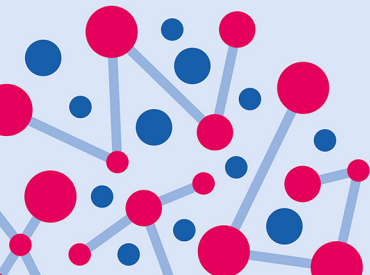




# Ghostly writing

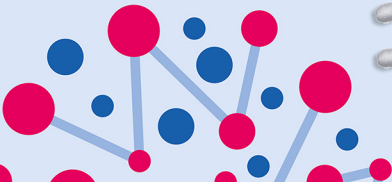
At-home science activity

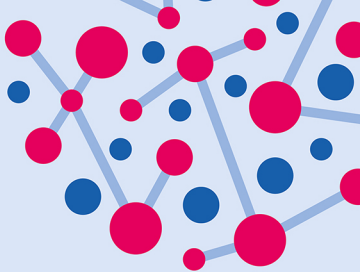


twig EDUCATION

# You will need:

- 60ml bicarbonate of soda
- 60ml water
- Beaker
- Sheet of paper
- Cotton buds
- Light bulb (the filament type that warms up when on) or tea light/candle
- Concentrated grape juice
- Paintbrush





1. Combine the water and bicarbonate of soda in a beaker and stir thoroughly.
2. Use a cotton bud to soak up some bicarbonate of soda solution and write a secret message onto the sheet of paper, leaving it to dry for at least 10 minutes.

3. The writing can be revealed using two different means of chemical change

- Hold the message over a warm filament light bulb or (very carefully) above the flame of a tea light or candle.
- Paint over the message with concentrated grape juice.

4. Swipe to find out more about the science behind the experiment!





- Grape juice is an acid.
- Bicarbonate of soda is a type of chemical known as a base. It becomes an alkali when it dissolves in liquid.
- Alkalis are the chemical opposites of acids.
- When these two types of chemical come together a reaction occurs, which causes a colour change that reveals the hidden writing.
- Bicarbonate of soda also undergoes a chemical change when it is heated – so when held over the lamp or candle it turns brown to reveal the “ghostly” lettering.