

FRANKENWEENIE

REVERSIBLE AND IRREVERSIBLE CHANGES

Mr. Rzykuski is proud of Victor's passion for science, but he wants to teach him about the power of science and how to carry out experiments responsibly. Science has the power to change materials – sometimes for good (i.e. they can't be changed back). He decides to teach him about **reversible and irreversible** changes to help him to understand about the power of science.

A **reversible change** is when you can change a material, then change it back to its original state e.g. freezing water into ice, melting it, then freezing it again.

An **irreversible change** is when you change a material, but then you can't change it back to its original state e.g. cake mixture, baked into a cake, the cake cannot be changed back into the runny mixture.

When some solids (like salt and sugar) are mixed into water, they **dissolve** – they form a solution with the water and create a new liquid. In most cases, you can get the solid mixture back by filtering and then heating the water so that it **evaporates** (turns from liquid into vapour). Sometimes you can't and you get a **reaction** – like when you mix bath bombs with water and you get bubbles.



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Help Victor sort these materials into the right categories.

REVERSIBLE CHANGES	IRREVERSIBLE CHANGES

1. Victor's mum stirs some sugar into water, and the sugar **dissolves**. Can she reclaim the sugar once it's dissolved?
2. Edgar is playing with sand and water. He mixes it into the water and then pours the water into a filter.
3. Mr. Ryzkuski makes himself a cup of black coffee with coffee granules and hot water.
4. Toshiaka experiments by mixing some flour with water, but he finds that it doesn't dissolve. Can he get the flour back?
5. Elsa fries an egg. Can she turn it back into its pre-cooked form?
6. Weird Girl burns her homework, then decides she needs it. Can she turn the soot back into paper?