

WHAT IS A CHEMICAL REACTION?

A chemical reaction is a process where one or more substances (**reactants**) change into new substances (**products**).



CHEMICAL REACTIONS

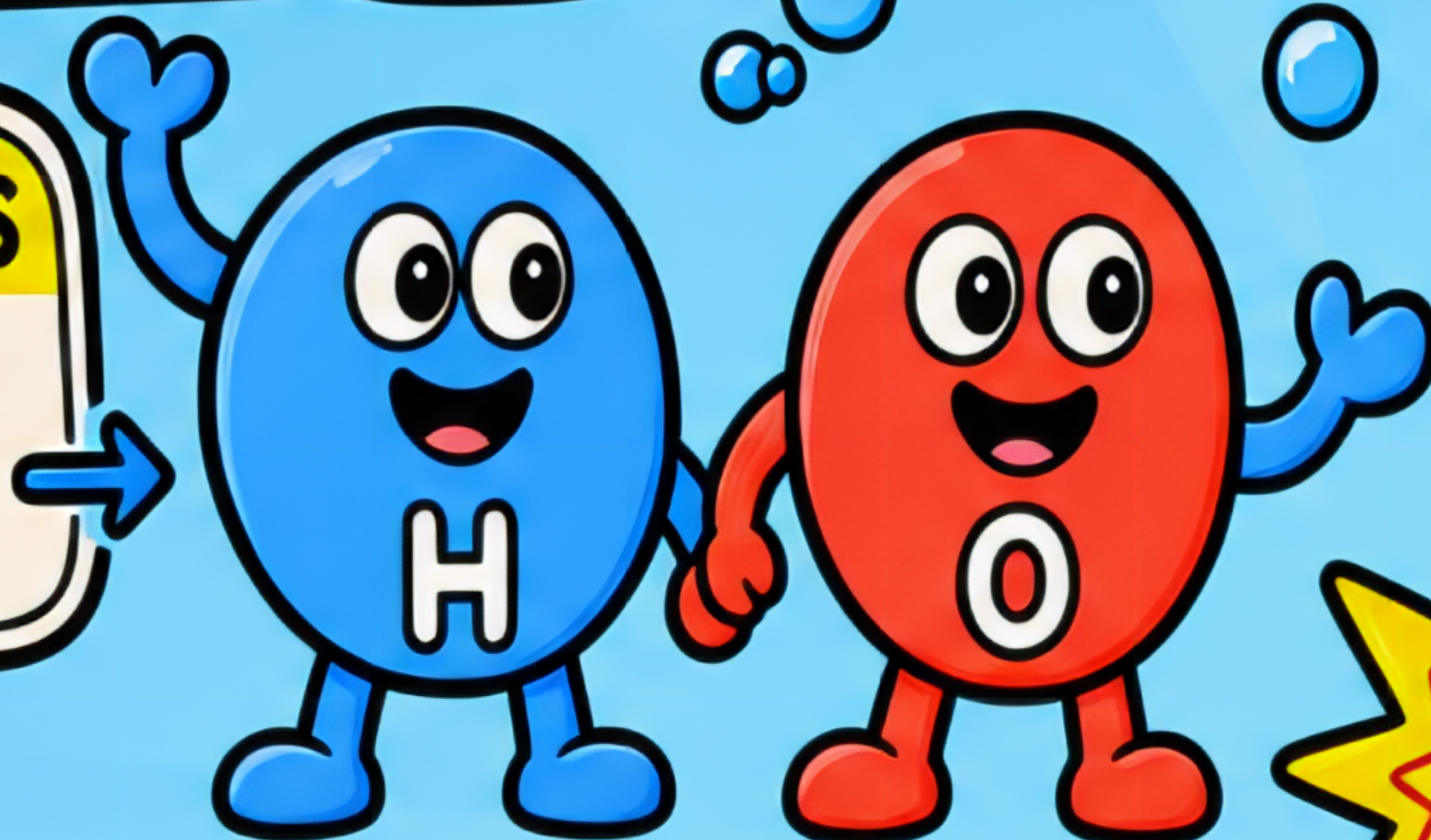
where substances transform!

THE BIG PICTURE

Chemical reactions are all around us! They power our bodies, cook our food, rust iron, burn fuel, and create new materials.

REACTANTS

The starting substances



REACTION!

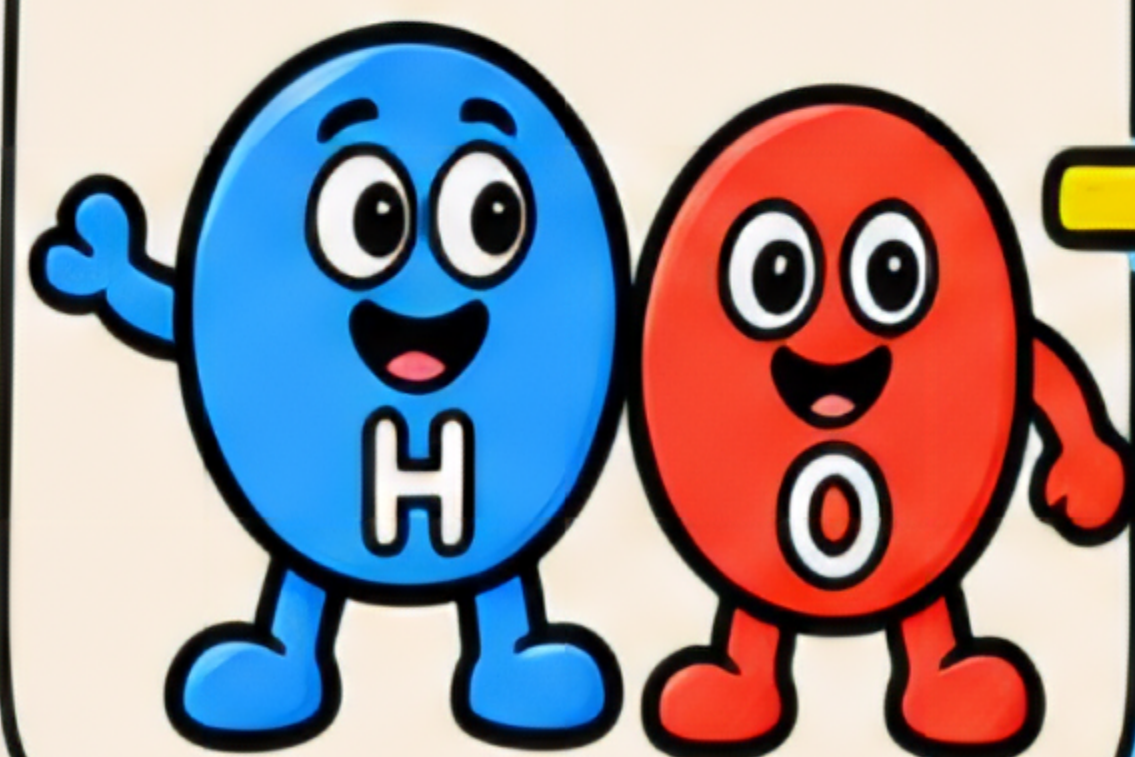
PRODUCTS

The new substances formed

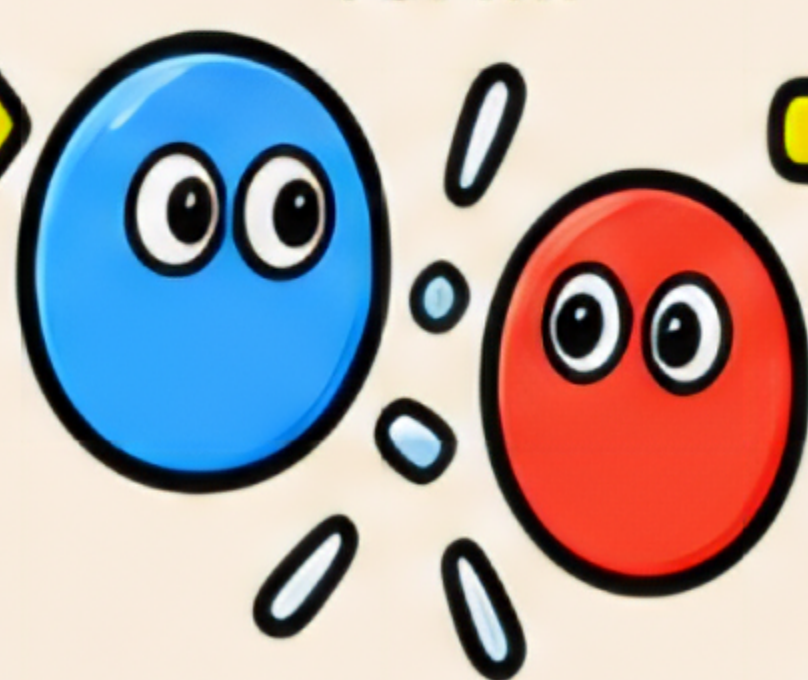


HOW IT WORKS

1 Reactants come together.



2 Bonds break and new bonds form.

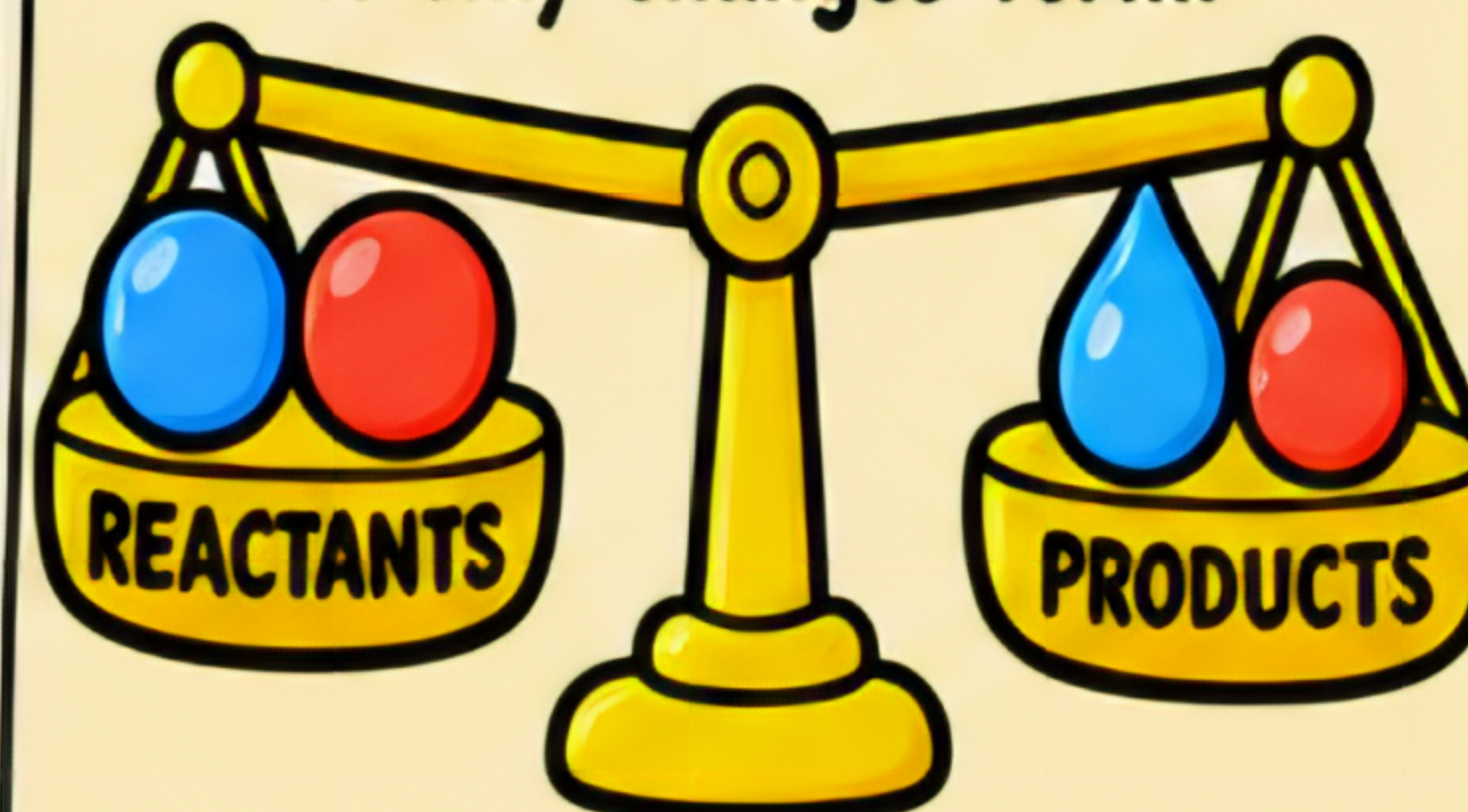


3 New substance(s) are created.



LAW OF CONSERVATION OF MASS

Matter is not created or destroyed in a chemical reaction—it only changes form.



The total mass stays the same!

EXAMPLES ALL AROUND US



Combustion

Fuel + Oxygen → Carbon Dioxide + Water



Rusting

Iron + Oxygen → Iron Oxide



Baking

Baking Soda + Vinegar → Carbon Dioxide + Water + Other Products



CHEMICAL REACTIONS = TRANSFORMATION

Old substances **change**.

New substances are **born**!