport of water in plants- take 2 plant twigs with leaves in transparent glass tumbler, one in normal water another in colored water, keep them in sunlight , observe after few hours and after 24 hours, list out the observations

Social Science

1.Draw scenery from any of the places that you visited on holiday or of your surroundings, mention the natural elements that are observed and also mention its important one natural element (river/mountain/forest).

2.Storytelling Activity- Read or listen to a short myth or folk story related to a river (Ganga), mountain (Himalayas), or forest.That will be presented by each student once the school reopens.

Class 8

ENGLISH

1.Complete the learner's diary

2. Art integrated project on the topic science and curiosity.

3. Write an article on the topic-Saving the girl child

हिन्दी

परियोजना कार्य

प्रश्न 1 आप सभी राज्यों के स्वतंत्रता सेनानियों के विषय में पढ़कर उनमें से 10 महिला एवं 10 पुरुष स्वतंत्रता सेनानियों के चित्रों का संग्रह करके एक संग्रामी तैयार कीजिए।

चित्रों के नीचे उनके विशेष योगदान के बारे में एक दो वाक्य भी लिखिए अपनी संग्रामी को तैयार करते समय इस बात का ध्यान रखिए कि आप किसी भी राज्य से एक से अधिक व्यक्ति न चुने।

प्रश्न 2 हमें बड़े संघर्षों के बाद स्वतंत्रता मिली है। अपनी इस स्वतंत्रता को बनाए रखने के लिए हम अपने स्तर पर क्या-क्या कर सकते हैं? लिखिए ।

संस्कृत

1. अधोलिखितानि पदानि निर्देशानुसारं परिवर्तयत-उदाहरणम् - भल्लुकः- तृतीया बहुवचने भल्लुकेन

खगः प्रथमा द्विवचने=

सिंहः - सप्तमी बहुवचने =

लता - प्रथमा बहुवचने=

सूचिका - चतुर्थी एकवचने=

पेटिका - तृतीया द्विवचने=

पुस्तक - द्वितीया बहुवचने =

लता - प्रथमा बहुवचने =

सूचिका - चतुर्थी एकवचने=

पेटिका - तृतीया द्विवचने=

MATHS

1) Art integrated project on QUADRILATERALS

2) MDP- Find the average rainfall for the years 2020 and 2025 in any 10 states of India and compare .

Science

1. Extension of MDP on effect of climate change on biodiversity and in the polar regions.
2. Project theme: " Chem city: Where atoms live their daily lives."

Design and create comic stripes to differentiate between elements, compounds and mixtures with diagrams and illustrate their properties and uses.

3. "Seeing the distant world – Prepare a simple telescope using lenses." - working model

Social Science

Topic: The Green Shield & The Toxic Smog: An Investigation into India's Environmental Crisis

The Mission

You are a **Senior Investigative Journalist** for *The Earth Times*. Your editor has assigned you to cover a dual crisis affecting the Delhi-NCR region. Your task is to prepare a comprehensive **Press Report** (written as a newspaper article or a news script) that explains two connected events:

1. **The New "100-Meter Rule"** for the Aravali Mountains.
2. **The Dropping AQI** (Air Quality Index) in Delhi-NCR

Section 1: The Investigative Brief (Fact Sheet)

To write an accurate report, use current facts from December 2025.

Refer: Sansad TV, the Hindu editorials

Section 2: Analysis of Impacts

In your report, you must explain how these two issues hurt us:

Focusing - impact on health and environment .

Section 3: The Three Pillars of Implementation

Explain to your readers the role of three organs of government in handling this.

The Judiciary (The Supreme Court):

The Executive (MoEFCC & Pollution Boards):

Legislature (Parliament/State Assemblies):

Section 4: Your Suggested Measures (The "Call to Action")

As a journalist, end your report with **3 solutions**. Consider:

1. **Strict Protection:** Should the definition be changed to 20m instead of 100m?
2. **Public Transport:** How can the Executive branch reduce vehicle smoke?
3. **The Green Wall:** A massive tree-planting drive across the entire range.

Submission Format: Choose One

- **Newspaper Front Page:** Create a hand-drawn or digital layout with headlines, photos (drawings), and your report.
- **Infographic Poster:** Use charts and icons to show the connection between the 100m rule and Delhi's AQI

Class 9

ENGLISH

Q.1 Write a book review

Q 2.Make a project on any one of the following topics:(500 words) **(Pictures and drawings can be included.)**

i) Emergence of Artificial Intelligence ii) Life and major works of Ruskin Bond iii) Pictorial description of the chapter the ‘ last leaf’

Q.3 Prepare flash cards based on Tense/ Reported speech and its application.

हिन्दी

प्रश्न 1 निम्नलिखित विषय पर दिए गए संकेत -बिंदुओं के आधार पर 130 शब्दों में अनुच्छेद लिखिए ।

(1.1) मोबाइल का मायाजाल

संकेत बिंदु-*आज की आवश्यकता
*लाभ या हानियाँ
*उचित प्रयोग आवश्यक ।

(1.2) शांतिप्रिय एवं समर्थ भारत संकेत बिंदु:-

*शांति दूध भारत
*अहिंसा परमो धर्म:
*सामर्थ्यवान भारत ।

प्रश्न 2 दिए गए विषयों पर लघु कथा लिखिए ।

(2.1) "सच्ची मित्रता" विषय पर लगभग 100 शब्दों में लघु कथा लिखिए ।

(2.2)"आत्मनिर्भर भारत" विषय पर लगभग 100 शब्दों में लघु कथा लिखिए ।

संस्कृत

1. खाद धातुनां रूपाणि पञ्चलकारेषु च लिखत ।

(खाद धातु के रूप पांचों लकारों में लिखिए)

2. 'अव्यय' शब्दों का प्रयोग हुए पाँच वाक्य संस्कृत में लेखिए।

3. पञ्च सरलसंस्कृत वाक्येषु स्वस्य परिचयं लिखत ।

(पांच सरल संस्कृत वाक्यों में अपना परिचय लिखिए।

MATHS

PRACTICE OF PT2 PORTIONS

ART INTEGRATED PROJECT -SURFACE AREA AND VOLUMES

CBQS FROM SURFACE AREA AND VOLUMES

SCIENCE

ACTIVITY 1:Scientist profile-Write about any two scientists whom you have learnt from the textbook.Describe their contributions to science and their picture in a A4 sheet paper.

ACTIVITY 2: Choose any one topic given below and prepare in A4 sheet paper the project which should contain an explanation of the topic with real life examples along with diagrams or pictures.

1.Renewable and non renewable resources

2.Science behind fireworks

3.Plant as a source of food and medicine

4.Science behind solar energy

<u>Answer these questions in a long sized ruled paper.</u>

1. Why do Helium, Neon and Argon have a zero valency?

2. Enlist the conclusions drawn by Rutherford from his α-ray scattering experiment.

3. In what way is Rutherford's atomic model different from that of Thomson’s atomic model?

4. What were the drawbacks of Rutherford’s model of an atom?

5. What are the postulates of Bohr’s model of an atom?

6. Show diagrammatically the electron distributions in a sodium atom and a sodium ion and also give their atomic number.

7. An element X has a mass number 4 and atomic number 2. Write the valency of this element?

8. Helium atom has 2 electrons in its valence shell but its valency is not 2, Explain.

9. Calculate the number of neutrons present in the nucleus of an element X,which is represented as $^{31}X_{15}$. 10. Write down the electron distribution of chlorine atom. How many electrons are there in the L shell? (Atomic number of chlorine is 17).

11. Will 35Cl and 37Cl have different valencies? Justify your answer.

12. Is it possible for the atom of an element to have one electron, one proton and no neutron. If so, name the element.

13.The ion of an element has 3 positive charges. Mass number of the atom is 27 and the number of neutrons is 14. What is the number of electrons in the ion?

14.A girl is carrying a school bag of 3 kg mass on her back and moves 200 m on a levelled road. The work done against the gravitational force will be (g =10 m s–2)

15.The power of a motor pump is 2 kW. How much water per minute the pump can raise to a height of 10 m? (Given g = 10 m s–2)

16.If an electric iron of 1200 W is used for 30 minutes everyday, find electric energy consumed in the month of April.

17.Four men lift a 250 kg box to a height of 1 m and hold it without raising or lowering it.

(a) How much work is done by the men in lifting the box? (b) How much work do they do in just holding it? (c) Why do they get tired while holding it? (g = 10 m s–2)

18.Represent graphically by two separate diagrams in each case (i) Two sound waves having the same amplitude but different frequencies? (ii) Two sound waves having the same frequency but different amplitudes. (iii) Two sound waves having different amplitudes and also different wavelengths.

19.Establish the relationship between speed of sound, its wavelength and frequency. If velocity of sound in air is 340 m s–1, calculate (i) wavelength when frequency is 256 Hz. (ii) frequency when wavelength is 0.85 m.

Social Studies

MAKE AN ART INTEGRATED PROJECT ON THE WORKING PRINCIPALS OF THE FOLLOWING INSTITUTIONS

1. The pillars of Democracy (3D Model installation) with examples

   Legislature, Executive, Judiciary, Media, Free and Elections, Fundamental rights

   or

2. "The Journey of a Bill" (Comic Strip or Storyboard which means a visual blueprint for a film, animation, or project using similar panel-by-panel illustrations (sketches, photos) with notes for camera angles, action, and dialogue to plan the production shot-by-shot.

Class 11

ENGLISH

Creative Writing Skills:

- **Poster Design:** Design a creative poster with a catchy slogan on "The Value of Books" or "Promoting Cleanliness" in your colony.
- **Speech Writing:** Prepare a speech (150–200 words) on topics like "The Brain Drain Problem," "Generation Gap," or "The Importance of Discipline".
- **Travelogue/Report:** Write a travelogue describing a factual visit to a particular destination using a narrative style.

हिन्दी

प्रश्न1 "जनसंचार माध्यम" पर परियोजना कार्य कीजिए ।

प्रश्न 2 "अक्का महादेवी" के बारे में लिखिए।

प्रश्न 3 "आलो- आँधारि" पाठ का सारांश लिखिए

Mathematics

Topics: Straight Lines, Conic Sections, Limits & Derivatives

Day 1: Straight Lines – The Geometry of Maps

Focus: Slope, Intercepts, and Real-world Positioning.

1. Competency Question (Critical Thinking):

A light ray reflects off a mirror. If the incident ray is along the line $x - y + 1 = 0$ and the mirror lies along the x-axis, determine the equation of the reflected ray.

Visualise the reflection and prove that the angle of incidence equals the angle of reflection using slopes.

2. Case Study: The Triangular Park

A city planner is designing a new triangular park bounded by three roads. The equations of the roads are:

* Road A: $x + y = 6$
* Road B: $2x - y = 4$
* Road C: $x + 2y = 5$
* Q1: Find the coordinates of the three vertices of the park.
* Q2: The planner wants to place a fountain exactly at the "Centroid" of the park. Calculate its coordinate.
* Q3: A straight pipeline needs to be laid from the origin (0,0) to the nearest point on Road A. Find the equation of this pipeline (Hint: Shortest distance is perpendicular).

Day 2: Straight Lines – Optimization & Locus

Focus: Distance of a point from a line and shifting origin.

1. Real-Life Application:

A rescue helicopter is located at point H(3, 4). It receives a distress signal from a hiker moving along a straight trail defined by $3x + 4y - 20 = 0$.

* Task: Calculate the shortest distance the helicopter must fly to reach the trail.
* Task: If the helicopter flies to the trail and then to a base camp at B(-1, 2), find the point on the trail that minimizes the total distance H \to P \to B (Reflection Principle).

2. Visualisation Task:

Draw a triangle with vertices (2,3), (4,-1), and (1,2). Shift the origin to (1,1) and find the new coordinates of the vertices. Does the area of the triangle change? Justify your answer mathematically.

Day 3: Conic Sections – Parabolic Architecture

Focus: Parabolas in standard forms and physical properties.

1. Competency Question:

An arch is in the form of a parabola with its axis vertical. The arch is 10m high and 5m wide at the base. How wide is it 2m from the vertex of the parabola?

2. Case Study: The Satellite Dish

A TV satellite dish is shaped like a Paraboloid of Revolution. The receiver is placed at the "Focus" to capture maximum signals. The dish is 2 meters wide at the opening and 0.5 meters deep at the center.

* Q1: Set up a coordinate system with the vertex at (0,0) and determine the equation of the parabola used to model this dish.

* Q2: Calculate the exact position (coordinate) where the receiver (focus) should be placed.

* Q3: If the depth is increased to 1 meter while keeping the width same, does the receiver move closer to or further from the vertex?

Day 4: Conic Sections – Elliptical Orbits & Whispering Galleries

Focus: Ellipse and Hyperbola properties.

1. Real-Life Application (Astronomy):

The Earth orbits the Sun in an elliptical path with the Sun at one of the foci. The semi-major axis is approximately 150 million km, and the eccentricity is 0.017.

* Task: Write the equation of Earth's orbit (assume center at origin).

* Task: Calculate the closest distance (Perihelion) and farthest distance (Aphelion) of the Earth from the Sun using a and e.

2. Hyperbola Challenge:

A cooling tower for a nuclear reactor is to be built in the shape of a Hyperbola. The narrowest part of the tower (the waist) has a diameter of 100m. The equation of the hyperbola is $\frac{x^2}{2500} - \frac{y^2}{4900} = 1$.

* Q: Find the diameter of the tower at a height of 70m above the center (waist).

Day 5: Limits – The Concept of approaching

Focus: Intuitive understanding of limits and standard forms.

1. Conceptual Check:

Evaluate $lim_{\{x \to 2\}} \frac{\{x^2 - 4\}}{\{x - 2\}}$.

* Writing Task: Explain in 2-3 sentences why we cannot simply substitute x=2 immediately, but we can substitute it after simplification. What is the difference between f(2) and $lim_{\{x \to 2\}} f(x)$?

2. Competency Question (Trigonometric Limits):

Evaluate: $lim_{\{x \to 0\}} \frac{\{1 - cos(2x)\}}{\{x^2\}}$.

* Extension: Use this result to evaluate $lim_{\{x \to 0\}} \frac{1-cos\,(mx)}{1-cos\,(nx)}$.

Day 6: Derivatives – Rate of Change in Physics

Focus: First Principle and Physical interpretation.

1. Physics Integration:

The displacement s (in meters) of a particle moving in a straight line is given by $s(t) = 2t^2 + 3t + 5$, where t is time in seconds.

* Q1: Find the velocity v(t) at any time t using the derivative (Power Rule).

* Q2: Find the velocity specifically at t = 3 seconds.

* Q3: Find the acceleration a(t) (derivative of velocity). Is the acceleration constant?

2. The First Principle Challenge:

Find the derivative of f(x) = sin(x) using the First Principle of Differentiation. Show all steps involving the expansion of sin(x+h).

Day 7: The "Math in Motion" Mini-Project

Synthesis of all topics.

Scenario:

A roller coaster track is being designed. The track follows the path of a curve $y = x^2$ (Parabola) for the first section, and then switches to a straight line path.

* Part A: At point (2, 4) on the parabola, the coaster track becomes a straight line that is tangent to the curve. Find the slope of the curve at x=2 using derivatives.

* Part B: Write the equation of this straight line track.

* Part C: Does this straight line intersect the line y = -2? If so, where?

Output for Day 7: Create a simple 1-page report or a chart answering these questions with a rough sketch of the roller coaster path.

Instructions for Students:

* Maintain a separate notebook or file for this holiday homework.

* Draw Diagrams: For Coordinate Geometry (Lines & Conics), a rough sketch is mandatory for every solution.

* Self-Correction: After solving, check if your answer makes physical sense (e.g., distance cannot be negative).

PHYSICS

CHOICE-BASED TASK (COMPULSORY)

You must choose ANY ONE task from the options below.

OPTION A: PHYSICS MOVIE MAKING

"Explain Physics Like a Creator"

What to do:
Create a 3–5 minute video explaining ONE Physics concept from Part-2.

You may use:

- Mobile phone camera
- Slides + voice-over
- Drawings + explanation
- Simple animation

Choose ONE topic only:

- Zeroth / First Law of Thermodynamics
- Isothermal vs Adiabatic process
- RMS speed of gas molecules
- Pressure–temperature relation
- Simple Harmonic Motion
- Resonance
- Speed of sound in different media

Your video MUST include:

1. Correct definition
2. At least one formula
3. Explanation of symbols
4. One real-life application
5. One exam-oriented point

OPTION B: PPT DESIGN – "PHYSICS MADE SIMPLE"

What to do:
Prepare a PowerPoint presentation (8–12 slides) on ONE chapter from Part-2 NCERT.

Slide structure (mandatory):

1. Title slide (Chapter + Name)
2. Key concepts (2 slides)
3. Important assumptions
4. Formulae with symbols explained
5. Graphs / diagrams (minimum 2)
6. One competency-based question
7. Common mistakes students make
8. One exam tip

OPTION C: SMART FORMULA SHEET (PART-2 ONLY)

What to do:
Prepare a handwritten formula sheet for ALL Part-2 chapters.

Rules:

- Maximum 4 A4 pages
- Neat handwriting
- Use colour coding:
    - Formula
    - Meaning of symbols
    - Conditions / limitations

Each chapter must include:

1. All important formulae
2. Meaning of each symbol
3. Condition of validity
4. One common mistake
5. One frequently asked exam question

IMPORTANT INSTRUCTIONS:

- Work must be your own
- Diagrams should be neat and labelled
- Formulae must be correct and contextual
- Late submission may lead to mark deduction

Computer Science (CS083):

To complete programs on (Lists,Strings,Dictionaries)

a. WAPP that inputs a line of text and prints its each word in a separate line. Also print the count of words in the line.

1.1. WAPP to input a string and check if it contains a digit or not.

1.2. WAPP to input a string and print the number of upper and lower case letters in it.

1.3. Input a string having some digits. WAPP to calculate the sum of digits present in this string.

1.4. WAPP to input a list and an element, and remove all the occurrences of the given element in the list.

1.5. Given a list of integers, L, WAPP to calculate and display the sum of all the odd numbers in the list.

1.6. WAPP to input a list of numbers and swap the elements at the even location with the elements at the odd location.

1.7. WAPP to find the highest 2 values in a dictionary.

1.8. WAPP to create a dictionary from the string.
Note: Track the count of letters from the string.

2. To complete record notebooks

3. To complete Investigatory project