

**Year 5 Spring Term 2024**

**Changes of Materials**

Can all changes be reversed?

**Reversible Changes**



liquid chocolate  
– cool –  
solid chocolate



solid lolly  
– heat –  
liquid lolly



mixture of rice  
and flour  
– sieve –  
both separated



dissolved sugar  
– evaporation (heat) –  
solid sugar

These are **PHYSICAL** changes – they **can** be reversed as no permanent change has been made.

**What should I already know?**

- I can compare and group materials together, according to whether they are solids, liquids, or gases.
- I can observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C)
- I can identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.

**What will I know at the end of the unit?**

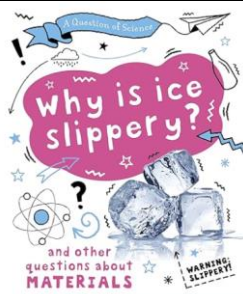
- I know that some materials will dissolve in liquid to form a solution and describe how to recover a substance from a solution.
- I can use knowledge of solids, liquids, and gases to decide how mixtures might be separated, including through filtering, sieving, and evaporating.
- I can demonstrate that dissolving, mixing and changes of state are reversible changes.
- I can explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda.

**Vocabulary**

solute  
solvent  
reversible  
evaporate  
chemical change  
effervescence

fair test  
corrosion  
combustion  
extinguish  
reaction  
carbon dioxide

**Recommended Reads**



**Inventor/ Scientist**

Clarence Birdseye  
Inventor – the founder of the modern frozen food industry.



**Suggested Investigations**

- What would you need to survive on a deserted island?
- Are all changes to materials reversible?
- What is a chemical change?
- What causes iron to rust, and can we stop or reduce it?