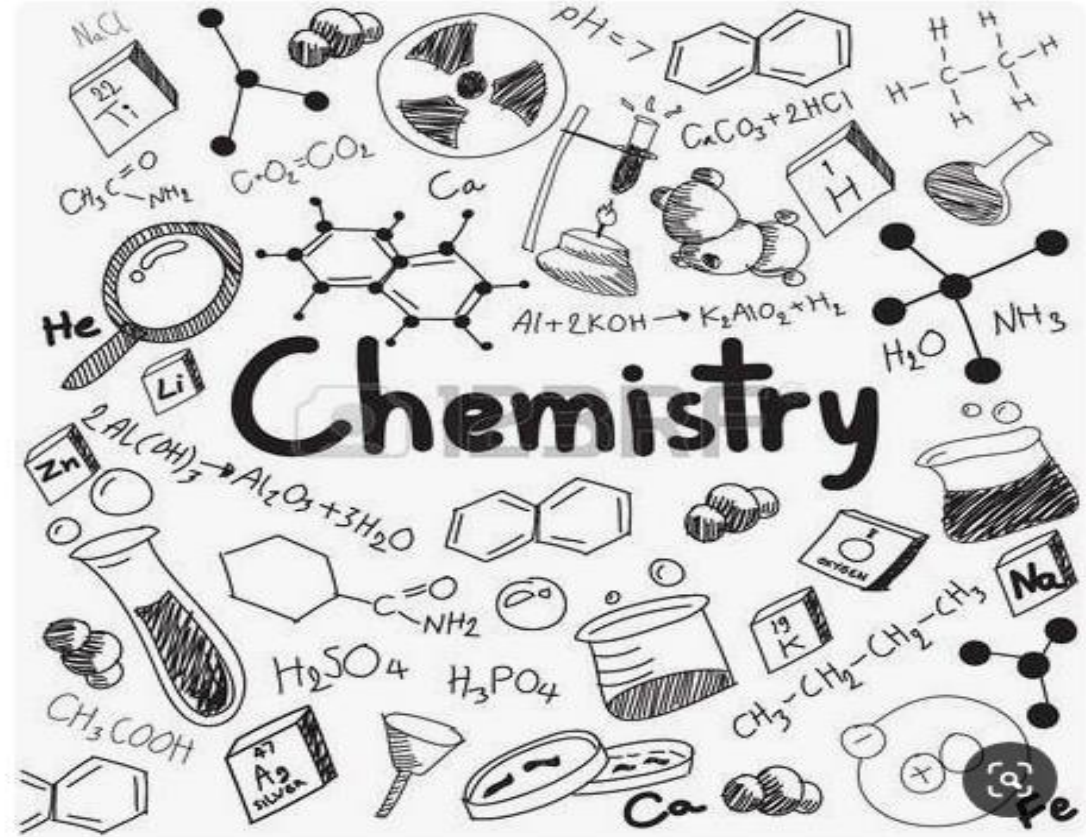




The National
Orthodox School
Shmaisani

- Lesson :(Displacement Reactions)
- Scholastic Year: 2022-2023
- Grade: 8CS



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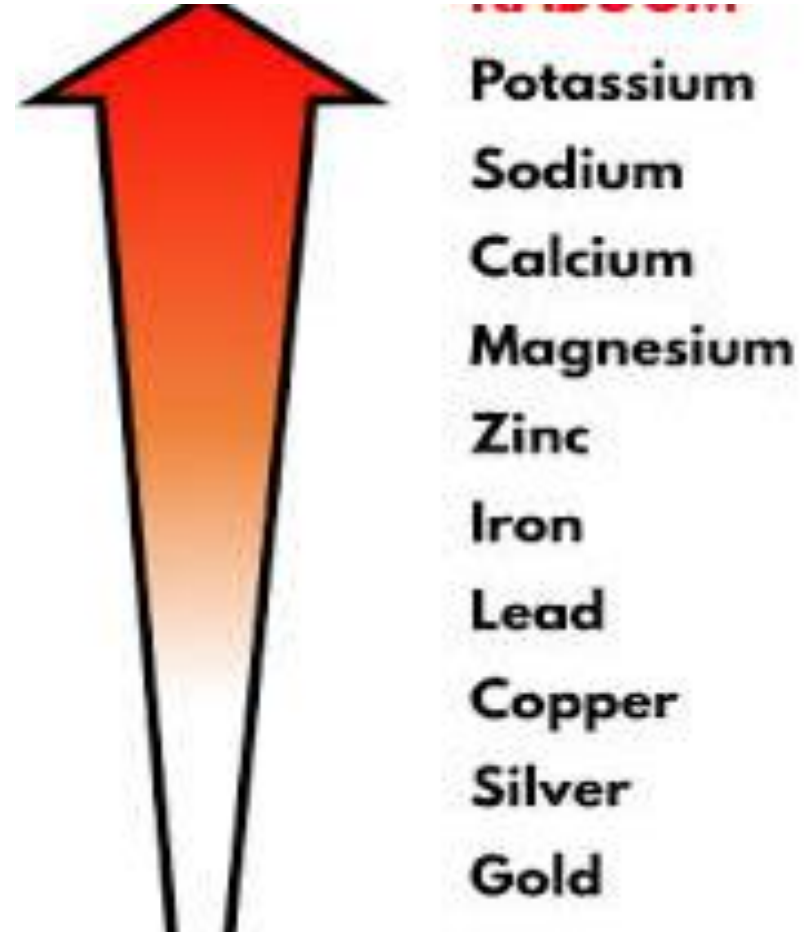
edexcel



<https://www.youtube.com/watch?v=TGPPPFczOj0>

The **reactivity series of metals**, refers to the arrangement of **metals** in the descending order of their reactivities. ...

We can examine the reactivity of metals by observing their reactions with **oxygen, water, acid** and **whether it displaces other metals in displacement reactions.**



Single Displacement Reaction

Displacement reaction is a chemical reaction in which a more reactive element displaces a less reactive element from its compound. Both metals and non-metals take part in displacement reactions.

[\[4K\] Displacement Reaction of Metals - Zinc in Copper \(II\) Sulfate - with explanation at micro level - YouTube](#)

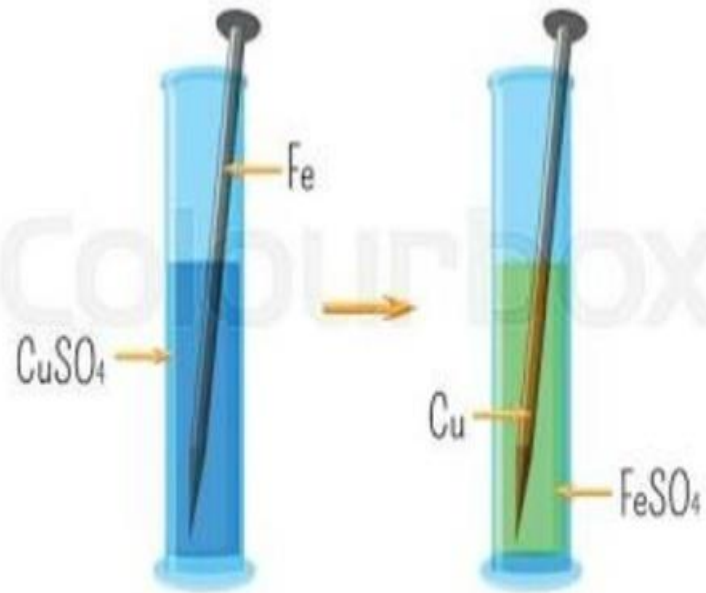
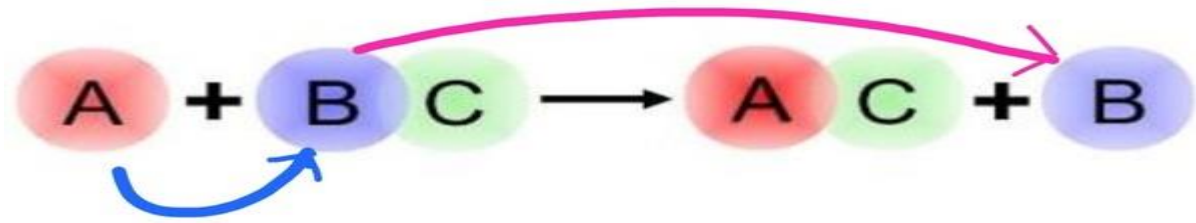
Why does a displacement reaction occur?

A single displacement reaction occurs when another element in a compound is replaced by an element.

A metal only substitutes for a metal, and a nonmetal only substitutes for a nonmetal.

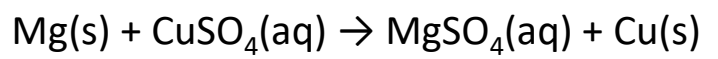
Only a more reactive element in the compound with which it reacts can replace the other element.

Displacement reactions



Iron being more reactive than copper displaces out copper from copper sulphate solution, which can be observed as the blue color fades into greenish iron sulphate solution. The displaced out copper can be seen as brown deposition on iron nail.

magnesium + copper(II) sulfate → magnesium sulfate + copper



In this displacement reaction:

the copper coats the magnesium

the solution's blue color fades as blue copper(II) sulfate is replaced by colorless magnesium sulfate solution.

