



# Fizzing Lemon

When life gives you lemons,  
why not make lemonade!

Ingredients	Equipment
<ul style="list-style-type: none"><li>● 1-2 lemons</li><li>● 1 teaspoon of bicarbonate of soda</li><li>● cold water (at least equal to the amount of lemon juice)</li><li>● 1-2 teaspoons of sugar</li></ul>	<ul style="list-style-type: none"><li>● juicer</li><li>● glass (A clear glass is best so you can watch the chemical reaction)</li><li>● spoon</li><li>● measuring spoons</li></ul>

## Method

1. Using the juicer, squeeze the lemon and measure the juice squeezed. You will need to know this later.
2. Add the juice to the glass.
3. Add ½ tspn of bicarbonate of soda and watch the reaction.
4. Add ½ tspn of bicarbonate of soda and watch the reaction again!
5. Stir to keep the reaction going.
6. Add 1-2 tspns of sugar to water to taste and add this to the lemon mixture.
7. Enjoy over ice and a slice of lemon (optional).

## What's happening?

- When the lemon juice and the bicarbonate of soda mix, they form a chemical reaction known as an **acid-base reaction**.
- The reaction produces a gas called carbon dioxide (CO<sub>2</sub>). This creates bubbles when formed in a liquid like in this fizzing lemonade experiment, known as the process of **carbonation**.



## Extend Yourself!

- Which ingredient is an acid and which is a base?
- Try this experiment using a variety of different fruit juices and see the different results produced. Which fruit had the biggest reaction?
- Draw or write about the process and result