## Tasty Science - How to create Fizzing Lemonade!

## You will need:

- 1-2 lemons
- 1 teaspoon of bicarbonate of soda/baking soda
- cold water (at least equal to the amount of lemon juice)
- 1-2 teaspoons of sugar (to taste)
- jug
- juicer
- glass
- spoon
- sieve
- measuring spoon


Believe it or not, you can create carbon dioxide $\left(\mathrm{CO}_{2}\right)$ using items from around the house! In this simple science experiment, we mix a base with an acid to get a chemical reaction.

This chemical reaction produces $\mathrm{CO}_{2}$ which are the bubbles you find in commercial fizzy drinks.

Step 1: Slice your lemon up and it's time to get squeezing with your juicer!
Given the stickiness of lemon juice, you might want to put something protective down on the table to protect against any spillage.


Step 2: Once you have finished squeezing out the lemon juice, use the sieve to decant and filter the juice into your jug so that the loose pieces are filtered.

Step 3: Pour your filtered lemon juice into a glass.


Step 4: Next it's time to add 1 x teaspoon of baking soda/bicarbonate of soda.

Following this, the chemical reaction will start!

The acid in the lemon juice reacts with the baking soda or bicarb. You can see the mixture will bubble as it creates the gas, which in turn causes the fizzing!



Step 5: To complete your lemonade, add 1-2 teaspoons of sugar for flavour and enjoy!

Optional addition - for 18+ ONLY: For adults carrying out this activity with their little helpers, why not add some gin for additional flavour and as a nod to the science of gin making!

