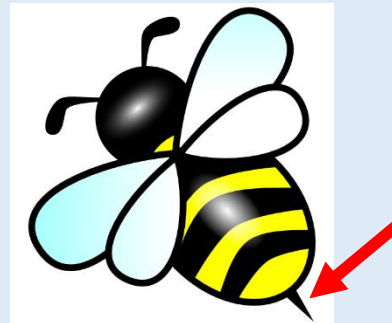


2



Rusting & Corrosion



Rusting is the corrosion of iron (& steel).



Other metals can corrode but not rust



Corrosion

Corrosion is also the reaction of a metal with **oxygen**.

It is sometimes called **oxidation**, and can happen to most **metallic** elements.



Rusting

Rusting is corrosion of a metal containing **iron**. It is also sometimes called an **oxidation**.

BUT...both **water** and **oxygen** (from the air) are required for rusting

Iron + Oxygen + Water → Hydrated Iron Oxide (**Rust**)

Rusting



Salt and other electrolytes (e.g. **acid**) can speed up rusting/corrosion

Rusting & Corrosion

Corrosion is when a _____ element reacts with **oxygen** to form a metal _____. **Rusting** is a special form of _____ that happens when **iron** (or **alloys** that contain **iron**) react with _____ and _____. Both **rusting** and **corrosion** can be described as _____.

Salt and other electrolytes (for example, **acids**) do not cause **rusting/corrosion** on their own, but they can cause it to _____ if **oxygen** and **water** are present.

Metallic oxide corrosion oxygen water oxidations
speed up

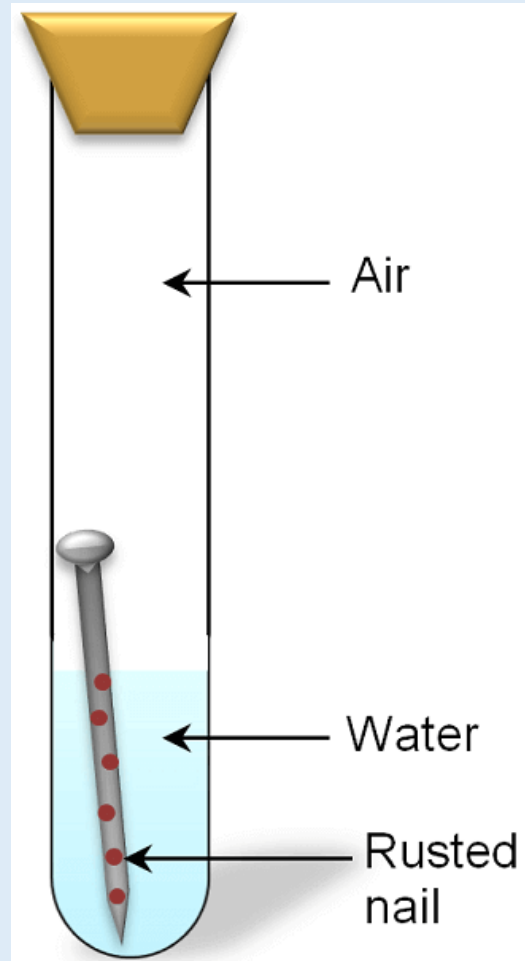
Group practical:

Design an experiment to prove that **oxygen** and **water** are needed for **rusting** to occur and that **salt** increases the rate of **rusting**

Work in groups of **3-4 (on your double tables)**

Group practical:

A basic equipment set up...



Group practical:

How could we test if rusting happens **without oxygen**?

How could we test if rusting happens **without water**?

HINTS:

Boiled water doesn't have any **oxygen** in it...

Oil floats on water and **doesn't let air through** it...

We have **silica**, which can **remove water** from the **air**...

