

# MOUNT COLUMBUS SCHOOL

NEW DELHI

2026-27

# SUMMER VACATION

HHW



**Stay Hydrated**  
Drink plenty of water  
and stay fresh!



**Eat Healthy**  
Have fruits, salads  
and light meals.



**Stay Protected**  
Wear a hat, sunglasses  
and use sunscreen.



**Keep Learning**  
Read books, learn new  
things and explore!



**Stay Active**  
Play indoor games,  
do yoga and exercise.



**Be Kind**  
Help others, spend time  
with family and friends.

Relax,

Refresh,

Recharge!

Enjoy, Explore, Excel!

Make wonderful memories  
this summer! ♥

**CLASS – IX**

**SUBJECT : ENGLISH**

**1. EK BHARAT SHRESHTHA BHARAT (EBSB) -**

Create a Travel Brochure – “Explore Sikkim: The Crown of Northeast India”. Include the following pointers:-

- Location
- Ways to reach
- Weather
- Best time to visit
- Hotels & stay options
- Flora & fauna
- Famous food

**2. MULTILINGUISM-**

**A. “Traditional Dress & Culture of Kerala” Poster**

Make a poster showing traditional dress and cultural elements of Kerala and label them in Malayalam.

**3. ART INTEGRATED –**

Design a poster on the topic “The voice of their vocation is the voice of their identity.”

**4. BOOK REVIEW-**

Choose any two books and write the book review in 120-150 words in the given format.

1. The Author      2. The Content      3. Theme      4. Your favourite character

**5. ASSIGNMENT FROM GATEWAY IN ENGLISH BOOK –**

\* ASSIGNMENT 1 ON PAGE A6 AND A7.

\* ASSIGNMENT- 6.1B ON B2-34

\* ASSIGNMENT- 6.3A ON PAGE B2-41 AND ASSIGNMENT 6.3K ON PAGE B2-47

\* ASSIGNMENT- 6.4B ON PAGE B2-52.

\* Q-5 ON PAGE D-14, Q-3 ON PAGE D-25, Q-4 ON PAGE D- 38, Q-3 ON PAGE 54.

**SUBJECT : HINDI**

**परियोजना कार्य-**

- i. आपके विद्यालय में आपदा की स्थिति में निकासी का मार्ग दर्शाने वाला मानचित्र है ,उसे ध्यानपूर्वक देखिए और एक नया निकासी मार्ग बनाइये जो चिकनी मिट्टी से बनाया हुआ मॉडल हो (**miniature**) और विद्यालय के लिए बनाए गए नए निकासी मार्ग का सजीव चित्रण करता हो।

इसके पश्चात इनके उत्तर लिखिए

- कौन-सा मार्ग अब आपको बेहतर लगा?
- पुराने निकासी मार्ग की कोई दो खामियां बताएं।
- इसके पीछे के कोई तीन कारण लिखिए।
- इस क्रियाकलाप से आपको भविष्य में किसी चीज में मदद मिलेगी? आपने उत्तर कारण सहित हाँ में ही लिखें।
- क्रियाकलाप के दौरान किन कठिनाइयों का सामना करना पड़ा? विस्तार से लिखिए।

(ii) नीचे दिए गए लिंक को ध्यानपूर्वक देखकर अनुक्रमांक अनुसार दिए गए पृष्ठ संख्या में से उपसर्ग और प्रत्यययुक्त शब्दों को **ONLINE AI टूल** की सहायता से खोजें और उनमें प्रयुक्त उपसर्ग और प्रत्यय के लिए ऐसी ही एक शिक्षण अधिगम सामग्री (TLM) केवल और केवल घर में मौजूद बेकार सामग्री की सहायता से तैयार करें-

<https://youtube.com/shorts/hikMUEk142c?si=ETmUb0U4bVk0BXuu>

- i. अनुक्रमांक 1-10 पृष्ठ संख्या-4
- ii. अनुक्रमांक 11-20 पृष्ठ संख्या-5
- iii. अनुक्रमांक 21-30 पृष्ठ संख्या-6
- iv. अनुक्रमांक 31-40 पृष्ठ संख्या-7

**नोट-परियोजना कार्य एक फाइल-फोल्डर में डालकर जमा करें।**

(ii) निम्नलिखित प्रश्नों के उत्तर लिखिए-

1. हीरा और मोती किन गुणों के कारण विशेष प्रतीत होते हैं ?
2. कहानी से हमें पशुओं के प्रति कौन-सी सीख मिलती है?
3. “दो बैलों की कथा” का मुख्य संदेश अपने शब्दों में लिखिए।
4. रैदास जी ईश्वर को पाने के लिए किस बात पर बल देते हैं?
5. “रैदास जी की शिक्षाएँ” विषय पर रंगीन माइंड-मैप तैयार करें।
6. रैदास के पदों से मिलने वाले 5 जीवन-मूल्य लिखिए और बताइए कि आप उन्हें अपने जीवन में कैसे अपनाएँगे।
7. अपने निकट के डाकघर जाएं और पत्र लिखने हेतु एक पोस्टकाड खरीदें और अपने मित्र को अपने गाँव आने का निमंत्रण देते हुए उस पर पत्र लिखकर अपने ग्रीष्मावकाश के कार्य में चिपकाएं। मोती की ओर से झूरी को एक पत्र लिखिए जिसमें वह अपने दुख और प्रेम को व्यक्त करे।
8. अपने नजदीकी बस स्टॉप पर जाएं और कम से कम दो स्टॉप तक टिकट लेकर यात्रा करें , यात्रा केवल परिजन के साथ ही करनी है (माता-पिता) और यात्रा के दौरान एक फोटो खींचें। घर आकर अपने अनुभव को अनुच्छेद का स्वरूप देकर 100 शब्दों में लिखिए। **(NOTE-अनुच्छेद के अंत में यात्रा टिकट और फोटो का प्रिंट लेकर लगाएं।)**

**नोट-प्रश्न संख्या 1 तक 8 का कार्य उत्तर पुस्तिका में करना है।**

### **SUBJECT : MATHEMATICS**

#### **Activity:**

- a) Create a beautiful design of square root spiral.
- b) Show the geometrical representation of the identity  $(a + b)^2 = a^2 + 2ab + b^2$  using paper cutting and pasting.

#### **Case Based Questions**

##### 1. Garden Design

Imagine a rectangular garden where the length is  $3x + 5$  meters and the width is  $x - 2$  meters, where  $x$  is a positive number.

- a) Express the area of the garden as a polynomial.
- b) Find the perimeter of the garden.
- c) If  $x = 3$ , what is the area of the garden in square meters?
- d) What are the coefficients and constant terms of the polynomial representing the area?

Rahul is creating a game where the scoring rule is based on polynomials. He sets the scoring pattern as:  
 $S(x) = x^3 - 4x^2 + 6x - 3$

Answer the questions that follow:

- a) What is the degree of the scoring polynomial?
  - b) What will be the score when  $x=2$ ?
  - c) How many terms are there in the polynomial  $S(x)$ ?
  - d) Find the zeroes of the scoring pattern.
1. Pankaj's father gave him some money to buy some fruits and vegetables from the market at the rate of  $p(x): x^2 - 24x + 128$ . Let  $\alpha$  and  $\beta$  are the zeroes of  $p(x)$ . Based on the above information, answer the following questions:
- a) Find the value of  $\alpha$  and  $\beta$ .
  - b) Find the value of  $\alpha + \beta + \alpha\beta$ .
  - c) What will be the value of  $p(2)$ .
  - d) What are the zeroes of  $x^2 + x - 2$ ? Find the sum of their reciprocals.
2. The students of Class 9 are assigned a project to design a garden in the school courtyard. They decide to place the four corners of the garden at specific points on a coordinate grid for accurate planning. They choose the following coordinates for the corners:
- A(2, 3)
  - B(2, 8)
  - C(7, 8)
  - D(7, 3)
- They want to use the grid to determine the length and breadth of the garden.
- a) What is the length of AB?
  - b) What is the length of BC?
  - c) Plot the coordinates given on a Cartesian plane.
  - d) Determine the shape of the garden.
3. Ritu is helping her father renovate their kitchen. They decide to buy square tiles to cover the floor. Each tile has a side  $\sqrt{2}$  meters. The cost per tile is calculated based on its area, and the rate is Rs.  $500/\sqrt{2}$  per square meter. At the shop, the seller tells Ritu that prices are easier to manage when they're rationalized, so he suggests rationalizing the cost.
- a) What is the area of each tile?
  - b) Find the cost of each tile in rationalized form.
  - c) How many tiles are needed to cover a floor of  $20 \text{ m}^2$ ?
  - d) Find the total cost of the tiles needed to cover the above floor.

## SUBJECT : SCIENCE

### ACTIVITY

- Design a board game where players move through stages of reproduction: (Correct answers help progress. Obstacles like “fertilization failed” or “pollination success”) [ROLL NO. 1 to 10]
- Present **short scenarios by comic strips on** - “What if there is no atmosphere?” or “No water?” [ROLL NO. 11 to 20]
- Create a **poster or infographic** titled “A Day Without the Sun” [ROLL NO. 21 to 35]

### PRACTICAL FILE WORK

Complete the following experiments in Science practical file.

1. Determination of the melting point of ice and boiling point of water.
2. Preparation of stained temporary mounts of onion peel, to record observations and draw their labeled diagrams

### Complete the following questions in Chemistry notebook:

1. If 10g of salt is dissolved in 90g of water. Calculate m/m % of solution.
2. Write the contrasting features of true solution, colloid and suspension.
3. What do you understand by spores?
4. Explain the differences between plant cells and animal cells, focusing on at least three major structural features. Also, discuss the importance of these differences in the life of the organism.
5. Which organelle is known as the "suicide bag" of the cell, and what is its role during cellular damage?
6. Distinguish between:
  - a) Pollination and fertilization in plants.
  - b) RER and SER
7. Is sublimation different from evaporation? Justify.
8. What protective devices can be used during sexual activity to reduce the spread of STIs?
9. A car is moving on a highway and brakes are applied, which cause an acceleration of  $-4\text{m/s}^2$ . How much will be the distance travelled by the car before coming to a stop, if the car was moving with a velocity of
  - (i) 54 km/h and
  - (ii) 108 km/h when the brakes are applied?
10. Ravi was given a mixture of sand, salt, and iron filings in the school laboratory. His teacher asked him to separate all the components of the mixture.
  - (a) Which separation techniques should Ravi use to separate the components?
  - (b) Write the steps of the method he should follow.
  - (c) What type of mixture is this? Justify your answer.
11. How would you separate a mixture containing kerosene and water?
12. Rohan observed an onion peel and a human cheek cell under the microscope in his school lab. He noticed some differences between the two. Based on his observation, answer the following:
  - (a) What is the major differences between the two types of cells?
  - (b) Name the structure responsible for maintaining the shape of the onion cell.
  - (c) Which type of cell (plant or animal) has plastids and why?
13. A bus decreases its speed from  $80\text{ km h}^{-1}$  to  $60\text{ km h}^{-1}$  in 5 s. Find the acceleration of the bus.
14. During an experiment, a signal from a spaceship reached the ground station in five minutes. What was the distance of the spaceship from the ground station? The signal travels at the speed of light, that is,  $3 \times 10^8\text{ m s}^{-1}$ .
15. An athlete completes one round of a circular track of diameter 200 m in 40 s. What will be the distance covered and the displacement at the end of 2 minutes 20 s?
16. What happens if egg doesn't meet with sperm?

## SUBJECT : SOCIAL SCIENCE

### **PART A – ASSIGNMENT (Do it in your notebook)**

1. Explain the importance of Social Science in daily life.
2. Name the main branches of Social Science.
3. How does Social Science help us understand society?
4. Define democracy.
5. Explain any five features of democracy.
6. Why is democracy considered the best form of government?
7. Differentiate between democratic and non-democratic government.
8. Explain the importance of citizen participation in democracy.
9. Why are elections important in a democracy?
10. What is universal adult franchise?
11. Explain the role of the Election Commission of India.
12. What is an electoral roll?
13. Differentiate between General Election and By-election.
14. Define biodiversity.
15. Explain the importance of forests.
16. What are the major causes of deforestation?
17. How do forests support livelihoods?
18. Explain the importance of conservation of biodiversity.

### **PART B – PROJECT WORK**

#### 1. ART INTEGRATED - GEOGRAPHY PROJECT

Topic: Flora, Fauna and Heritage of Paired States/UTs under Ek Bharat Shreshtha Bharat and Viksit Bharat@2047.

Section-wise Allotment:

- 9A – West Bengal + Tripura
- 9B – Andaman & Nicobar Islands + Lakshadweep
- 9C – Uttarakhand + Uttar Pradesh + Delhi

Research Areas:

- Physical Features and Climate
- Flora and Fauna
- Tribal Culture and Heritage
- Endemic Species
- Tourism and Sustainable Development
- Vision of Viksit Bharat@2047

Presentation Mode (According to Roll Number):

- Roll No. 1–15: Digital Presentation/PPT
- Roll No. 16–30: Infographic Chart/Travel Poster
- Roll No. 31–40: Creative Brochure/Pamphlet/Flash Cards

#### 2. ECONOMICS ACTIVITY – “SCHOOL TRIP PLANNER”

Imagine that you are the organiser of a school trip. Plan a one-day educational trip for Class IX students and prepare a complete trip plan.

Your project should include:

- Name and location of the destination
- Purpose of the trip
- Number of students and teachers
- Estimated budget (transport, food, entry tickets, emergency expenses, etc.)
- Travel route and time schedule
- Safety rules and first aid arrangements
- Responsibilities of students during the trip
- Eco-friendly and sustainable travel ideas
- Emergency contact details

Presentation Ideas:

- Budget Table
- Travel Brochure/Poster
- Itinerary Chart
- Route Map/Infographic
- PPT or Digital Planner

Use creative ideas, drawings, charts and pictures to make your work attractive and informative.

## SUBJECT : INFORMATION TECHNOLOGY

### **Project Overview**

This project focuses on mastering advanced formatting tools including character styling, complex table structures, and automated document generation. Complete the following three activities in your Practical File.

### **Activities to be Completed**

#### ***Activity 1: The Character Resume (Layout & Tabs)***

Task: Create a one-page professional resume for a historical figure (e.g., Albert Einstein) or a fictional character (e.g., Sherlock Holmes).

Technical Requirements:

Use Heading Styles (Heading 1, Heading 2) for sections like 'Experience' and 'Education'.

Set Custom Tab Stops to align dates perfectly on the right margin.

Apply a Two-Column Layout specifically for the "Skills & Interests" section.

#### ***Activity 2: Scientific & Financial Data Sheet (Superscript, Subscript & Tables)***

Task: Create a "Science & Math Fact Sheet" followed by a structured "Price List" table.

Technical Requirements:

Subscript/Superscript: Write at least 5 chemical formulas (e.g.,  $\text{SH}_{2}\text{SO}_{4}$ ) and 5 mathematical equations (e.g.,  $a^2 + b^2 = c^2$ ).

Complex Table: Create a  $5 \times 5$  "Stationery Price List" table.

Formatting: Use Cell Merge for the main header, apply Border & Shading, and use Center Alignment for all data cells.

### Activity 3: Creative Invitation Card (Mail Merge)

Task: Design an aesthetic Invitation Card for your "Birthday Party" or a "School Science Exhibition."

Technical Requirements:

Page Setup: Set page size to 'A5' or use a custom border to define the card area.

Practical File Instructions

For each activity, the presentation in your file must be as follows:

Side of File	Content to Include
Right Side (Ruled)	Aim, Software Used, Procedure (Step-by-step), and Result.
Left Side (Blank)	Final Printout of the document and Screenshots of the tool used (e.g., Screenshot of the Table Properties or Mail Merge Wizard).

Submission Date: First IT Lab session after the vacation.

Note: Please bring your digital files on a USB drive or upload them to the designated School Cloud folder.

## WORKSHEET

### Section A – Multiple Choice Questions (MCQs)

#### Part A – Self-Management Skills

1. Self-management means:

- (a) Managing others
- (b) Managing oneself effectively
- (c) Managing money
- (d) Managing machines

2. Which of the following is a positive quality?

- (a) Laziness
- (b) Confidence
- (c) Anger
- (d) Fear

3. Positive thinking helps a person to:

- (a) Lose confidence
- (b) Feel stressed
- (c) Stay motivated
- (d) Avoid work

4. Personal hygiene includes:

- (a) Untidy clothes
- (b) Cleanliness habits
- (c) Wasting water
- (d) Sleeping late



## Section B – Short Answer Questions

1. Define self-management.
2. Write any two qualities of a self-confident person.
3. What is positive thinking?
4. Mention any two personal hygiene habits.
5. What is Information Technology?
6. Define ITeS with one example.
7. What is BPO?
8. Write any two uses of IT in education.
9. Name any two applications of IT in health care.
10. What is digital documentation?
11. Write the steps to save a document.
12. What is the use of formatting in a document?
13. Differentiate between rows and columns.
14. What is the function of Ctrl + C and Ctrl + V?
15. Why are headers and footers used in documents?

### SUBJECT : ARTIFICIAL INTELLIGENCE

#### A. Create one AI Project Cycle based solution for any SDG or real problem in India.

Choose one SDG such as:

- Quality Education
- Clean Water
- Good Health
- Sustainable Cities
- Climate Action

Write your project under these headings:

1. Problem Scoping
2. Data Acquisition
3. Data Exploration
4. Modelling
5. Evaluation
6. Deployment
7. Ethics

#### B. Short Questions

1. What is AI Reflection?
2. Write the stages of the AI Project Cycle in order.
3. What is Problem Scoping?
4. Why is Data Acquisition important?
5. What is Data Exploration?

6. What is Modelling in AI?
7. Why is Evaluation necessary?
8. What is Deployment?
9. What is AI Ethics?
10. Write two ethical concerns in AI.

**Submission:**

- Email to **naushad.mtcolumbus@gmail.com**
- Before **30 June 2026**
- Submit the physical project in class in first week of **July 2026**

**SUBJECT : ART EDUCATION**

- ▶ Prepare a neat and well-maintained Art File for PT-I syllabus work.
- ▶ Complete the composition “**Mother and Child**” with proper colouring and presentation.
- ▶ Draw and colour the composition “**Panchatantra**” creatively in the Art File.
- ▶ Write upon the topics “**What is Colour?**” and “**Art Forms**” and give few examples with the help of drawings.