



## WHAT SHOULD I ALREADY KNOW?

- Compare and group materials together, according to whether they are solids, liquids or gases.
- Observe that some materials change state when heated or cooled, and measure and research the temperature at which this happens in degrees Celsius.
- Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.

## NOTABLE SCIENTIST

### SIR HUMPHREY DAVY



Davy invented the safety lamp used in coalmines. Before Davy's lamp, the gas from the old lamps used to perform an irreversible change and react with the gases in the air (causing it to explode and injure/even kill the miners).

In addition, Davy added an extra material that turned blue when carbon dioxide was near (a reversible reaction) to warn the miners that dangerous gases were near.

## STICKY KNOWLEDGE

Mixtures are made when two materials are combined.

A solution is a type of mixture but one material is liquid.

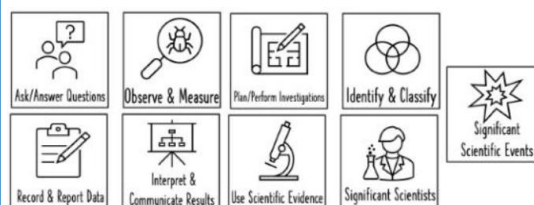
Sometimes mixed substances react to make a new substance. These changes are usually irreversible.

Heating can sometimes cause materials to change permanently. When this happens, a new substance is made. These changes are not reversible.

## VOCABULARY

Mixture	When two or more materials are combined
Solution	A type of mixture, where one of the materials dissolves into the other.
Dissolve	For one material to be broken up and absorbed into another
Soluble	A material that is able to be dissolved
Reversible Change	A reaction or mixture that can be undone. You can get the materials back that you started with.
Irreversible Change	When materials react/mix together and cannot be undone. This usually results in something new being made.
Working Scientifically	Asking questions, designing experiments and recording the results.

## WEAVING CONCEPTS



Sugar is a soluble material.



Sand is an insoluble material.



## ENQUIRY TYPES

1. Observing changes over time
2. Pattern Seeking
3. Grouping & Classifying
4. Fair Testing
5. Research

