Irreversible Changes

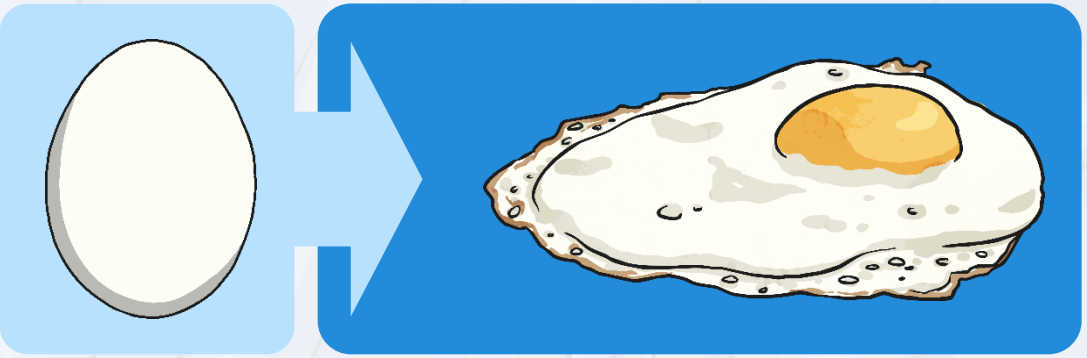
Kitchen Creations

Whole Class

The kitchen is where our food is made and cooked. But did you know it is also home to many scientific reactions?

Kitchen Creations

How do eggs change when you cook them?



The egg shell is cracked, and the raw egg pours into the pan. As the liquid egg white and yolk are heated, they start to change. The clear liquid egg white firms up and becomes opaque white. It changes into a solid. The orange liquid egg yolk also solidifies and turns lighter in colour.

Kitchen Creations

The heat causes an irreversible chemical change to occur.
The cooked egg cannot be cooled and turned back into a raw egg.
It is a chemical change because a new product has been made, and irreversible because it cannot be changed back.

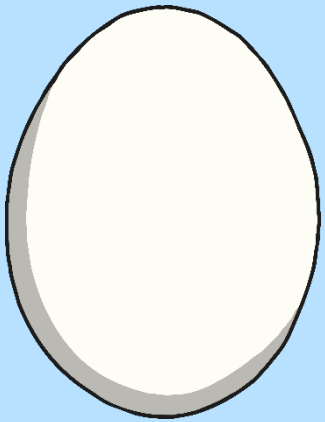
Melting, freezing, evaporating, condensing and dissolving are examples of reversible physical changes.

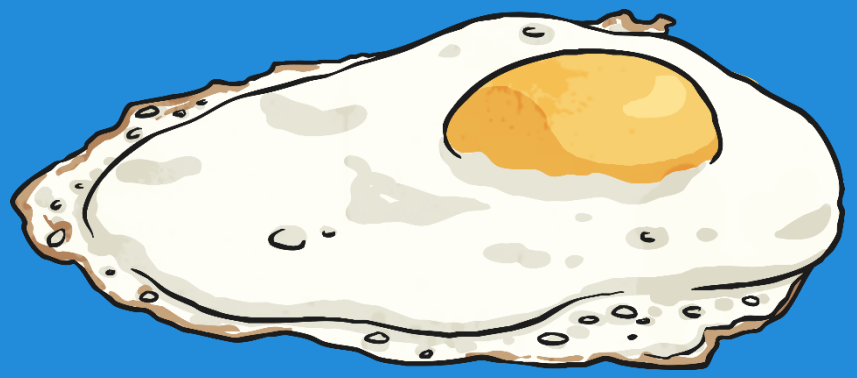
These are physical changes because no new materials are created. They are reversible changes because they can be changed back or reversed.

Kitchen Creations

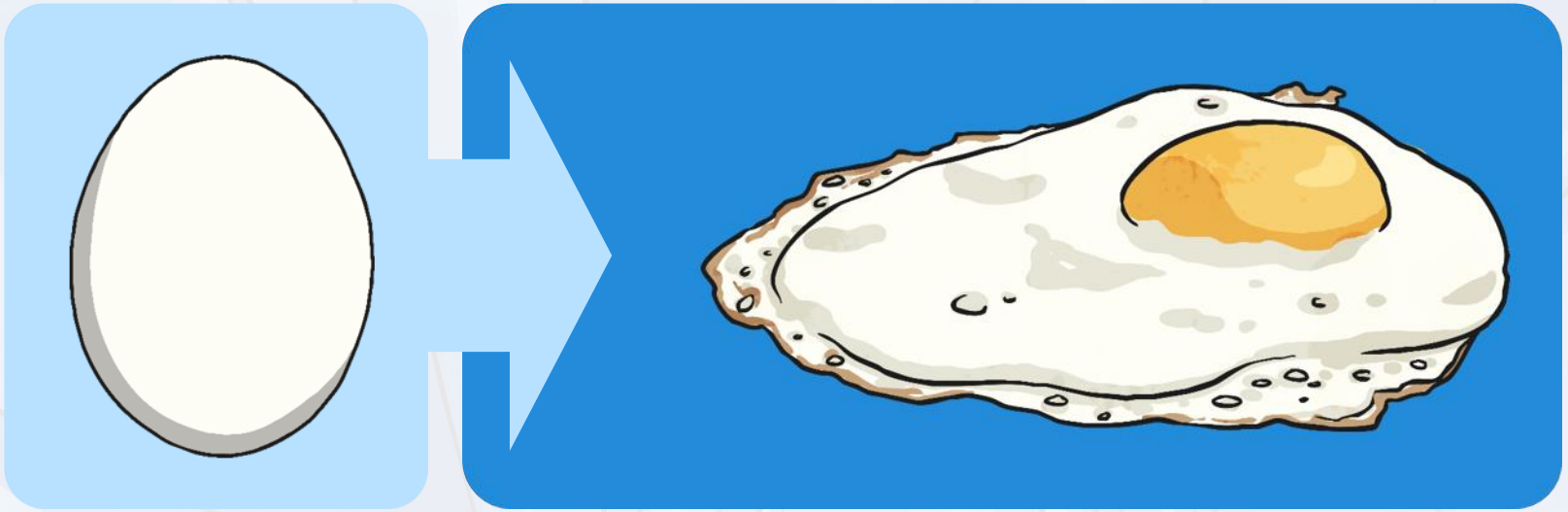
Chemical changes involve reactants and products.
The reactants are the materials that you start off with,
before the chemical change happens.
The products are the materials that are formed in the chemical change.

What was the reactant and what was the product in the egg example? What caused the chemical change?





Kitchen Creations



Heat caused the chemical change to occur.

True or False?

Use what you have learnt to decide whether these questions are true or false. After you have made your decisions click on the questions to see if you were correct.

Melting chocolate is an irreversible change.

Heating materials always causes reversible changes.

An irreversible change is one that cannot be changed back.

Reversible changes create new materials.

Irreversible changes can create useful materials.

Baking bread is an irreversible change.