

Name _____

Can You Make Something “Disappear” in a Chemical Reaction?



Have you ever mixed baking soda and vinegar and watched it fizz? It might look like something is disappearing—but is it really gone? The answer has to do with chemical reactions and the Law of Conservation of Matter.

A chemical reaction is when substances mix and change into something new. They might bubble, change color, get hot or cold, or even produce gas. But even if something looks like it disappears, it hasn't. The matter is still there—it's just in a new form.

Let's look at that baking soda and vinegar reaction. When they mix, they form a new substance and release carbon dioxide gas. That gas floats away into the air. It may seem like some matter vanished, but it didn't. The gas is invisible to your eyes, but it's still there.

The Law of Conservation of Matter says that matter cannot be created or destroyed—it can only change form. This means that in every chemical reaction, all the matter you started with is still there afterward, just in a different form. That's true for fizzing science experiments, cooking food, and even rusting metal.

Sometimes, the change makes it hard to see where the matter went. For example, when a candle burns, the wax melts and turns into gases. You can't see all the gases, but they are still matter. They have mass, even if you can't catch or hold them.

Scientists use special tools to measure the matter before and after reactions. If you could collect every bit of gas, liquid, and solid, you would find that nothing has gone missing. The total amount of matter stays the same.

So, can you make something disappear in a chemical reaction? Not really. It might look like it's gone, but it has simply changed form. That's the magic—and the science—of chemistry.