

**LK SINGHANIA EDUCATION CENTRE  
GOTAN**



**HOLIDAY ASSIGNMENT**

**SESSION : 2025-26**

**CLASS - IX**

**“Climb every mountain, ford every stream,  
Follow every rainbow, till you find your dream.”**

**Dear Students,**

**Wishing you a happy and blessed Summer time!**

**You are the torch bearers of change. Put in your sincere efforts and do some unique and creative work for the society. The tiny efforts of each soul are the remarks of gratitude to Nature.**

**The entire team of LKSEC teachers has put all will and might in designing “The Holiday Assignment”, where certain aspects are kept in mind like use of technology, wise use of paper and resources from surroundings. Put your shoulder to the wheel in making the projects creative, attractive and cost effective with appropriate information.**

**While preparing the assignment, keep in mind following points:**

- 1. All the assignments should be original.**
- 2. Use technology wisely and correctly.**
- 3. Values and virtues bring enrichment in bonds among members of the family. So, as a piece of advice, involve your parents in the process.**
- 4. Use poster colours, sketch pens etc.**
- 5. Grammatical accuracy also carries weightage.**
- 6. Sincere and honest efforts will be appreciated.**
- 7. The cover page must include details like student’s name, class and section, subject and name of the teacher it is to be submitted to.**

**Make this summer special, innovative and enthralling.**

**Educationally yours,**

**R C Joshi  
Principal**



# CLASS - IX

## SUB – SCIENCE

### Submission Guidelines:

Submit the work on A4 sheet with:

1. Title Page (Name, Class, Section, Topic (Holiday Home work -----(Subject), I D No.).
2. Detailed report for each activity, observations, Diagrams, Photos, Reflections.

### BIOLOGY

#### Assignment - 1

Prepare a model to compare plant cell and animal cell using common household items like grains, pulses, etc.

Note: The size of the above assignment should not be more than that of the size of an A4 size paper.

#### Assignment - 2

Draw your cell city on a blank piece of white paper. The cell should take up the entire front of the page and each part of the city should be labelled with the city part and the cell part. Your drawing should be full of colour. Make sure that you give your city an interesting name!

Complete the check list as well given below. One is already done for you as an example.

Cell Part	Labeled	Description
Cell Membrane		
Nucleus	Town Hall	As nucleus controls the activities of the cell, the town hall is the centre that regulates the activities of a city
Mitochondria		
Golgi body		
Lysosomes		
Chloroplast		

## CHEMISTRY

In the last few years, science has helped a lot in the development of India. Science has contributed to all the sectors. Science has improved the global economy, increased employment opportunities, saved millions of lives and has played a major role in a lot of industries. Science is very important for the growth and development of India. It even plays a key role in our daily lives. Every country should invest as much as possible in research and development for scientific technologies. The following are the abbreviations of some of the research institutes in India.

Expand their names and write short notes on these institutes. Also locate their headquarters on a map of India.

1. ISRO

2. DRDO

3. ICAR

4. TIFR

5. AFRI

6. NIBMG

**Part B – Fun Activity** Activity: Take a small amount of camphor or naphthalene balls

and leave them in open air.

Observe and record what happens over a few days. Explain the process you observed.

1. (a) Identify the kind of motion in the following cases:

(i) A car moving with constant speed turning around a curve.

(ii) An electron orbiting around nucleus.

(b) An artificial satellite is moving in a circular orbit of radius 36,000 km. Calculate its speed if it takes 24 hours to revolve around the earth.

2. (a) Define average speed.

(b) A bus travels a distance of 120 km with a speed of 40 km/h and returns with a speed of 30 km/h. calculate the average speed for the entire journey.

3. Define uniform and non-uniform motion. Write one example for each.

4. What does the odometer of an automobile measure? Which of the following is moving faster? Justify your answer.

(i) A scooter moving with a speed of 300 m per 1 minute.

(ii) A car moving with a speed of 36 km per hour.

**5.** A car travels from stop A to stop B with a speed of 30 km/h and then returns back to A with a speed of 50 km/h. Find (i) Displacement of the car.

(ii) Distance travelled by the car.

(iii) Average speed of the car.

**6.** Velocity-time graph for the motion of an object in a straight path is a straight line parallel to the time axis.

(a) Identify the nature of motion of the body.

(b) Find the acceleration of the body.

(c) Draw the shape of distance-time graph for this type of motion.

# **CLASS – IX**

## **SUB – ENGLISH**

### **Composition:**

Write a composition (300-350 words) on how and where I spent my vacations.

### **Storytelling:**

Compose a story based on any cartoon character that you like most.

### **Reflection and Documentation**

### **Diary Entries:**

Write diary entries describing an incident from your parents' or grandparents' childhood.

### **Practical Exercises**

### **Recipe Writing:**

Learn and describe three new recipes with step-by-step.

### **Read Books:**

Read interesting books and watch good English programs during the holidays.

### **Notebook Completion**

### **Presentable Work:**

Ensure your homework is presentable and handwritten

# Class : 9

## Mathematics

### Chapter 1: Number Systems (Competency Based)

#### Instructions

- Attempt all questions carefully.
- Show all important steps wherever necessary.
- Use a separate notebook for working out answers.
- Neat presentation will be appreciated.

#### Part A: Concept Check (Understanding)

1. Define:
  - (a) Rational Number
  - (b) Irrational Number
  - (c) Real Number
2. Represent the following on a number line:
  - (i)  $\sqrt{3}$
  - (ii)  $-\sqrt{5}$
  - (iii) 2.5
3. Simplify the following:
  - (i)  $(\sqrt{2} + \sqrt{3})^2$
  - (ii)  $(5 + \sqrt{2})(5 - \sqrt{2})$

#### Part B: Application Based Questions

4. Find two irrational numbers between 1 and 2.
5. Express  $0.272727\dots$  in the form  $p/q$ .
6. If  $x = 2 + \sqrt{3}$ , find the value of  $(x^2 - 4x + 1)$ .

#### Part C: Real Life Context

7. Case Study: A carpenter wants to make a square tabletop with an area of 2 square meters. What should be the exact side length of the table? Represent your answer as a surd, and explain whether it is a rational or irrational number.
8. Word Problem:

A farmer has a square plot with a side length of  $\sqrt{50}$  meters. Find:

  - (a) The area of the plot.
  - (b) Whether the area will be a rational or an irrational number.

#### Part D: Skill Enrichment

9. Find the value of  $(\sqrt{5} + \sqrt{2})(\sqrt{5} - \sqrt{2})$  without using a calculator.
10. Write an algorithm (step-by-step method) to approximate  $\sqrt{7}$  correct up to 2 decimal

places using the division method.

### Bonus Activity (Creative Thinking)

#### Project Work:

Make a colorful poster showing examples of Rational and Irrational numbers from real life (like  $\sqrt{2}$  in carpentry,  $\pi$  in circles, 0.333... in fractions etc.). Use at least 5 examples from different fields like science, construction, nature, etc.

#### Competencies Assessed:

Competency	Details
Conceptual Understanding	Clear knowledge of number types
Application of Knowledge	Use of number system concepts in solving problems
Problem Solving	Handling real-world contexts using math
Logical Reasoning	Simplification, estimation and surd calculation
Creativity	Applying concepts creatively through poster making

## ग्रीष्मकालीन अवकाश रचनात्मक कार्य

### कक्षा - 9

1. पाठ्य पुस्तक 'क्षितिज भाग 1' के सभी छह गद्य पाठों में किन्हीं पांच से 10 -10 अति लघु प्रश्न-उत्तर (पाठ्य पुस्तक में दिए गए प्रश्नों से अतिरिक्त तथा एक शब्द या एक वाक्य में उत्तर) बनाकर लिखिए।
2. अपने परिवार के किसी सदस्य से किसी एक विषय पर बातचीत करें और उसे संवाद शैली में लिखें।

**Class - IX**  
**Sub - Social Science**

**Subject: History**

**Write about ideology of Socialism, Communism and Capitalism. Also give your opinion as to which ideology fits better to grow the National Economy and bridge the gap between the rich and poor nations.**

**Task:**

- Prepare a decorative cover page with the project title, students name, class & section
- Introduction of the project topic
- Stick photos & images where needed — focus on ideas
- Conclusion
- Maximum pages : 10

**OR**

**Was Adolf Hitler only responsible for WW II ? Write your opinion with relevant facts of the time.**

**What to do:**

**Task:**

- Prepare a decorative cover page with the project title, students name, class & section
- Introduction of the project topic
- Make a chart on ideologies , methods and contributions of Hitler in the history of Germany.
- Add images , quotes and events with references to WW II
- File Format: Table format across 3-4 A4 Sheets with headings .
- Conclusion

## Geography Project

### Topic : Disaster Management

Students may select any one natural and one man-made disasters of their choice and should cover the following points on each disaster chosen by them :

#### Task:

- Students may prepare a project file on A-4 Size paper or a PPT
- Prepare a decorative cover page with the project title, students name, class & section
- Index
- Introduction of the Disaster selected
- Impact on life and economy
- Preparedness and Safety measures
- Mitigation Strategies
- Role of Students in Disaster Management
- Students may use relevant and authentic pictures, newspaper clippings, diagrams, and statistics for the project work.
- Maximum pages : 10 Pages /Slides
- Conclusion