



B.M. BHARTI MODEL SCHOOL

**SUMMER
VACATION**

HOLIDAYS HOMEWORK

CLASS-IX

Name : _____
Class & Section : _____
Roll No. : _____
Father's Name : _____

*** INSTRUCTIONS FOR STUDENTS DURING SUMMER HOLIDAY HOMEWORK***

Dear Students,

Summer vacation is a time to relax, refresh, and enjoy with family and friends. Along with fun and recreation, complete your holiday homework sincerely and neatly. Follow these instructions carefully:

- 1. Complete all work on time and submit it after the vacation.**
- 2. Maintain neatness and proper presentation in every subject.**
- 3. Use your own handwriting and avoid copying from others.**
- 4. Read all instructions carefully before starting the work.**
- 5. Make your work creative, colourful, and attractive wherever required.**
- 6. Revise the work done in class regularly during the holidays.**
- 7. Spend some time daily in reading books, newspapers or storybooks.**
- 8. Practice good handwriting and learn new words every day.**
- 9. Parents are requested to guide and encourage students, but the work should be done by the students themselves.**
- 10. Keep all notebooks and holiday homework sheets properly covered and labelled.**
- 11. Do worksheet on worksheet itself.**
- 12. Maintain discipline and balance studies with play, exercise, and rest**
- 13. Take care of your health, eat healthy food, and stay hydrated during summer.**
- 14. Enjoy your holidays and return to school with fresh energy and enthusiasm.**

✦✦ “Learning never stops when creativity and curiosity continue.” ✦✦

Holidays Homework 2026-27

Class IX

Theme: - “Inclusive Development for a Sustainable Future”

Dear Young Minds,

Summer vacations are not only a time to unwind and rejuvenate, but also an opportunity to think, create, and grow. This year’s Holiday Homework is thoughtfully designed around the theme: **“Inclusive Development for a Sustainable Future.”** Through engaging and creative activities, you will explore how empathy, equality, innovation, and responsible living can contribute towards building a world where progress benefits everyone. As future changemakers, your ideas and actions have the power to shape a more inclusive and sustainable society. Along with completing your assignments, make sure to **revise your concepts regularly and nurture the habit of learning something new each day**. Stay curious, think creatively, and make meaningful use of your summer break.

Wishing you a joyful, inspiring, and productive summer vacation!

GENERAL INSTRUCTIONS:

- *Holiday Homework carries marks in assessment. Therefore, submission after the vacation is compulsory for all students.*
- *Parents may act as facilitators; however, the work must be done independently by the student.*
- *Originality of the work will be appreciated.*
- *The work must be neat, well-organized, and presentable.*
- *Questions must be attempted in the given sequence.*
- *The student will be assessed on: handwriting, presentation, neatness, completion of all the given tasks and proper indexing of the work.*
- *It is mandatory to do the assigned task.*

English

SUBJECT ENRICHMENT ACTIVITY

Theme: Inclusive Development for a Sustainable Future

Inclusive development ensures that progress benefits every section of society while safeguarding the environment for future generations. Sustainable growth can only be achieved when technological innovation, social equality, economic progress, and environmental responsibility work together. Through thoughtful ideas and creative solutions, we can build a future that is fair, green, and prosperous for all.

Dear Students,

The following activities are designed around the theme “**Inclusive Development for a Sustainable Future**” to foster creativity, critical thinking, communication skills and awareness of how individuals can contribute towards building a more inclusive and sustainable world.

ACTIVITY – 1: Reflect, Create, Inspire! Article Writing and Poster Making

Students are required to complete both parts of the activity on the same allotted topic.

Part A: Reflective Article Writing

Research your allotted topic by reading or watching a reliable source such as an article, speech, TED Talk, documentary clip, podcast, or educational video.

Write an **ARTICLE (250–300 words)** reflecting on:

- Key ideas or information you gained
- Insights that inspired or surprised you
- How inclusion and sustainability are interconnected in the given topic
- How the resource influenced your understanding of building a better future

Part B: Poster Making

Design an informative and creative poster based on the same topic. Your poster must include:

Heading / Slogan

Create a catchy and meaningful title

Visual Elements

Use drawings, symbols, charts, icons, or illustrations relevant to your topic

Key Message

Write 4–5 short impactful points Call to Action

End with a strong concluding message encouraging positive change Example:

“Build a Future Where Progress Belongs to Everyone.”

TOPIC ALLOTMENT

- **Roll Numbers 1–10** : Equal Access to Quality Education
- **Roll Numbers 11–20** : Technology for Every Hand: Digital Inclusion for All
- **Roll Numbers 21–30** : Renewable Energy for Rural Development
- **Roll Numbers 31–40** : Sustainable Cities and Inclusive Urban Spaces
- **Roll Numbers 41 Onwards** : Gender Equality and Innovation for a Sustainable Future

POINTS TO REMEMBER

- Complete both the article and poster on the **same allotted topic**
- Use authentic and reliable sources for research
- Keep your article well-structured and meaningful
- Ensure the poster is neat, creative, and visually appealing
- Maintain originality in both written and visual work

KEY PARAMETERS

- Relevance to theme
- Creativity and originality
- Depth of reflection
- Clarity of message
- Presentation and neatness

MATERIAL REQUIRED

For Article Writing:

Use **A-4 size ruled sheets** (any light color)

For Poster Making:

Use **A-3 or A-4 size sheets**, sketch pens, colours, pencils and decorative material available at home.

ACTIVITY - 2: Word Quest: The Flashcard Adventure

Developing a strong vocabulary helps in expressing ideas clearly and confidently.

TASK:

Prepare **10 flashcards**, each presenting **one vocabulary word related to the theme assigned according to your roll number.**

THEME ALLOTMENT

- **Social Inclusion and Equality** (Roll No. 1–4)
- **Technology for All** (Roll No. 5–8)

- **Leadership for Change** (Roll No. 9–12)
- **Global Citizenship** (Roll No. 13–16)
- **Digital Access and Literacy** (Roll No. 17–20)
- **Justice and Human Rights** (Roll No. 21–24)
- **Health and Well-being** (Roll No. 25–28)
- **Cultural Diversity** (Roll No. 29–32)
- **Climate Action** (Roll No. 33 onwards)

Each Flashcard Must Include:

Front Side:

- Vocabulary word clearly written

Back Side:

- Meaning
- Part of speech
- One synonym
- One antonym
- One example sentence

Students are encouraged to practice pronunciation and use each word in daily conversation.

MATERIAL REQUIRED:

Use index cards or small pieces of paper

Social Science

Task I: The Global Score Card

The "Global Scorecard" Research Guide

Each student must answer these specific questions and list down their findings in creative manner.

Pillar 1: The "Trade" Battle (What do they sell?)

● **The Big Question:** *If these two countries were shops, what would be the "Best-Sellers" on their front shelves?*

● **Research Questions:**

1. List the **Top 3 goods** exported by each country. (e.g., Is it raw nature like *Oil/Gold* or man-made like *Cars/Apps*?)
2. Who are their **Top 2 "Customer" countries** (Trading Partners)?
3. **The "Gap" Finder:** Does the country buy more than it sells? If yes, what is the one thing they should start making themselves to save money?

Pillar 2: The "Tourism" Magnet (Why visit?)

● **The Big Question:** *If I have \$1,000 to spend on a holiday, why would I pick Country A over Country B?*

● **Research Questions:**

1. How many **international tourists** visited last year? (Quantity)
2. What is their **Tourism USP?** (Is it *History/Monuments, Nature/Beaches, or Modern Cities/Shopping*?)
3. **The "Gap" Finder:** What is one thing that stops tourists from visiting? (e.g., Is it expensive flights, safety, or lack of promotion?)

Pillar 3: The "Future" Factor (Innovation & Greenery)

● **The Big Question:** *Is the country living in the past or building for the future?*

● **Research Questions:**

1. What is one **famous invention or brand** from this country? (e.g., Apple for the USA, Samsung for South Korea, Tata for India).
2. How much of their energy comes from **Green Sources** (Solar, Wind, Water)?
3. **The "Gap" Finder:** Is the country's technology accessible to everyone, or only to people in big cities?

Pillar 4: The "USP" The Big Question:

What is the one "Superpower" this country has that no one else does?

● **Research Questions:**

1. If this country disappeared tomorrow, what would the world miss the most? (e.g., "The world would have no coffee," or "The world would have no software engineers.")

2. What is their **Global Ranking** in a fun category? (e.g., Happiest Country, Cleanest Country, or Most Innovative Country).

Pillar 5: The unsung heroes of sustainability.

- **The big question:** Can traditional communities become the key leaders in solving the world's climate and sustainability challenges?
- **Research Question:**
 1. *Compare any two traditional practices followed by communities in different countries. What scientific principles or environmental knowledge are reflected in these traditions?*
 2. *How do the socio-economic and legal difficulties faced by these communities vary across different countries? Examine how factors such as poverty, lack of land ownership, language barriers, and limited government recognition influence their participation and contribution to the national economy*
 3. *In what ways could climate action progress more rapidly across different countries if these communities were given greater legal recognition, decision-making power, and financial support.*

Conclusion:

- *After comparing the different countries across trade, tourism, innovation, and sustainability, which country do you think is best prepared for the future and why? Support your answer with examples from your research.*
- *Which country exerts more influence in the world?*
The "Exhibition Display" Requirements

Students can make:

1. *The "Scorecard Table"*
2. *The "Spider Web" Chart.*
3. *Icons representing each country's top export.*
4. *World Map highlighting both locations.*
5. *Poster/chart/Infographics*
6. *A 3D Bar Chart comparing military spending.*
7. *The "Expert Recommendation" (Conclusion)*

Assigned countries according to Roll no.:

- Roll No.- 1 To 7 (Usa Vs. Japan)*
- Roll No.- 8 To 14 (India Vs. China)*
- Roll No.- 15 To 21 (Russia Vs. Ukraine)*
- Roll No.- 22 To 28 (Brazil Vs. Australia)*
- Roll No.- 29 To 32 (France Vs. Italy)*
- Roll No.- 33 Onwards (Australia Vs. New Zealand)*

Task II: Ek Bharat Shreshtha Bharat

“Create an engaging scrapbook exploring the vibrant cultural heritage of different regions across India. Highlight traditional music, famous dance forms, and unique cultural practices. Include at least two dance forms, one musical tradition, and key cultural elements such as festivals, cuisine, traditional attire, art, and way of life. Explain the origin and importance of each aspect and show how they represent the identity, traditions, and diversity of the people. Enhance your scrapbook with pictures, illustrations, cut-outs, or other creative materials. Conclude your project with a brief reflection describing what you learned about the cultural richness and diversity of India.”

Roll No. 1-15

Roll No. 16-30

Roll No. 31 onwards

SIKKIM

ARUNACHAL PRADESH

NAGALAND

B.M. BHARTI MODEL SCHOOL

Mathematics

Theme: Inclusive Development for a Sustainable Future

Inclusive development means creating growth and progress that benefits every section of society without harming the environment or future generations. A sustainable future can only be achieved when economic growth, social equality, and environmental protection work together. In today's rapidly changing world, nations must focus on development that includes people of all backgrounds, regions, genders, and economic conditions.

Meaning of Inclusive Development

Inclusive development ensures that all people have equal access to opportunities, resources, education, healthcare, employment, and decision-making. It aims to reduce poverty, inequality, and social exclusion while improving the quality of life for everyone.

METHODOLOGY: Students are required to do the following tasks:

WHERE TO DO: A4 SIZE RULED SHEET

Task I: Solar Energy System for Inclusive Development

A rural community is transitioning to **solar-powered energy** to ensure **inclusive development and a sustainable future**. A solar battery system stores energy for households.

- On Day 0, the battery has **800 units** of energy.
- Due to **daily usage**, energy decreases linearly by **120 units per day**.
- However, a solar panel installation program is gradually improving energy input. From Day 0 onward, the system gains an **additional constant input of 40 units per day** (already included in the net change).
- Due to aging of equipment, after a certain number of days, efficiency drops and the **net loss increases**.

Let the net energy in the battery after **x days** be represented by a linear polynomial (valid until efficiency changes).

- Q1. Form a linear polynomial $E(x)$ representing the energy after x days.
- Q2. If the slope is negative, explain why the system is still considered “developing.” Can a system show improvement even with overall decay? Justify.
- Q3. After 10 days, due to battery wear, the daily energy loss increases by 30 units per day (solar input remains same).
- Write a **new linear polynomial** valid for $x > 10$
 - Is the function still a single linear polynomial for all x ? Explain why or why not.
- Q4. The community wants the battery to last **at least 20 days before reaching zero**. Find the **required net daily change**.

Q5. A proposal suggests doubling solar input from **40 to 80 units/day**.

- Form the new polynomial.
- Will this make the system sustainable (energy never reaches zero)?

Project Work

Mathematics lab manual:

- Do activities no.17 to no. 21
- it should be done neatly
- use pastel sheets and colors

B.M. BHARTI MODEL SCHOOL

WORK SHEET
CLASS:- 9
SUBJECT :- MATHS

CHAPTER :- NUMBER SYSTEM

2 MARKS EACH

Q1:-Without using a calculator, show that $\sqrt{3.24}=1.8$.

Q2:-Rationalize: $1/\sqrt{15}-2$.

Q3:-Find two irrational numbers between $\sqrt{2}$ and $\sqrt{3}$.

Q4:-Write the decimal expansion of $1/19$ up to six places of decimal.

Q5:-Simplify: $\sqrt{12}\cdot\sqrt{27}$.

3 MARKS EACH

Q1:-Prove that $\sqrt{5}$ is irrational using contradiction.

Q2:-Simplify: $\sqrt{45}/5+\sqrt{20}/5$.

Q3:-Write the decimal expansion of $7/8$ and state whether it is terminating or non terminating.

Q4:-Find six rational numbers between $2/5$ and $3/5$.

Q5:-If $x=\sqrt{2}+\sqrt{3}$, find the value of $x^2-2\sqrt{6}$.

4 MARKS EACH

Q1:- Represent $\sqrt{6}$ on a number line.

Q2:-Express $\sqrt{11}$ in decimal form up to four places of decimal.

Q3:-Find the value of $\sqrt{72}+\sqrt{128}$.

Q4:-Write the decimal expansion of $1/23$ up to eight places of decimal. State whether it is terminating or recurring.

Q5:-If $y=\sqrt{3}-\sqrt{2}$, find the value of y^2 and hence evaluate $1/y$.

CHAPTER :- POYNOMIALS

2 MARKS EACH

Q1:-Factorize: x^2-9 .

Q2:-Expand: $(2x-3)(2x+3)$.

Q3:-If $p(x)=x^2-5x+6$, find $p(2)$.

Q4:-Divide x^3-2x^2+x-2 by $x-1$.

Q5:-Find the remainder when x^3+2x^2-5x+7 is divided by $x-2$.

3 MARKS EACH

Q1:-Factorize completely: $x^2+2x-15$.

Q2:-If $p(x)=x^3-4x^2+x+6$, find $p(-1)$.

Q3:-Divide x^3+3x^2+3x+1 by $x+1$.

Q4:-Solve for x : $x^2-7x+12=0$.

Q5:-If x^2+1 is a factor of x^4+1 , find the other factor.

4 MARKS EACH

Q1:-Factorize completely: x^3-64 .

Q2:-Divide $x^4-3x^3+3x^2-x$ by $x-1$.

Q3:-If $p(x)=x^3-3x^2+4x-12$, show that $x=2$ is a root of the polynomial and factorize it completely.

Q4:-Solve for x : $x^3-13x+12=0$.

Q5:-If x^2-2x+1 is a factor of $x^4-2x^3+x^2$, find the other factor.

CHAPTER :- LINES AND ANGLES

2 MARKS EACH

Q1:-If two lines intersect, prove that vertically opposite angles are equal.

Q2:-In the given figure, if two parallel lines are cut by a transversal, and one angle is 70° , find its corresponding angle.

Q3:-If two parallel lines are cut by a transversal, prove that alternate interior angles are equal.

Q4:-Find the value of x if two adjacent angles form a linear pair and one angle is 65° .

Q5:-If two parallel lines are cut by a transversal, and one angle is 120° , find the other seven angles.

3 MARKS EACH

Q1:-In a triangle, prove that the exterior angle is equal to the sum of the two interior opposite angles.

Q2:-If two parallel lines are cut by a transversal, prove that interior angles on the same side of the transversal are supplementary.

Q3:-In a triangle, one exterior angle is 110° and one interior opposite angle is 40° . Find the other interior angles.

Q4:-If two lines intersect such that one pair of vertically opposite angles are 50° , find all other angles.

5:-In a triangle, if two angles are 45° and 55° , find the third angle and its exterior angle.

4 MARKS EACH

Q1:-In a triangle, prove that the sum of the three angles is 180° using the concept of parallel lines.

Q2:-In a triangle, one angle is twice the other, and the third angle is 60° . Find all angles of the triangle.

Q3:-In a triangle, one exterior angle is 120° . The two interior opposite angles are equal. Find all angles of the triangle.

Q4:-In a triangle, the ratio of angles is 2:3:4. Find all angles of the triangle and each exterior angle.

Q5:-Two parallel lines are cut by a Two transversal. Prove that the sum of all angles formed is 1440°

संस्कृतम्

नोट- समस्त कार्य, कार्यपुस्तिका में करें।

पाठ्य पुस्तक शारदा के पूर्व पठित पाठो के पठित गंधाश, नाट्यांश पंधाश (किन्ही दो) के प्रश्नोत्तर कॉपी में करे

पत्र

*-भवान् सुदीप्तः गर्गः दिल्लीनगरस्य शाहदरा उपनगरं निवसति । भवतः क्षेत्रे इदानीं चौर्यकार्यं प्रवर्धितं वर्तते । तस्य निवारणाय स्वक्षेत्रस्य सुरक्षा अधिकारिणं लिखितम् इदं स्वपत्रं भवान् मञ्जूषायाः सहायतया सम्पूरयत

*. भवान् कुलदीपकः अस्ति। 'पाञ्चजन्य': साप्ताहिके पत्रे भवान् पत्रकारः एकं समाचारं प्रकाशयितुम् इच्छति । अतः तस्य प्रकाशनार्थं पत्रस्य सम्पादकं प्रति मञ्जूषायाः सहायतया भवान् तत्पत्रं सम्पूर्य लिखतु-

चित्रवर्णनम्

उद्यानम्, अवकाशः, भ्रमणार्थम्, जनाः, बालिकाः, बालकाः, भोजनम्, वृक्षाः, अधः, क्रीडन्ति, खादन्ति, भ्रमन्ति, सन्ति, कन्दुकेन, पादपाः, अस्ति, नद्याः, तटे, सर्वे, प्रसन्नाः

3 अनुच्छेद

अधः प्रदत्तशब्दानां सहायतया 'दीपावल्याः वर्णनम्' इति विषये संस्कृते अनुच्छेदं लिखत-
मञ्जूषा

दीपानाम् अवलिः, रात्रौ, अमावस्या, अन्धकारः, श्रीरामः, अयोध्याम्, प्रजाः, प्रसन्नाः, आगतः, निशायाः, दूरीकृतः, मिष्टान्नानि, दीपान्, ज्वालयाम्, सर्वत्र, उल्लासः, हर्षः

मञ्जूषायां प्रदत्तशब्दानाम् सहायतया 'जलप्रदूषणम्' इति विषयम् अधिकृत्य अनुच्छेदं संस्कृतेन लिखत-
मञ्जूषा-अवकरम्, नदीषु, जनाः, कार्यशालाभ्यः, दूषितम्, मलम्, क्षिपन्ति, स्वच्छम्, क्षालयन्ति, वस्त्राणि, पूजा-सामग्री, पुष्पाणि, नालिकामार्गेण, जायन्ते, रोगाः, भवन्ति, रुग्णाः, पीत्वा

हिंदी

विषय संवर्धन गतिविधि

THEME - सतत भविष्य: समावेशी विकास

विवरण -

सतत भविष्य हेतु समावेशी विकास एक ऐसी सर्वांगीण अवधारणा है, जो सामाजिक न्याय और पारिस्थितिक संतुलन के मध्य सामंजस्य स्थापित करती है। यह न केवल आर्थिक प्रगति का मार्ग प्रशस्त करती है, बल्कि हर वर्ग को भी सुनिश्चित करती है कि विकास की अवधारणा से समाज का अंतिम व्यक्ति वंचित न रहे। सतत विकास की टिकाऊ तकनीकें अंत्योदय (अंतिम व्यक्ति के उत्थान) को केंद्र में रखकर किफायती नवाचारों के माध्यम से सामाजिक-आर्थिक विषमता को न्यून करती हैं और भविष्य को सुरक्षित बनाती हैं।

कार्य-1 अन्वेषण कार्य (Research Work)

- ▶ सतत भविष्य: सतत विकास से संबंधित किन्हीं दस परियोजनाओं संबंधी जानकारी जुटाइए।
- ▶ पर्यावरण संरक्षण हेतु "मिशन लाइफ" को एक सरकारी योजना के बजाय जन आंदोलन बनाने की आवश्यकता बताते हुए अपने मित्र को 120-150 शब्दों में पत्र लिखिए।

कार्य-2 अक्षय ऊर्जा : स्वच्छ व आत्मनिर्भर भारत अनुच्छेद लेखन

- ▶ अक्षय ऊर्जा: स्वच्छ व आत्मनिर्भर भारत' विषय पर जानकारी एकत्र कीजिए तथा संकेत बिंदुओं की सहायता से 200-250 शब्दों में अनुच्छेद लिखिए।

- प्रस्तावना: नवीकरणीय ऊर्जा का अर्थ
- आत्मनिर्भरता की ओर कदम
- पर्यावरणीय लाभ व आर्थिक अवसर
- चुनौतियाँ व समाधान

कार्य-3 संवाद लेखन

ई-कचरा (E-waste) की समस्या और इसके टिकाऊ समाधान पर बातचीत करते हुए दो छात्रों के मध्य हुए संवाद को 120-150 शब्दों में लिखिए।

संवाद लेखन में निम्नलिखित बिंदुओं का प्रयोग अनिवार्य है -

- ई-कचरे का बढ़ता स्तर
- पर्यावरणीय और स्वास्थ्य जोखिम
- अवैज्ञानिक निपटान की समस्या
- उत्तरदायित्व और जागरूकता

कार्य-4 शब्द संपदा स्मृति पत्रक (FLASH CARDS)

दिए गए विषयों से संबंधित कोई बीस नवीन शब्द अर्थ सहित सुंदर वर्तनी में लिखिए।

निर्देश :

आकार - 10 x 7 सेमी०

- संस्कृति : भारतीय अस्मिता (अनुक्रमांक 1 से 10 तक)
- साहित्य और आत्मचिंतन (अनुक्रमांक 11 से 20 तक)
- जैव विविधता : सृष्टि का संतुलन (अनुक्रमांक 21 से 30 तक)
- आहार : तन-मन का पोषण (अनुक्रमांक 31 से अंतिम अनुक्रमांक तक)

SCIENCE

General instructions -

1. Attempt all the questions mentioned in the project on A4 sheets and present it in a file.
2. Your work should be presented in a creative manner.
3. Practice assignment also to be done on A4 sheets.
4. Revise all the topics covered in the class.

BIOLOGY

Project Title: “Cells, Cancer & Community: Investigating Biology for a Healthier Future”

Students will investigate:

How understanding cells and cell cycle helps society prevent disease, improve healthcare access, and build a sustainable future.

Part A: Concept Foundation (Biology Understanding)

Explain with Diagrams:

- Difference between normal cell division and cancerous cell division

Part B: Investigation Project

Lifestyle and Cell Health Investigation

Research Question:

Which lifestyle habits in my family/community may affect healthy cell functioning?

Investigate:

- Sleep patterns
- Junk food consumption
- Exercise habits
- Screen time
- Smoking/passive smoking exposure

Explain how these factors affect:

- Cell repair
- DNA damage
- Cell cycle regulation
- Cancer risk

1. Environmental Carcinogens Around Us

Research Question:

What environmental factors in my locality may increase risk of abnormal cell growth?

Investigate:

- Air pollution
- Plastic burning
- Pesticide use
- Tobacco shops
- Excessive sun exposure
- Industrial waste

Explain:

- How carcinogens damage DNA?
- Mutation → uncontrolled mitosis → tumor formation

Stem Cells and Future Medicine

Research Question:

How can cell biology innovations create an inclusive and sustainable healthcare future?

Investigate:

- Stem cells
- Regenerative medicine
- Organ growth research
- Cancer therapies
- Personalized medicine

Part C: Creative Application Task

Innovation Challenge Design a futuristic idea:

“Invent a sustainable healthcare innovation using cell biology” Submission Guidelines

- 7-8 pages
- Include diagrams, charts, real data, photographs
- Handwritten / Scrapbook / File format

PHYSICS

Theme: *Learning Physics Through Real-Life Travel & Graphs*

A Journey to Ladakh

Imagine you are planning a summer trip from **Delhi to Leh Ladakh**. Your task is to plan and analyze your journey using concepts of motion.

1. Mode of Transport

- Choose how you want to travel:
 - ✈ Flight
 - 🚗 Car
 - 🚌 Bus
 - 🚂 Train + Road

- Explain **why** you selected this mode (comfort, cost, speed, adventure, etc.)
- Distance Covered**
 - Find and write the **total distance** from Delhi to Leh.
 - If using multiple transport modes, mention distance for each.
 - Time Taken**
 - Estimate or research the **total time taken** for your journey.
 - Average Speed Calculation**
 - Calculate your **average speed**
 - Show complete calculation
 - Journey Halts (Important)**

List all stops (example: Manali, Key long etc.) Mention:

 - Distance between stops
 - Time taken
 - Reason for halt (rest, fuel, food, sightseeing)
 - Add Creativity**
 - Draw a **route map**
 - Add pictures or sketches of mountains, roads, vehicles
 - Make it look like a **travel diary**

Reflection Questions:

- Which part of your journey had the **highest speed**? Why?
- Where did you move the **slowest**? Why?
- How does terrain affect motion?

Graphical Representation of Motion

Prepare this project neatly on A4 sheets with proper diagrams.

Page 1: Introduction

- What is motion?
- Types of motion (uniform & non-uniform)
- Importance of graphs in physics

Page 2: Distance-Time Graph

- Draw **2 separate graphs**:
 1. Uniform motion (straight line)
 2. Non-uniform motion (curved line) Label axes clearly:
- X-axis → Time
- Y-axis → Distance

Page 3: Speed-Time Graph

- Draw 2 graphs:
 1. Constant speed
 2. Accelerated motion

Page 4: Finding Speed from Distance-Time Graph

Page 5: Finding Acceleration & Distance from Velocity-Time Graph

- Give a simple example
- Show shaded area in graph

Page 6: Bibliography

- Books used
- Websites (if any)
- Notes/teacher material

WORKSHEET – BIOLOGY

Multiple Choice Questions

1. If the plasma membrane of a cell ruptures, what will most likely happen first?
2. A plant cell was placed in a concentrated salt solution. What will happen to the cell and why?
3. Why are lysosomes called ‘suicidal bags’ of the cell?

Assertion – Reason Questions

4. Assertion (A): Mitochondria are known as the powerhouse of the cell.
Reason (R): Mitochondria synthesize proteins required for cell function.
5. Assertion (A): Lysosomes are essential for the survival of the cell.
Reason (R): They help in intracellular digestion and destruction of worn-out organelles.
 - a) Both Assertion (A) and Reason (R) are true, and (R) is the correct explanation of (A).
 - b) Both Assertion (A) and Reason (R) are true, but (R) is NOT the correct explanation of (A).
 - c) Assertion (A) is true, but Reason (R) is false.
 - d) Assertion (A) is false, but Reason (R) is true.

Short & Long Answer Questions:-

6. A saltwater fish is accidentally placed in freshwater. Predict what will happen to its cells and explain the reason behind it.
7. Why do onion peel cells not burst when placed in pure water, whereas red blood cells do? Justify.
8. A student observes a cell under a microscope and notes the absence of a nucleus. What type of cell is it? Justify your answer and draw a diagram.

WORKSHEET – PHYSICS

Multiple Choice Questions

1. A ball is dropped from a certain height. Its velocity just before hitting the ground is v . If thrown downward with initial velocity v , what will be the final velocity?
2. An object moves along a circular path with constant speed. Describe the nature of motion.
3. The displacement-time graph of an object is a straight line inclined to the time axis. What does it indicate?
4. A car accelerates uniformly from rest to 30 m/s in 6 seconds. Calculate acceleration.
5. What does the slope of a speed-time graph represent?

Short Answer Questions

6. Define retardation. Is it scalar or vector? Explain.
7. A bus travels half the journey at 40 km/h and the remaining half at 60 km/h. Find the average speed.

Assertion – Reason Questions

8. Assertion: Displacement can be equal to or less than distance travelled.
Reason: Displacement is the shortest path between initial and final positions.
9. Assertion: Uniform motion is always accelerated motion.
Reason: In uniform motion, velocity remains constant.
 - a) Both Assertion (A) and Reason (R) are true, and (R) is the correct explanation of (A).
 - b) Both Assertion (A) and Reason (R) are true, but (R) is NOT the correct explanation of (A).
 - c) Assertion (A) is true, but Reason (R) is false.
 - d) Assertion (A) is false, but Reason (R) is true.

Long Answer Question

10. Two friends, A and B, start cycling from the same point at the same time. Friend A travels at 15 km/h along a straight road, while Friend B travels at 20 km/h along another road at 90° to the first road.
 - (a) Find the distance travelled by each friend after 2 hours.
 - (b) Find the distance between them after 2 hours.

INFORMATION TECHNOLOGY

WORKSHEET

(Note- Do in your school notebook)

Q1) Multiple Choice Questions:

- i) Computer connected with LAN
- | | |
|---------------|--|
| a) Work Fast | b) Go Online |
| c) Can E-mail | d) Can share information or peripheral devices |
- ii) Which of the following uses cables to connect two or more computers?
- | | |
|-----------------|----------------|
| a) Transmission | b) Unguided |
| c) Guided | d) Radio waves |
- iii) Microphone is _____ unit.
- | | |
|-----------|---------------|
| a) Input | b) Output |
| c) Memory | d) Processing |
- iv) Which of the following is not a type of cybercrime?
- | | |
|-------------------|--|
| a) Data theft | b) Forgery |
| c) Damage to data | d) Installing antivirus for protection |
- v) Unsolicited commercial email is known as
- | | |
|----------|------------|
| a) Spam | b) Malware |
| c) Virus | d) Spyware |

Q2) Fill in the blanks:

- i) _____ is a computer which provides sharing the resources of other computers connected in a network.
- ii) _____ is the formation of network.
- iii) The language used to develop web pages is _____.
- iv) The most powerful computers are known as _____.
- v) World computer literacy day is celebrated on _____.

Q3) True / False:

- i) LAN's are the computer networks confined to a localized area such as an office.
- ii) The most powerful computer in a typical network is network server.
- iii) Operating system is an application software.
- iv) Moving from one website to another is called downloading.
- v) The full form of ICT is Internet common technology.

Q4) Paragraph Completion:

A computer network is a group of (i) _____ that are (ii) _____ each other for the purpose of (iii) _____. A computer (iv) _____ allows computers to communicate with many other

computers and to (v) _____ resources and information.

Q5) Mr. Ravi and Mr. Manoj want to send a song to each other. Both are having mobile phones. What network technology is needed to share a song through mobile phones? Describe it.

Q6) Below is the list of various types of application software: Database, Desktop Publishing, Drawing, Word Processing, Spreadsheet

Which one is the most suitable to use for each of the following tasks?

- Rotation of shapes
- Typing in text for a novel
- Using frames to position text and graphics on a page
- Replication of cells
- Carrying out a compilation search on two or more criteria

Q7) What is e-commerce? Write a short note on it and name some websites related to it.

Q8) What do you understand by search engine? List popular search engines in the market.

Q9) Explain AI and uses?

Q10) Explain the types of printer.

Q11) What do you understand by video conferencing? How is it useful during the COVID-19 pandemic?

Q12) What is the difference between third and fourth generation computers?

Q13) Write a short note on technology that is used in fifth generation computer.

Q14) What is the main difference between RAM and ROM?

Q15) What do you understand by web browser? Explain it.

❖ Digital work

The School is organizing an Educational trip to Bihar. Imagine you are the Team Head of your club. You are organizing a workshop for students along with some other members of your club. The name of your club is "Tripadvisor". Design a poster in LibreOffice / MS Word digital presentation to inform the students of the school about the event. Include following details in your poster:

1. Name of the Event.
2. Date & Time of the Event.
3. Any Logo/motto you want to give.
4. Create a table which include 5 Tourist places & Tour package.
5. Contact details of organizers.
6. Use all the possible formatting features of digital presentations of Libre Office / MS Word software and bring the printout for the same.



INTERNATIONAL YOGA DAY 2026



Theme: Yoga for Wellness, Wisdom, and World Peace

Dear Students,

Yoga Time with Dad

Objective

To celebrate the bond between fathers and children while promoting health and fitness through yoga during summer vacation.

Conduct this activity two days before International Yoga Day and father's day (21 June 2026), share a photo or video of yourself performing any one yoga pose with your class teacher. Along with the photo or video, mention:

- Name of the yoga pose
- Benefits of that pose

Activity Instructions-

Step 1: Practice Yoga with Your Father

Perform any 5 yoga poses together with your father or any elder family member for at least 15–20 minutes.

Suggested Yoga Poses:

1. Tadasana (Mountain Pose)
2. Vrikshasana (Tree Pose)
3. Bhujangasana (Cobra Pose)
4. Vajrasana
5. Butterfly Pose

Step 2: Click Photographs

Take 2–3 photographs while practicing yoga with your father/family member.

Step 3: Make a Thank You Card

Prepare a small handmade card for your father with messages like:

“Happy Father’s Day”

“Thank you for caring for me”

“My Dad, My Hero”

Stay Fit & Enjoy Yoga.