Properties and Changes of Materials

<u>Learning objective:</u>

To explain that some changes form new materials, and that these changes are not usually reversible.

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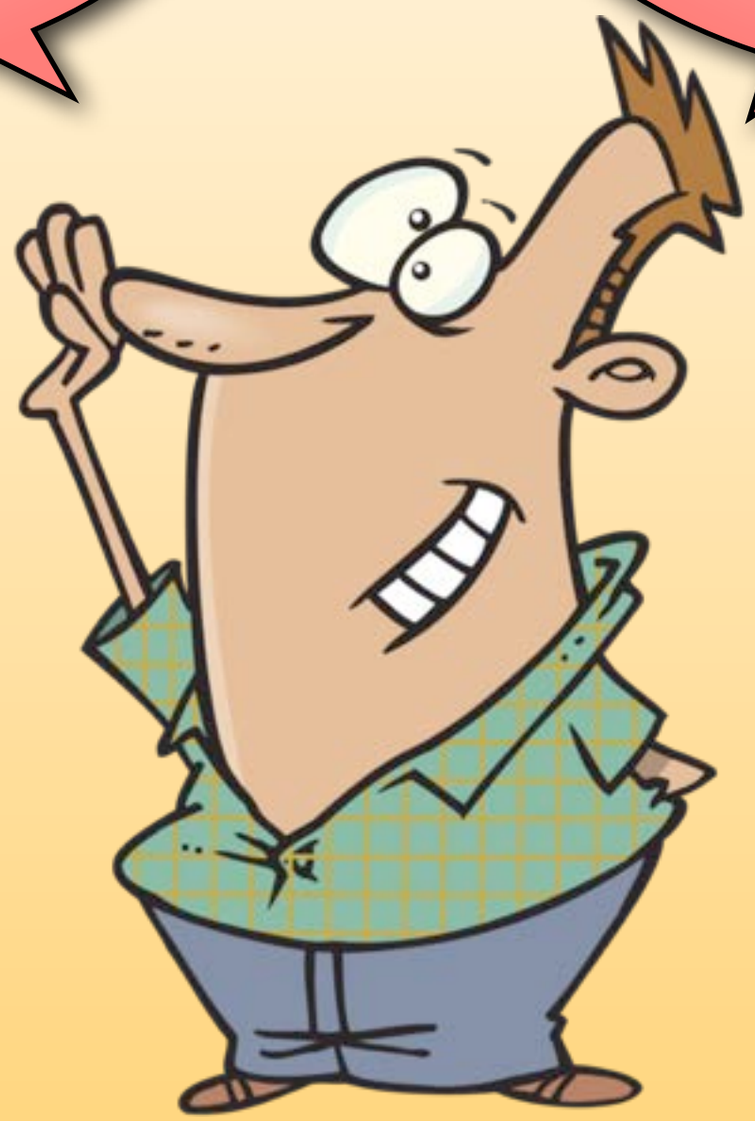
What is a reversible change?

What is an irreversible change?



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A reversible change is when two materials are mixed together and can then be separated again using filtration or evaporation. Both soluble and insoluble materials can be separated from water.

Can you think of any examples of this?

An irreversible change occurs when two materials are mixed together and react with one another to create a new substance. This means that the two materials cannot be separated again.

What happens when you mix plaster of Paris with water? Why is it an irreversible change?

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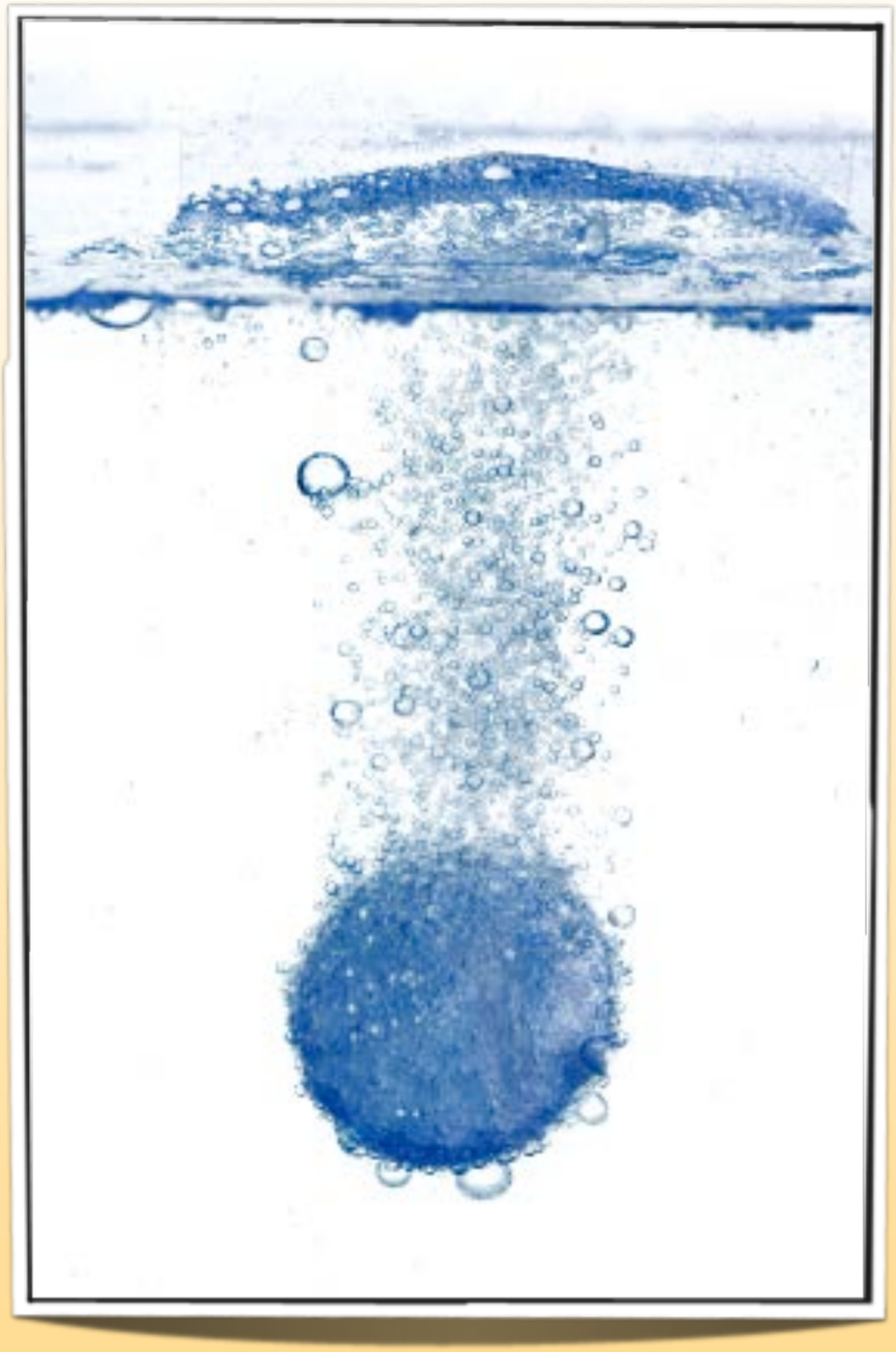

What happens when you mix effervescent tablets with water?

Why does this happen when materials like this mix with water?

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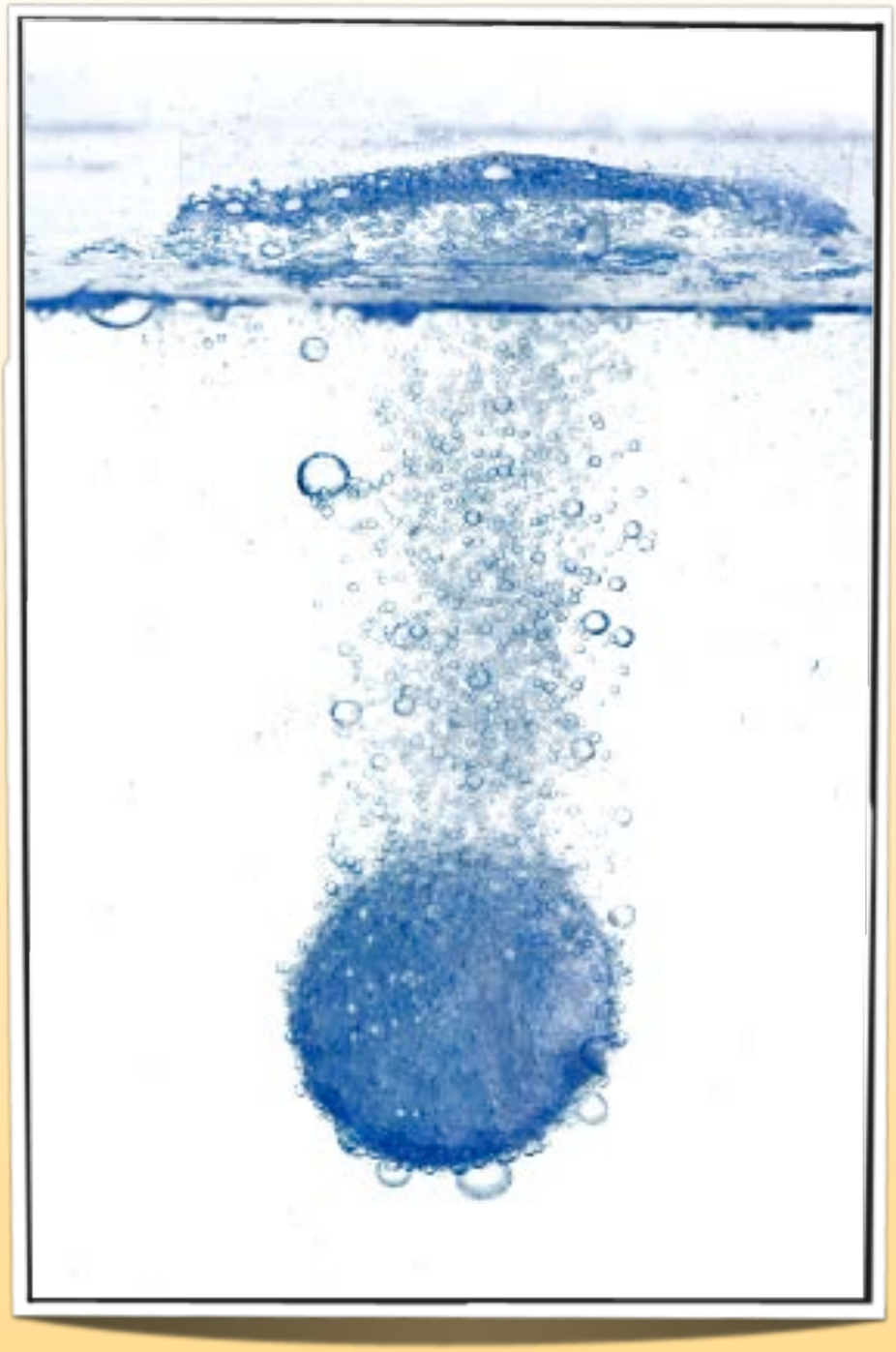

This tablet reacts with the water to produce a gas. This gas escapes as bubbles. The gas is a new substance that was produced through the reaction so it is not possible to get the materials back in their original state. This means that it is an irreversible change.

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Today we will be investigating some different irreversible changes. How can we make sure we stay safe when carrying out scientific experiments?

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