

# EGG AND ACID EXPERIMENT

## Context

An important part of digestion happens in the stomach, and inside our stomach we have an acid which is made up of hydrochloric acid (very strong), which is released into your stomach from glands. In this experiment you will see the effect that high acid foods can have on an object (egg shell).

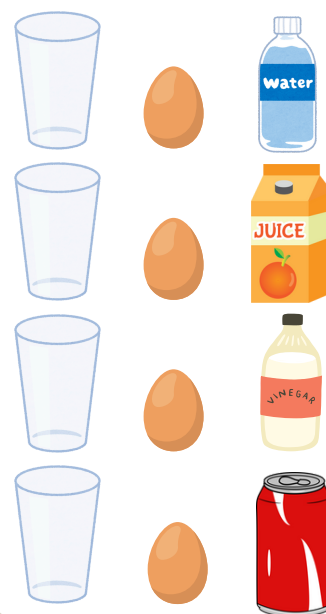
You will be placing an egg into high acid liquids to show your class the power of acid, and describe the purpose of it in turning our food into 'chyme'.

## Tools and Ingredients

- Range of liquids: Water, Vinegar, Coca Cola (full sugar) and Orange Juice
- 4 eggs
- 4 cups

## Method

1. Set out the ingredients and tools you are using in front of you.
2. Talk the pupils through the ingredients that you are using, high sugar/ acid (vinegar, coca cola and orange juice) and neutral/ control (water).
3. Put the eggs in the cup (gently so they don't crack or smash, then pour over with the liquid
4. Move the cups to the side and wait 24 hours. If you use clear vinegar, you should already see the chemical reaction that dissolves the calcium carbonate shell.
5. Empty the liquid out of the cups, and inspect the eggs with the class
  - If you have 4 tables in your class, you could give one egg to each table to inspect, then rotate
6. Set a timer for 24 hours and check on your experiment the following day.
7. Collate all of the results and ask the pupils what they have learnt.
  - The eggs in the high sugar/ acid liquid will have the enamel of the shell removed, only leaving the sack and egg inside. This is why it is important to brush our teeth and limit sugary foods



## Reflection Questions

What have you learned today?

What did you observe in the experiment?

How did this experiment make me feel?

If you could do this experiment again, what would you change?

If you could learn more about this topic, what would you like to know?

## Top Tips

It would be recommended to demonstrate this experiment at the front of the class, as this experiment has to be left for 24 hours.

If you get pupils involved in this experiment, please be aware of religious beliefs, allergies and intolerances, as this experiment uses eggs.