



**CAPSTONE ENGLISH MEDIUM  
HR. SEC. SCHOOL, SEMRA**

**SUMMER**

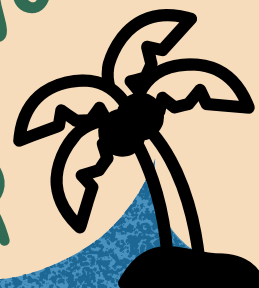
**SUMMER  
HOLIDAYS**

**HOMEWORK**

**class 10**

**SUMMER  
Vacation**

Summer  
VACATION





## MODEL OF A THEODOLITE

### OBJECTIVE

CONSTRUCT A THEODOLITE MODEL TO MEASURE HEIGHTS USING TRIGONOMETRY.

### MATERIALS

PROTRACTOR, STRAW, CARDBOARD, TAPE, MEASURING TAPE, CALCULATOR, A4 SHEETS

### STEPS

ATTACH A STRAW TO A PROTRACTOR TO CREATE A THEODOLITE FOR SIGHTING.

CHOOSE AN OBJECT (E.G., A WALL) AND MEASURE THE DISTANCE TO ITS BASE.

MEASURE THE ANGLE OF ELEVATION TO THE TOP USING THE THEODOLITE.

CALCULATE HEIGHT:  $\text{HEIGHT} = \text{DISTANCE} \times \tan(\text{ANGLE})$ .

VERIFY WITH A MEASURING TAPE.

WRITE A 150-WORD REPORT WITH DIAGRAM AND RESULTS.

PRESENT THE MODEL AND CALCULATIONS.

### LEARNING OUTCOMES

PRACTICAL APPLICATION OF TRIGONOMETRY IN SURVEYING

IMPROVED SKILLS IN MODEL-BUILDING AND MEASUREMENT



## Objective

Demonstrate the principle of electromagnetism.

## Materials

Iron nail, copper wire, battery, paperclips, tape

## Steps

Wrap copper wire tightly around an iron nail (50–100 turns).

Connect wire ends to a battery to create an electromagnet.

Test by picking up paperclips and count them. Disconnect the battery and observe the effect.

Document observations and explain electromagnetism.

## Learning Outcomes

Understanding magnetic fields and electricity

Practical application of scientific concepts



## ***POSTER ON FUNDAMENTAL RIGHTS***

### **Objective**

Understand and communicate the importance of Fundamental Rights.

### **Materials**

Chart paper, colors, markers, printed images

### **Steps**

Research the six Fundamental Rights from the NCERT textbook.

Create a poster with a section for each right. Include a brief description and a real-life example for each.

Add illustrations or images to enhance the poster. Present the poster and explain one right in detail.

### **Learning Outcomes**

Knowledge of constitutional rights  
Enhanced research and presentation skills



# ENGLISH

## Objective

Analyze characters from any story given in the book and express findings creatively.

पुस्तक में दी गई किसी भी कहानी के पात्रों का विश्लेषण करें और निष्कर्षों को रचनात्मक ढंग से व्यक्त करें।



# हिन्दी

## Objective

Summarize a Hindi story and present it visually.

एक हिंदी कहानी का सारांश बनाइये और उसे दृश्यात्मक रूप में प्रस्तुत कीजिये।

# संस्कृत

## Objective

Summarize a story and present it visually.

एक कहानी का सारांश बनाइये और उसे दृश्यात्मक रूप में प्रस्तुत कीजिये।