



Pedagogy in practice:

A LEARNING WORKBOOK



CHITKARA
UNIVERSITY



Created by



DRISHTI BHARDWAJ
(247099I07I)



SHREYA ATTAR
(247099I054)



NEHA
(247099I055)



RUPA KUMARI
(247099I059)

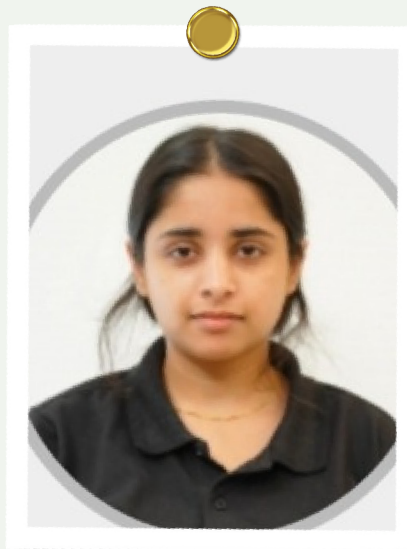
Created by



SHAGUN SHARMA
(247099I06I)



PRABHNOOR KAUR
(247099I070)



SAUMYA
(247099I065)

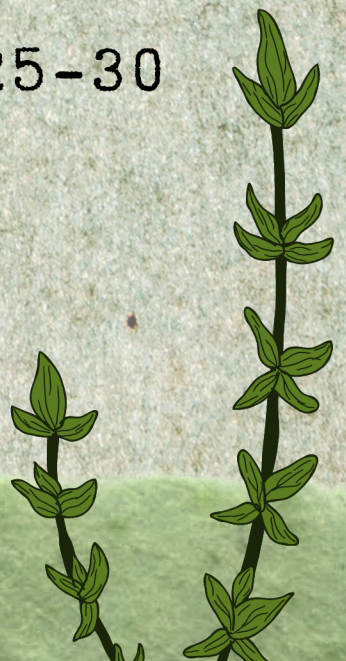


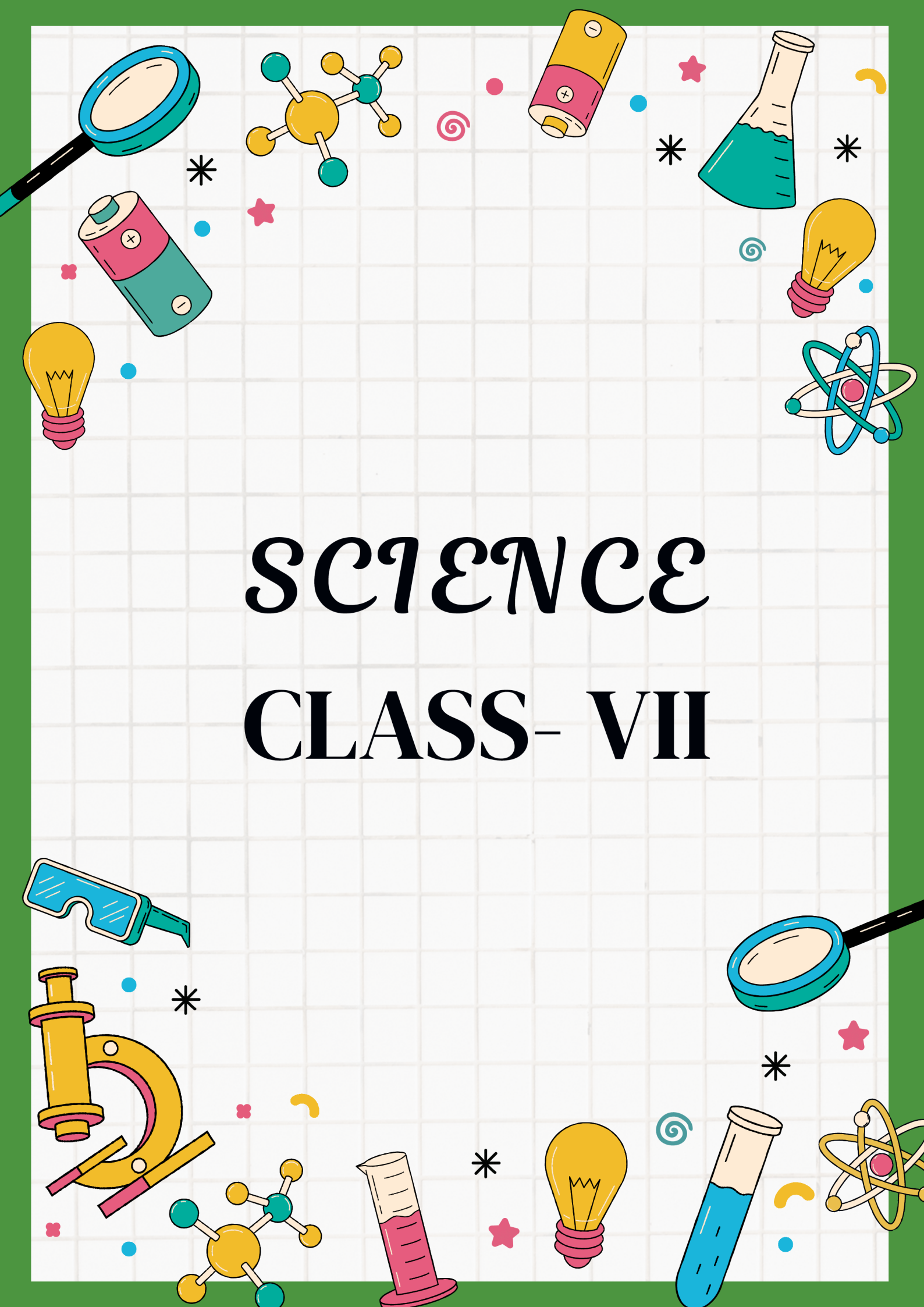
JAHANVI
(247099I0I4)

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The page features a decorative border of science-related icons on a green background. The icons include a magnifying glass, a battery, a lightbulb, a molecular model, a spiral, a flask with blue liquid, a test tube with blue liquid, a microscope, a pair of safety goggles, a test tube with pink liquid, another lightbulb, another molecular model, and another atom model. There are also small stars, dots, and asterisks scattered throughout the border.

SCIENCE

CLASS- VII



Heat Detectives: Solve, Sketch, Create!



SECTION-A

Story Time –" A Day in the Life of a Metal Rod"

Write a short, funny or dramatic story from the point of view of the metal rod during the activity.

Start like this:

"It was a calm day until the flame touched my end. Suddenly, warmth rushed through me and I saw the nails..."

Continue the story here: -----

SECTION-B

Build-a-Tool Challenge

Design a tool or device that uses the idea of conduction. You can choose one:

- A cooking tool
- A winter jacket lining
- A hot beverage cup
- A robot hand that handles hot items

Name your device:-----

Materials used: -----

How it works:-----

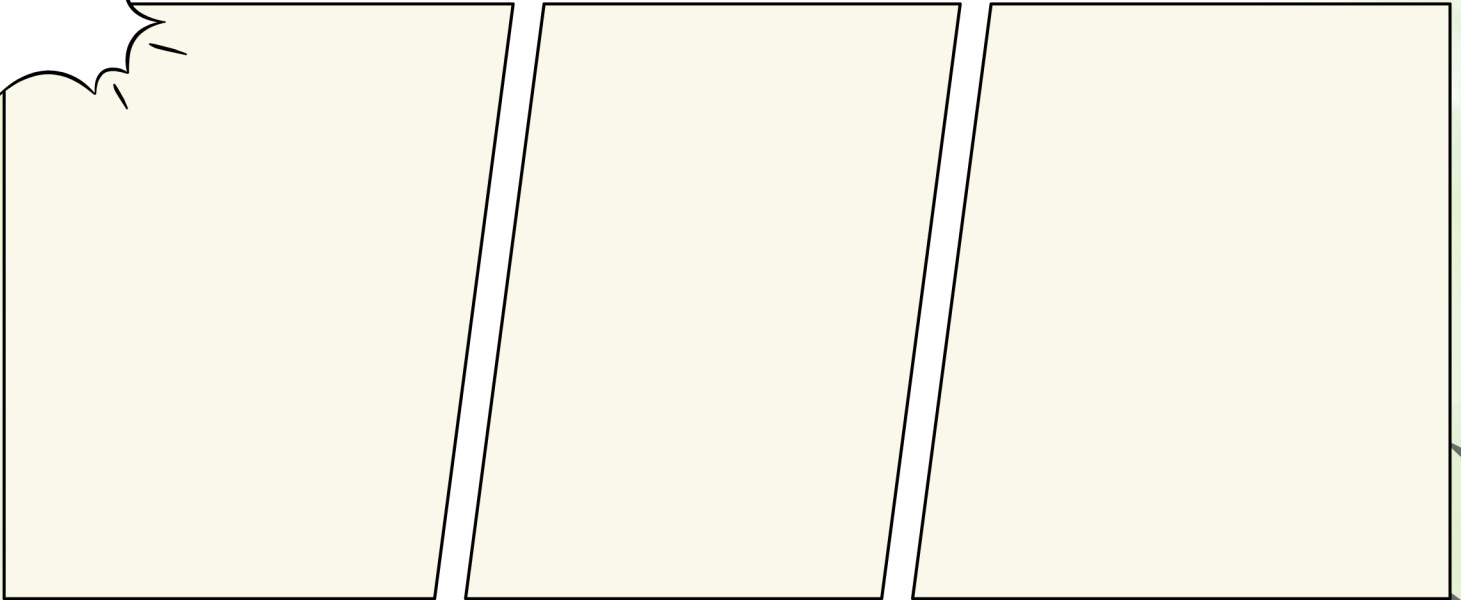
DRAW OR BLUEPRINT IT
HERE



SECTION-C

Comic Creation – “The Adventures of Heat Hero!”

Create a 3-panel comic strip where a superhero named Heat Hero teaches kids the difference between conductors and insulators. Use speech bubbles, symbols, or jokes!



SECTION-D

Exit Puzzle – Heat Riddle

“I have no legs but I travel fast,
Through metal rods, I zoom right past.
If you touch me, you might shout – ‘Ow!’
What am I?”

Answer: _____





“VIBGYOR Adventures: Learning Light the Fun Way!”

SECTION A

ACTIVITY: Create your own RAINBOW!

Materials Required:

- A clear glass or transparent
- Water.
- A small white sheet of paper
- A small mirror
- A flashlight or direct sunlight

Steps:

1. Fill the clear glass with water almost to the top.
2. Place the small mirror inside the glass at an angle, so it's partially submerged in water.
3. Put the glass near a window where it can catch direct sunlight. (If indoors, use a flashlight.)
4. Hold the white sheet of paper on the opposite side of the mirror so that the sunlight (or flashlight) shines into the water and reflects off the mirror onto the paper.
5. A rainbow pattern will appear on the paper.

The speed of the light is the fastest thing in the universe- about 3,00,000 kilometers per second! That means light from the sun takes just 8 minutes and 20 seconds to reach the earth- even though the sun is 150 million kilometers away!

**FUN
FACT**



SECTION B

The Storyteller's Table

What to do:

1. Write a short, imaginative story where ray of light enters the magical Prism Kingdom and splits into 7 colorful characters - Violet, Indigo, Blue, Green, Yellow, Orange, and Red.
2. Each colour should have a unique personality [e.g. Red is bold and brave, Blue is calm and wise].
3. Describe how they come together to form white light and what happens when they are separated.
4. End the story with a lesson or message about how unity creates something beautiful.

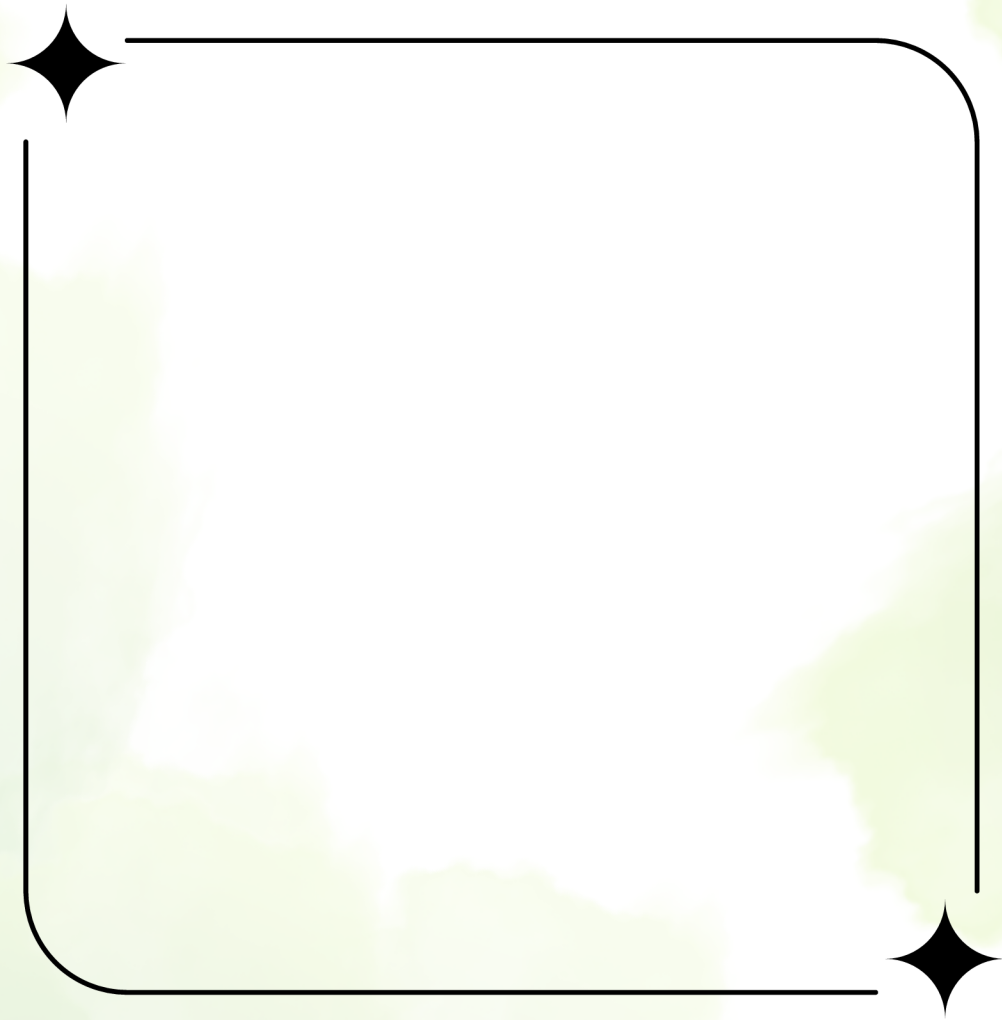
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SECTION C

The Artist's Corner

What to do:

1. Watch the prism experiment that shows a beam of white light passing through the glass prism and splitting into the rainbow spectrum.
2. Draw what you saw! Sketch the setup: the prism, the incoming white light, and the emerging seven colours.
3. Label each colour in the correct order.
4. Get creative! Use coloured pencils, markers, or paints to make your drawing vibrant and artistic.



SECTION D

The Quiz Master's Den

What to do:

Solve these riddles.

1.Red to Violet, in a line,
Appearing after rain, so fine.
Sunlight bends, then takes this form,
What am i after a storm?

2. I am bending of a beam,
But not in water, like a dream.
I happen when the colours spread,
From red below to violet ahead.

3. You see me when light takes a trip,
Through a glass with a triangular tip,
I split the light into many a hue,
Name me now, I'm asking you!

What I did:

What I discovered:

One question I still have:



HEATING EFFECT OF ELECTRIC CURRENT *“Hot Wires, Cool Science”*

learning objective:

To investigate and demonstrate the heating effect of electric current through the construction of a simple electric current through the construction of a simple electric heater model.

Project Title: “Build Your Own Electric Heater Model”

Project Scenario:

You are a young scientist challenged to design a mini electric heater model using safe, low-voltage materials. Your goal is to observe how electric current produces heat and find practical applications of this effect in everyday life.

Materials You May Use:

- AA or 9V battery
- Nichrome wire / iron wire
- Electrical tape
- Switch or paper clip
- Cardboard base
- Bulb holder (optional)
- Safety gloves and adult supervision

Safety Precautions:

Always work under the supervision of your teacher or another adult.
Do not use high-voltage power sources. Stick to low-voltage batteries only (like AA or 9V)

Avoid touching the wire with bare hands when current is flowing. Use gloves or wait for it to cool down.

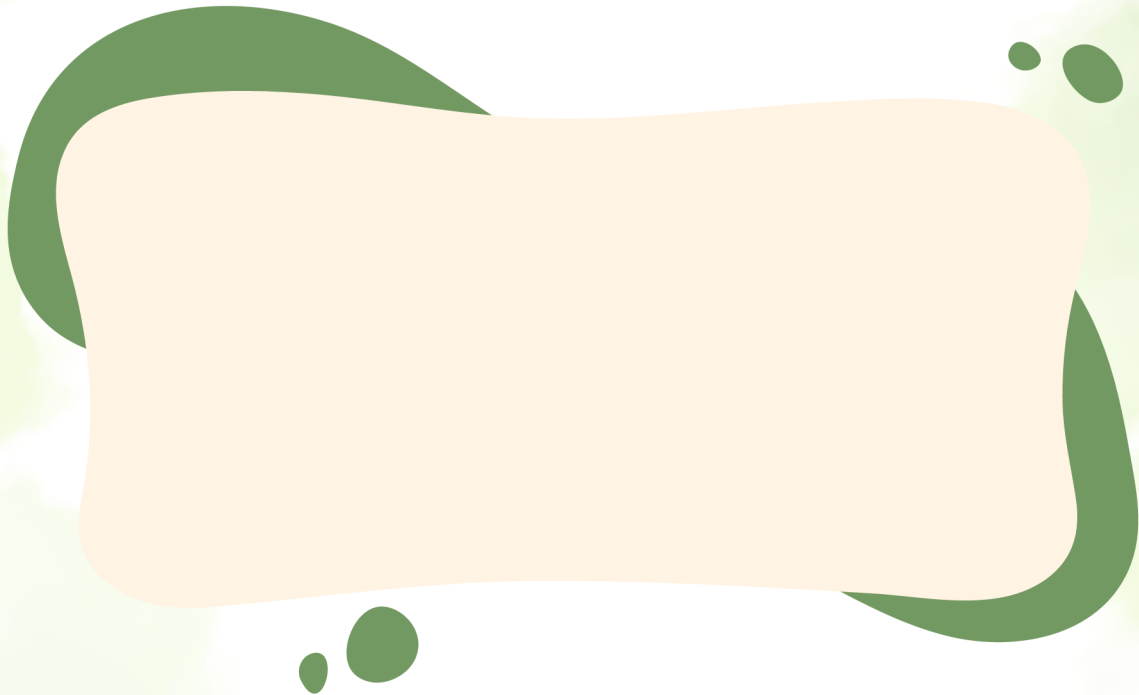
Make sure the circuit is properly insulated to prevent short circuits.

Disconnected the battery immediately after testing the model.

Keep water and other liquids away from the setup.

Project Steps:

Design: Draw your model's design. Label the power source, wire, and switch.



2. Build: Assemble your heater model with teacher guidance.

3. Test: Observe what happens when you complete the circuit. Feel the wire warm up carefully or measure the temperature with a thermometer (if available)

Step	What I Did	What I Observed	My Notes
1.			
2.			
3.			
4.			
5.			

Quick Check: Tick what you observed

- ☐ The wire became warm
- ☐ The wire glowed slightly
- ☐ A small bulb glowed (if used)
- ☐ No change observed
- ☐ There was a slight smell
- ☐ The wire become too hot

Safety Checklist

- ☐ Worked with an adult or teacher
- ☐ Used gloves or waited for wire to cool
- ☐ Used only AA or 9V battery
- ☐ Disconnected battery after test
- ☐ No water or liquids near setup

4.Reflect: Why did the wire heat up? What would happen with a thicker or longer wire?

5. Connect: List devices at home that work using the heating effect of electric current [e.g., iron, geyser, toaster].

6.What I learned?



“Red or Blue ? Find the Clue !”

Objective

To test household substances using litmus paper and identify if they are acidic, basic or neutral.

Instructions

1. Gather blue and red litmus paper strips.
2. Collect the household substances listed below.
3. Dip a strip of red litmus and blue litmus into each substance.
4. Observe and note any colour change.

Test table-Use litmus paper to detect!

write your observation and conclusion in the table below.

Substances	Red litmus change (yes/no)	Blue litmus change (yes/no)	Conclusion (Acid/Base/Neutral)
Lemon juice			
Shampoo solution			
Soap water			
Detergent solution			
Saltwater			

Substances	Red litmus change (yes/no)	Blue litmus change (yes/no)	Conclusion (Acid/Base/Neutral)
Milk			
Sugar solution			
Vinegar			
Grapes juice			
Coca-Cola			

Decode the Mystery!

Colour code-What do the colour changes means in your test?

- Blue litmus into red=_____
- Red litmus into blue=_____
- No change=_____



"Catch the breath, solve the path"

SECTION A

Activity:-

"Oxy's express: The respiration relay"



Journey briefing:-

Welcome Aboard! You are now a part of the Human Body Express, a high-speed transport network where oxygen is the passenger, and your body parts are the stations. Let's take a ride!

Choose Your Role on the Team :-

Underline your role

Captain Nose

Tunnel Windpipe

Oxygen Loader (Lungs)

Delivery Van (Blood)

Control Center (Cell)

CO₂ Return Agent

What does your role do during the journey? (Describe in your own words):-

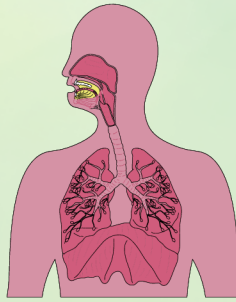
"

"?

Section B

Track the journey of oxy

O₂



Fill in the stations the oxygen molecule visits:- 

<u>PASSAGE</u>	<u>YOUR ANSWER</u>	<u>CLUES</u>
1.Enters from	_____	“Boarded the express through nose gates!”
2.Passes through	_____	“Speeding down the air tunnel—taking the lung fork!”
3.Reaches the	_____	“Checked into the gas swap station!”
4.Travels inside	_____	“Hopped on a red cell for body-wide delivery!”
5.Delivers to	_____	“Dropped off the oxygen package at cell door!”
6.Used to produce	_____	“Helping cells power up—mission complete!”



On the return trip,Co2 moves from the cell through:-

<u>PASSAGE</u>	<u>YOUR ANSWER</u>	<u>CLUES</u>
1.Produced in	_____	“Just got made inside the cell—time to head out!”
2.Picked up by	_____	“Red blood cell cab is back—return trip begins!”
3.Travels through	_____	“Zooming through body roads—veins this time!”
4.Reaches the	_____	“Arrived at the lung terminal —last stop for gas swap!”
5.Passes into	_____	“Jumped across the membrane into the air sacs!”
6.Exits from	_____	“Blasted out the nose gate—goodbye, body!”

Section-C

Oxy talks-what did you Discover?

Oxy has just completed the ride of a lifetime inside your body. Now it’s your turn to show what you’ve learned!

Q1. Oxy says, “I’m famous in every cell!”
Why do you think every cell throws a party when Oxy arrives?
[Hint: What job does oxygen do in cells?]



Q2. The food you eat goes on a secret mission inside your body.

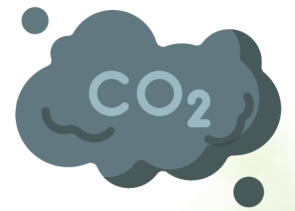
Can you reveal the hidden role of food during respiration?

[Hint: What happens to food when it meets oxygen?

Q3. After the big energy show, CO₂ wants to go home.

How does the body help carbon dioxide catch the next train out?

[Hint: Where does CO₂ go and how?



Section-D

HERO LAB-Create your own superhero:-

Design your own superhero based on "Oxygen."What's their name?What powers do they have?Draw them and explain on the next page!

**DID YOU
KNOW?**



You breathe in over
11,000 liters of air a
day!

That's like filling a
small swimming
pool—with oxygen
leading the team!

Draw your superhero



■Name of the superhero:_____

■What they do:_____



SOCIAL STUDIES

CLASS- IX





“Teach the Class” Peer Stations

SECTION A

Objective: Reinforce content understanding through peer explanation.

How it works:

- Divide the class into **5 groups**- each group is assigned one type of vegetation in India.
- Each group creates a **mini- presentation** (using chart paper or flashcards) with:
 - key features
 - Regions found
 - One fun fact or myth
- After 10 minutes of preparation, the groups rotate to different “stations” and teach the rest of the class.
- Use a “passport” sheet for students to write one takeaway from each station.



“Vegetation Detective Game”

SECTION B

Objective: Identify types of vegetation based o clues.

How it works:

- Prepare clue cards (visual or textual) describing different vegetation types (e.g, “I grow where it rains the most, and my trees never shed”).
- Students work in **pairs** to read the clues and guess the vegetation type.
- Once guessed, they must locate the vegetation on a **blank map of India** and explain its features to their partner.



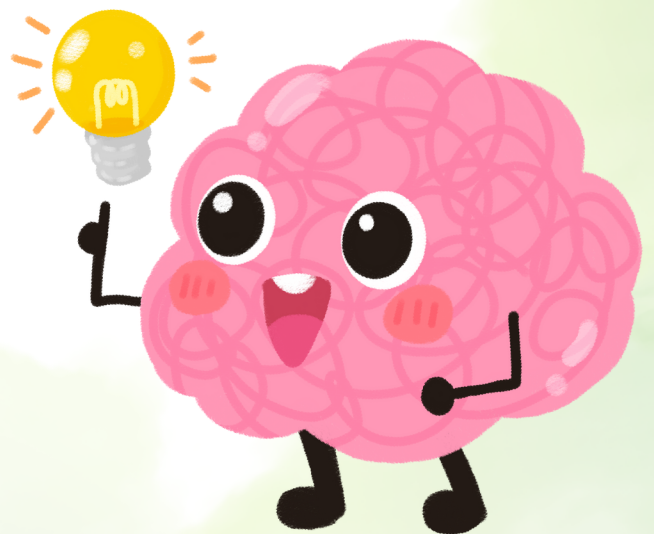
“Mnemonic Masterclass & Contest”

SECTION B

Objective: Aid memory through creativity.

How it works:

- Introduce the initials T-D-D-M-M.
- Students create and decorate a mnemonic poster in groups.
- Each group presents their mnemonic with a short explanation.
- Conduct a class vote to select the most memorable one.
- Bonus: Make a classroom wall display of all mnemonics created!





INDIA'S GREEN PUZZLE-WHAT GROWS WHERE and WHY

SECTION A

Students will be provided different case studies and they have to answer the questions given below .

Case Study A- The Evergreen Hills of Kerala

Anaya lives in Wayanad , Kerala , where it rains heavily for most of the year. Her house is surrounded by tall trees with broad leaves .

She often sees mahogany, rosewood and rubber trees around. The forest is so dense that sunlight barely reaches the ground.

Q1- What type of vegetation is found in this region ?

Q2- What kind of climate supports this vegetation?

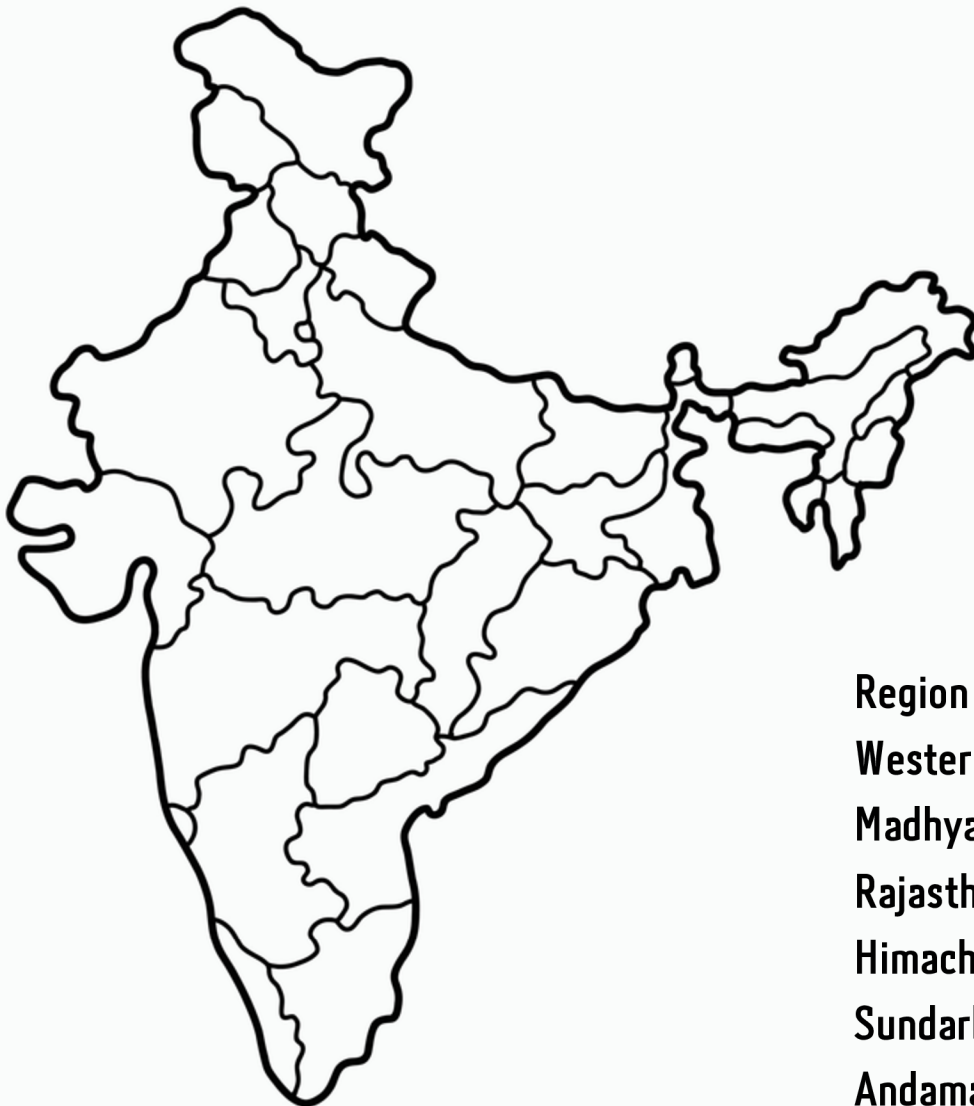
Q3- List one benefit and one challenge of living near this type of forest.

Section B-

Learning Objective – To identify the distribution of different types of vegetation in India and understand how physical features like climate, rainfall and soil influence vegetation patterns.

Map Labelling – Use colours and symbols to locate and label the following types of vegetation.

- 1- Tropical Evergreen Forests (Green)
- 2- Tropical Deciduous Forests(Light Green)
- 3- Thorn Forests and Scrubs(Yellow)
- 4- Montane Forests (Brown)
- 5- Mangrove Forests(Sundarbans
(West Bengal), Andaman coastt



Region to Label

Western Ghats(kerala, Karnataka

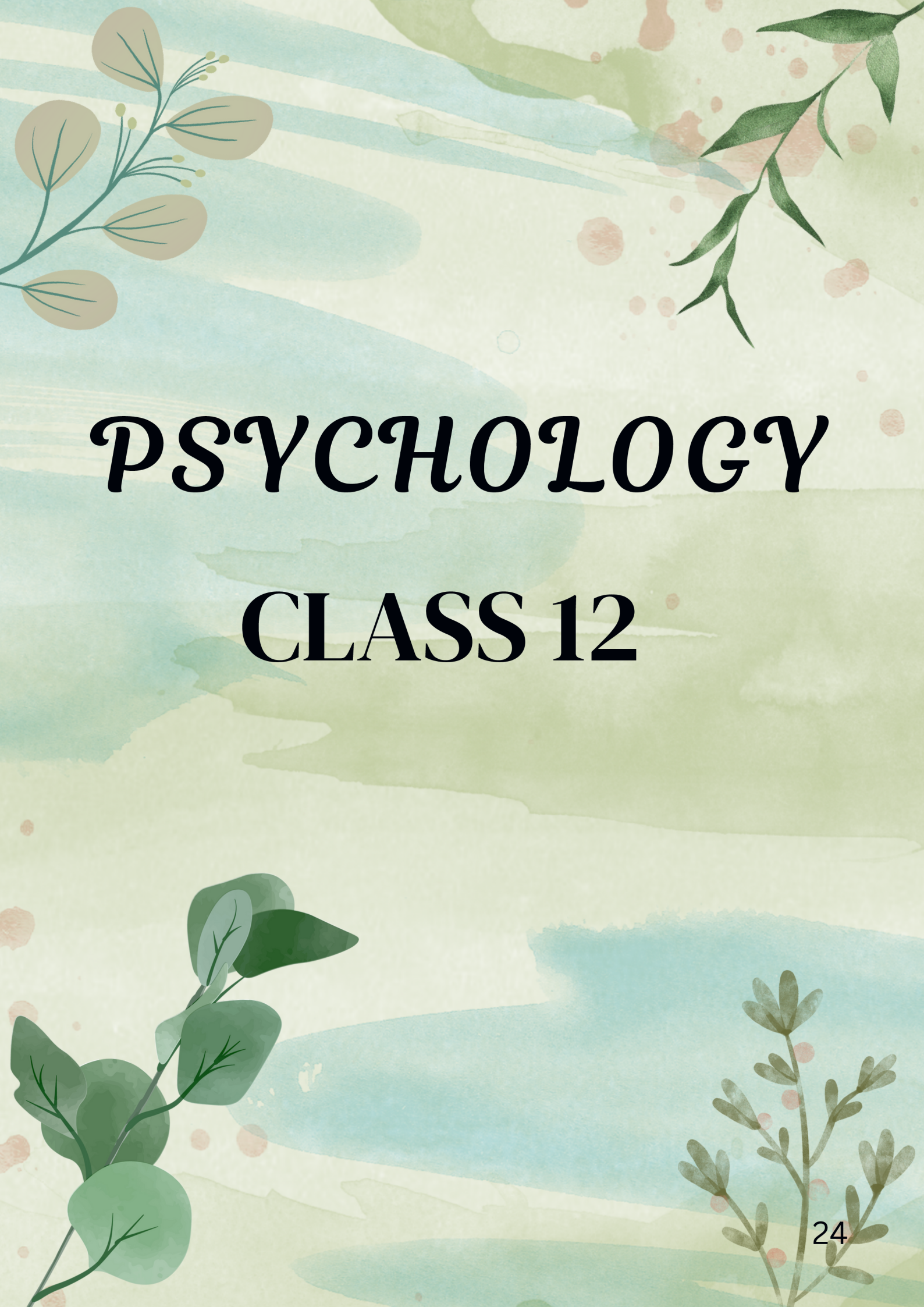
Madhya Pradesh, Jharkhand)

Rajasthan, Gujarat

Himachal Pradesh , Uttarakhand

Sundarbans(West Bengal)

Andaman coast



PSYCHOLOGY

CLASS 12



Psychological Disorders – Interactive Activity Set

Let's dive into the world of mental health with hands-on activities that help you learn, reflect, and engage!

Objective:

The activities in this set aim to enhance students' understanding of psychological disorders by fostering empathy, critical thinking, and self-reflection. Through creative roleplays, group games, and case study analysis, students will deepen their knowledge of various mental health conditions, their symptoms, and their real-life impact. The activities also encourage active participation, teamwork, and the ability to communicate complex ideas in engaging ways. Additionally, they promote awareness and advocacy for mental health, challenging myths and reducing stigma surrounding mental illness. Ultimately, these activities aim to create a compassionate and informed environment where students can learn and support mental health awareness effectively and to creatively represent a psychological disorder through a meme that reflects its key symptoms or behaviours and encourage critical thinking through peer guessing.

Activity 1:

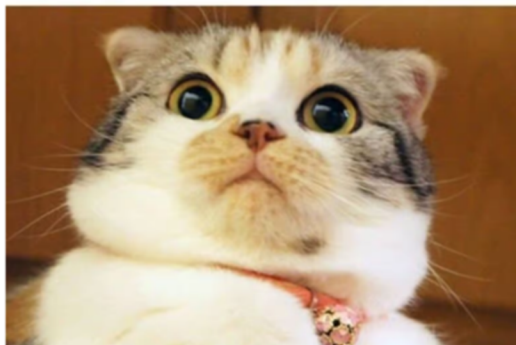
Meme my Disorder

Instructions:

1. Choose one psychological disorder from the chapter 'Psychological Disorders'
2. Create a meme that humorously yet respectfully represents the core symptoms or behaviour patterns of the disorder
3. Do not mention the name of the disorder in the meme
4. Use the space below to draw or paste your meme
5. Below the meme, write three hints to help your classmates guess the disorder
6. Leave the answer blank — this will be filled in by your peers during class discussion or peer review

Sample (For Reference Only):

Random coworker, trying to be nice: Hi! How are you?
Me:



Hints:

1. Fear of being watched, judged, or embarrassed.
2. Avoids public speaking, parties, or social gatherings.
3. Blushing, sweating, or trembling in social settings.

Correct Answer:

Mixed Anxiety-Depressive Disorder (Anxiety + Depression)

Sample (For Reference Only):

when u wanna hang out with people
but ur perpetual self doubt makes u feel
like you're not really part of the group
and they just tolerate u



Hints:

1. Sudden, intense surge of fear or discomfort
2. Physical symptoms like racing heart, chest pain, dizziness
3. Often strikes without warning — even at rest.

Answer _____

Your Meme:



Three Hints:

1. _____
2. _____
3. _____

Your Guess (To be filled by a peer):

Activity 2:

Create a Mental Health Awareness Poster

Design a Poster That Spreads a Positive Message!

Your poster can focus on:

A specific psychological disorder

Raising awareness about mental health in general

Offering tips for self-care or helping a friend

Include:

Disorder name

2–3 symptoms

Slogan or message

Bright, bold visuals

📷 Optional: Share your poster on a class wall or online.

Activity 3:

Case Study Match-Up – Disorder Detective

📖 Match each case to the correct disorder.

Case Studies:

Maya avoids parties and fears being laughed at.

Leo checks his door lock 15 times before leaving.

Zara hears voices and believes strangers are spying on her.

Alex feels amazing one week and deeply depressed the next.

Jules suddenly feels intense fear and can't breathe in crowded places.

Disorder Options:

A. Schizophrenia

B. OCD

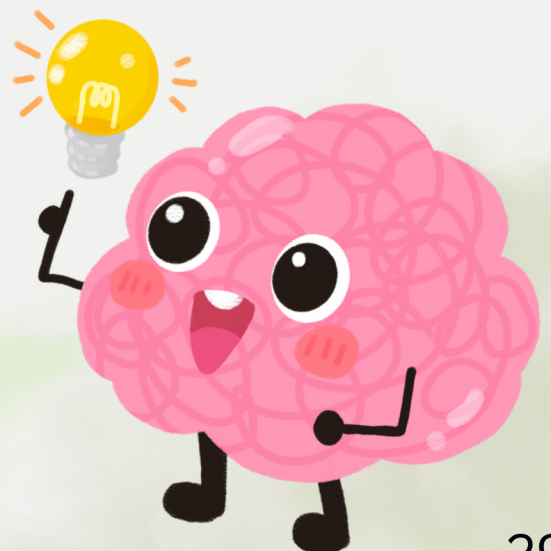
C. Bipolar Disorder

D. Social Anxiety


E. Panic Disorder

✍️ Write your matches below:

1 - __ | 2 - __ | 3 - __ | 4 - __ | 5 - __



Who Am I? – Disorder Riddle Game

 Guess the disorder based on these clues!

1. I bring deep sadness, fatigue, and loss of interest in favourite things.

→ Who am I? _____

2. I cause extreme fear in social situations, even friendly ones.

→ Who am I? _____

3. I come with sudden panic, a racing heart, and trouble breathing.

→ Who am I? _____

4. I lead people to see or hear things others don't.

→ Who am I? _____

5. I involve repeating actions to ease anxiety.

→ Who am I? _____

 Bonus: Write your own “Who Am I?” riddle and share it!

Great job! Remember, learning about psychological disorders isn't just about knowledge—it's about empathy, awareness, and building a kinder world.

A decorative page with a green background. The page features a central white notepad area with horizontal lines for writing. The notepad is titled "NOTES" in a large, dark green, serif font. The page is adorned with various floral and leaf illustrations: a branch with small white flowers in the top left, a single yellow flower in the middle left, a branch with green leaves in the top right, a single yellow flower in the middle right, and a branch with small white flowers in the bottom right. The page number "31" is located in the bottom right corner.

A decorative page with a green background. The page features a central white notepad area with horizontal lines for writing. The notepad is titled "NOTES" in a large, dark green, serif font. The page is adorned with various floral and leaf illustrations: a branch with small white flowers in the top left, a green leafy branch in the top right, a single yellow flower in the middle left, a yellow flower in the middle right, and a branch with small white flowers in the bottom right. The page number "32" is located in the bottom right corner.

A decorative page with a green background. The page features a central white notepad area with horizontal lines for writing. The notepad is framed by a green border. In the top-left corner, there are small white flowers and green leaves. In the top-right corner, there are green leaves. In the bottom-left corner, there are green leaves. In the bottom-right corner, there are small white flowers and green leaves. The word "NOTES" is written in a large, bold, black serif font at the top of the notepad area. The page number "33" is written in a black serif font at the bottom right of the page.