



WHAT MAKES METAL RUST?



Let's find out together!

A FUN SCIENCE EXPERIMENT FOR CURIOUS KIDS!

YOU'LL NEED:

- 3 small iron or steel nails
- 3 small clear cups or jars
- Water
- Cooking oil
- A little salt
- Labels or sticky notes
- A marker

★ Ask a grown-up for help and be careful with the nails. Wash your hands when you're done!

STEP-BY-STEP

- 1 Put one nail in each cup.



- 2 Cup 1: Add enough water to cover the nail.

CUP 1
WATER



- 3 Cup 2: Add water plus a pinch of salt. Stir.

CUP 2
SALT
WATER



- 4 Cup 3: Add water to cover the nail, then add a thin layer of cooking oil on top.

CUP 3
WATER
+ OIL



- 5 Label the cups and observe them each day for about a week.



MAKE A PREDICTION!

Before you wait, make your best guess!

Which nail will rust the MOST?



Cup 1
(Water)



Cup 2
(Salt Water)



Cup 3
(Water + Oil)

Which nail will rust the LEAST?



Cup 1
(Water)



Cup 2
(Salt Water)



Cup 3
(Water + Oil)

WATCH AND RECORD!

Check your cups once a day for about a week. What do you see?

DAY	WHAT DO YOU NOTICE?
1	
2	
3	
4	
5	
6	
7	

WHAT SHOULD YOU NOTICE?



The nail in **WATER** will gradually develop reddish-brown rust.



The nail in **SALT WATER** will rust faster!



The nail with the **OIL LAYER** should rust much more slowly.



THE SCIENCE BEHIND IT!

Rust forms when **iron** reacts with **water** and **oxygen**.

Salt doesn't cause rust by itself, but it helps the rusting process happen faster.



THINK LIKE A SCIENTIST!

Which nail rusted the most? _____

Which nail rusted the least? _____

Why do you think that happened? _____



Keep exploring, keep questioning, and have fun with science!

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