

PERIODIC TABLE SPECIAL

To celebrate the International Year of the Periodic Table, you will meet a chemical element or two in each experiment.

THE LAB

Eight pages of things
to make and do

Kitchen
chemistry

Make fizzy lemonade

Learn about elements as you turn a citrus fruit into a thirst-quenching fizzy drink.

What you need

- Knife
- 1 lemon
- Juicer
- Bowl or jug
- Glass
- Water
- Ice cubes
- 1tsp sugar
- 1tsp bicarbonate of soda

Instructions

Cut the lemon in half. Place the juicer over a bowl or jug (if it does not have a juice collector) and squeeze each lemon half over the juicer. Pour the juice into a glass, fill the rest of the glass with water and add ice. Add sugar to make it a little sweeter. Now, for the science. Add a teaspoon of bicarbonate of soda to the juice and watch what happens. You should see lots of small bubbles forming instantly. Congratulations – you've used chemistry to create your own fizzy lemonade.

NATURAL CLEANER

The citric acid in lemon juice is great at breaking down certain types of dirt, making it easier to wipe away grime.

Lemon juice contains an acid.

How does it work?

A chemical reaction occurs when two substances are combined to form a new substance. In this experiment, a reaction occurs between an acid and a base. The acid is the lemon juice. The base is the bicarbonate of soda. When they are mixed together, carbon dioxide is released. Carbon dioxide (CO_2) is a colourless and odourless gas made from one atom of carbon and two atoms of oxygen joined together. When the gas forms within a liquid, it creates bubbles.

MEET THE ELEMENTS

One carbon atom and two oxygen atoms join to make carbon dioxide.

6	C	8	O
	Carbon		Oxygen

