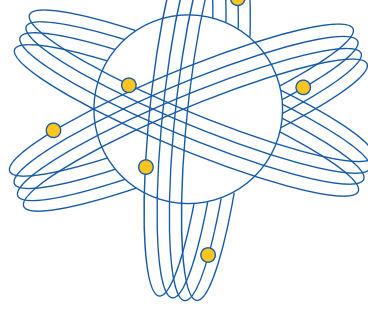


Monster Mouth Madness



In this experiment, you'll turn an ordinary cup into a creepy creature that foams at the mouth.

But first, let's make some predictions!

Before we get started, let's make some guesses about what might happen. Scientists like to make predictions, or hypotheses, before they do experiments. It helps them figure out what to expect and why things happen the way they do.

1. Have a go at making your best guess using the questions below:
2. What do you think will happen when you mix baking soda and vinegar?
3. Do you think the foam will come out the top of the cup or the hole?

TĪMATA! LET'S GET STARTED!

What you will need:

- Plastic or paper cups
- A spooky face/cartoon to stick on the front - or draw directly onto the cup
- Scissors (to cut a "mouth" hole in the cup)
- Baking soda (2-3 tablespoons per cup)
- Vinegar (1/2 cup for each monster)
- Food colouring
- Dish soap (a squirt to help make more foam)

Instructions:

1. Stick or draw a spooky face onto the cup/s. Ask an adult to help you cut a hole where the mouth is.
2. Place 2-3 tablespoons of baking soda inside the monster cup.
3. Mix the vinegar, dish soap and food colouring in a separate cup.
4. Its time to bring your monster to life! Pour the vinegar mix into the monster cup and watch as the foamy mixture bursts out of your creature's mouth!

How does it work?

The foaming effect happens because of a chemical reaction between the baking soda (a base) and vinegar (an acid). When they mix, they produce carbon dioxide gas, which creates bubbles and foam. The small hole in the monster's mouth directs where the foam escapes, making it look like the creature is foaming from its mouth. The size and shape of the hole affect how fast or high the foam erupts, smaller holes produce a more forceful, dramatic foam while larger holes let the foam flow more gently.

Reflect:

- Why do you think the reaction produces bubbling and foam?
- Was the reaction bigger or smaller than you expected? How could you change this?

Extra for Experts!

Try changing the amounts of baking soda, vinegar, or food colouring — or even use different sizes and shapes of mouth holes — to see how each one changes the effect.