




Chemistry in Everyday Life

An illustration of a young boy with brown hair, wearing a red long-sleeved shirt with a white horizontal stripe and blue pants. He is standing in a bedroom with a wooden dresser and a window in the background. A pink speech bubble is above him.

Hi, I'm Alex! My parents have assigned me some chores. I need to get these done before going to bed!

To-do List

Patch bedroom wall cracks


☐

Fix the kitchen cabinet handle

☐

Clean the wash basin

☐



This is a big crack! I need to find a material that can fill this crack.



Plaster of Paris

Grade and Board: VI Tamil Nadu

Video Type : BHL P

Subtopic code: 20SBTN06CHE05TH002

Timings: 0:18:42 – 0:20:33

Start: The walls that you...

End: ...water molecule, right?

Duration: 0:01:51



Plaster of Paris

Take
notes 



White powdery solid, readily
forms a **paste with water**

Chemical name:
Calcium sulphate hemihydrate

Chemical formula:



Uses of Plaster of Paris

Take
notes 



Decorative
ceilings



Chalk



Fracture cast



Sculptures



Textbook Question

Explain the uses of plaster of Paris.

A large, empty teal rectangular box with a white border and slightly rounded corners, intended for the user to write their answer.



Textbook Question

Explain the uses of plaster of Paris.

Take
notes 

Plaster of Paris is used:

1. in making black board **chalks**
2. as a cast for **setting fractured bones**
3. for making casts for **statues and toys**
4. in construction, for making **decorative ceilings**



POLL QUESTION



In plaster of Paris, one water molecule is bonded to _____ calcium sulphate molecules.

A

one

B

two

C

half

D

four



In plaster of Paris, one water molecule is bonded to _____ calcium sulphate molecules.

A

one

B


two

C


half

D

four



Oh! So, I should use
plaster of Paris to
patch the cracks! It will
help with leak-
proofing too.



But if two molecules
calcium sulphate are
bound to only one water
molecule, where did the
other water molecule go?



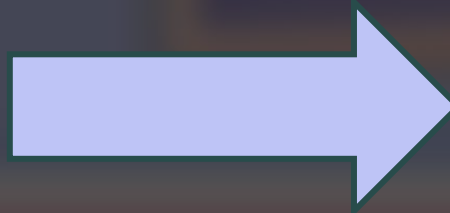
How Plaster of Paris Loses Water?

Take
notes 



Gypsum
($\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$)

140–180 °C



Plaster of Paris
($\text{CaSO}_4 \cdot \frac{1}{2}\text{H}_2\text{O}$)



Gypsum

Grade and Board: VI Tamil Nadu

Video Type : BHLP

Subtopic code: 20SBTN06CHE05TH002

Timings: 0:27:45 – 0:28:58

Start: The mineral gypsum...

End: ...because it's dihydrate.

Duration: 0:01:13



Gypsum

Take
notes 



Mineral of calcium

Chemical name:
Calcium sulphate dihydrate

Chemical formula:
 $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$

Uses of Gypsum

Take
notes 



Making plaster
of Paris



Additive in
fertilisers



Ingredient of
cement



Artificial
dentures



POLL QUESTION



Gypsum is a mineral made of calcium _____.

A

sulphate

B

hemihydrate

C

chloride

D

dihydrate



Gypsum is a mineral made of calcium _____.

A

sulphate

B

hemihydrate

C

chloride

D

dihydrate

?

Select the applications in which gypsum is directly or indirectly used.



Decorative
ceilings



Beauty
products




Fertilisers

Got it! Plaster of Paris is made by heating gypsum. Heating leads to the loss of water molecules.



Doubt Board

A cartoon illustration of a man with brown hair, wearing a red sweater with a white horizontal stripe and blue pants. He is standing in a room with a light blue wall and a wooden chest of drawers. A pink speech bubble is coming from him.

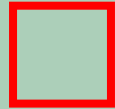
I'm done patching the cracks on the wall! It's time to move to the kitchen for the next task.

To-do List

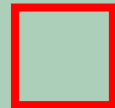
Patch bedroom wall cracks



Fix the kitchen cabinet handle



Clean the wash basin



A cartoon illustration of a kitchen. A young boy with brown hair, wearing a red long-sleeved shirt with a white horizontal stripe and blue pants, stands on the left, looking thoughtful with his hand on his chin. The kitchen features brown wooden cabinets, a grey range hood, a blue refrigerator, and a grey oven. On the countertop, there are several blue and green plates, a black wok, and a brown sack of rice. A pink speech bubble is positioned above the boy.

The door handle seems
out of place. I need to
find something that can
fix it.



Adhesives

Grade and Board:	VI Tamil Nadu
Video Type :	BHLP
Subtopic code:	20SBTN06CHE05TH002
Timings:	0:06:36 – 0:09:55
Start:	An adhesive is...
End:	...two surfaces to bind.
Duration:	0:03:19



Adhesives

Take
notes 

Sticky substances that can **bind things together**



Cello tape



Cement



Glue sticks



POLL QUESTION



Who is right?

Cement can be used as an adhesive too.

Cement is only a construction material, and it can't be used as an adhesive.

A

Tina

B

Ryan



Who is right?

Cement can be used as an adhesive too.


Cement is only a construction material, and it can't be used as an adhesive.

A


Tina

B

Ryan



So, the substances
that join two or more
objects are called
adhesives.



But there are so many
adhesives! Which one
should I use here?



Types of Adhesives

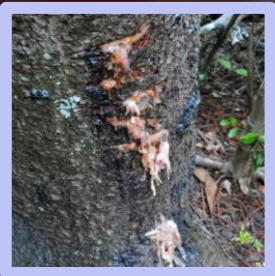
Grade and Board:	VI Tamil Nadu
Video Type :	BHLP
Subtopic code:	20SBTN06CHE05TH002
Timings:	0:10:04 – 0:12:43
Start:	Just like natural...
End:	...metals or wood.
Duration:	0:02:39



Types of Adhesives

Take notes

Natural



Tree sap



Flour paste



Beeswax

Less availability

Low strength

Easy to produce

Synthetic



Cello tape



Glue stick



Adhesive film

Easily available

High strength

Difficult to produce

?

Assertion (A): Natural adhesives cannot be used to join heavy surfaces like metals.

Reason (R): Natural adhesives are not readily available.

Both A and R are true, and R is the correct explanation for A.


Both A and R are true, but R is not the correct explanation for A.

A is true, but R is false.

Both A and R are false.

So, different types of adhesives also serve different purposes! I need to use a synthetic adhesive to fix the handle.





I've glued the kitchen cabinet handle as well!
It's time to move to the wash basin and clean it.

To-do List

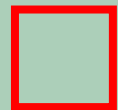
Patch bedroom wall cracks




Fix the kitchen cabinet handle




Clean the wash basin





Here's the wash basin! I need to find a chemical that can help me clean it.



Here's the disinfectant bottle! It says that it contains something called 'phenol'. I want to know more about this...

**Disinfectant
Cleaner**

Powered by high
quality **phenol**



Phenol

Grade and Board: VI Tamil Nadu

Video Type : BHLP

Subtopic code: 20SBTN06CHE05TH002

Timings: 0:52:34 – 0:54:17

Start: This is how phenol...

End: ...C₆H₅OH, okay?

Duration: 0:01:43



Phenol

Take
notes



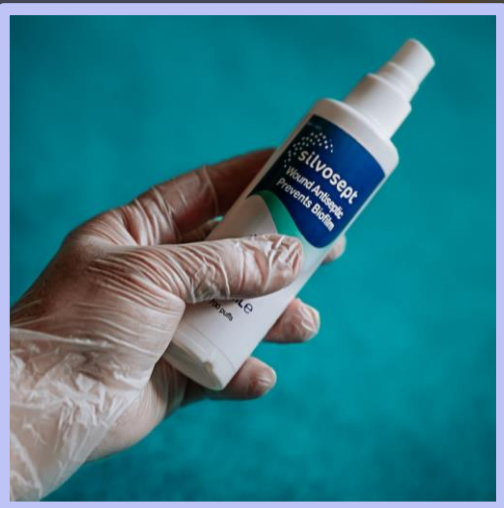
White crystalline solid, **absorbs moisture** from the surroundings

Chemical name:
Carbolic acid

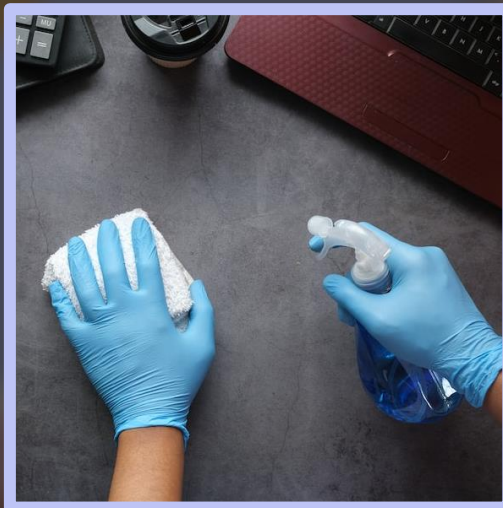
Chemical formula:
 C_6H_5OH

Uses of Phenol

Take
notes 



Antiseptic



Disinfectant



Mouthwash



Hard plastics

A central graphic featuring a teal circle with a white outline, resembling a clock face. The words "POLL QUESTION" are written in white, bold, sans-serif capital letters across the center. Surrounding the circle are various educational icons: a yellow lightbulb with rays at the top-left, an open book at the top-right, an orange highlighter at the bottom-left, and an hourglass at the bottom-right. Small blue stars and a white molecular-like icon are also scattered around the central circle.

POLL QUESTION



_____ phenol can be used as a disinfectant and antiseptic.

A

Concentrated

B

Dilute

C

Solid

D

Liquid



_____ phenol can be used as a disinfectant and antiseptic.

A

Concentrated

B

Dilute

C

Solid

D

Liquid



Textbook Question

Mention any three physical properties of phenol.

A large, empty teal rectangular box with a white border, intended for the user to write their answer.




Textbook Question

Mention any three physical properties of phenol.


Take
notes



1. Phenol exists as a **white crystalline powder but absorbs moisture** from the surroundings.
2. Phenol solution is **colourless**, but **changes to red** in the presence of dust.
3. Phenol should be **handled with great care** because it causes immediate white blistering to the skin.



Wow! Phenol in the disinfectant helps kill germs. It seems to be a strong chemical.



I've cleaned the wash basin as well! I'm done with all the chores assigned to me.

To-do List

Patch bedroom wall cracks



Fix the kitchen cabinet handle



Clean the wash basin



It's almost bedtime!
Let me take my
supplements before
that.

Looks like this
supplement contains a
chemical named 'Epsom
salt'. I'm curious to know
about its benefits.

Ingredients:
Epsom salt,
Flavour,
Stabilisers



Epsom Salt

Grade and Board:	VI Tamil Nadu
Video Type :	BHLP
Subtopic code:	20SBTN06CHE05TH002
Timings:	0:39:23 – 0:40:32
Start:	When we look at...
End:	...seven H ₂ O
Duration:	0:01:09



Epsom Salt

Take
notes 



Chemical name:
**Magnesium sulphate
heptahydrate**

Chemical formula:
 $\text{MgSO}_4 \cdot 7\text{H}_2\text{O}$

Uses of Epsom Salt

Take
notes 



Beauty
products



Health
supplements



Decorative
items



Additive in
fertilisers

A central graphic featuring a dark teal circle with a white outline, resembling a clock face. The words "POLL QUESTION" are written in white, bold, sans-serif capital letters across the center. Surrounding the circle are various educational icons: a glowing yellow lightbulb with rays at the top-left, an open book with red pages at the top-right, an orange highlighter at the bottom-left, and an hourglass with orange sand at the bottom-right. Small blue stars and white molecular-like symbols are scattered around the central circle.

POLL QUESTION



Which amongst the following elements is **not** present in Epsom salt?

A

Magnesium

B

Hydrogen

C

Sulphur

D

Nitrogen



Which amongst the following elements is **not** present in Epsom salt?

A

Magnesium

B

Hydrogen

C

Sulphur

D

Nitrogen

?

Write the number of water molecule(s) present in each molecule of the given substances.



Gypsum

Number of water molecule(s)




Epsom salt




Plaster of Paris





Wow! A simple substance like Epsom salt can improve muscle functioning and skin health!



Now I can finally go to bed. Thanks for helping me out with my chores!

Doubt Board

Homework Time!



Practice is the way to excellence!

Please do finish your homework on time.