16 AMAZING SCIENCE

EXPERIMENTS YOU CAN TRY AT HOME

MOVING A CAN WITHOUT TOUCHING IT

YOU WILL NEED:

- ✔ a balloon
- ✔ a tissue
- ✔ an empty drinks can



blow rub tie

★ **a** _____ air into the balloon and **b** _____ the end.

★ **c** _____ the filled balloon on your hair or on a tissue.

★ Put the can on the floor and hold the balloon near it.

★ **Pull the balloon away from the can slowly, and the can will move towards the balloon!**

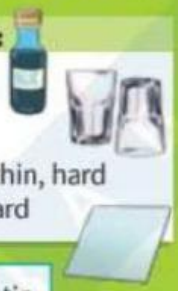
HOW IT WORKS

The can moves towards the balloon because when you rub the balloon, it gets a negative [1] *electricity / electrical* charge. When you put the balloon near the can, the [2] *electricity / metal* in the can gets a small positive charge. The result is that the static [3] *electricity / air* in the balloon attracts the can.

KEEPING LIQUIDS APART

YOU WILL NEED:

- ✔ two glasses
- ✔ salt
- ✔ food colouring
- ✔ a small piece of thin, hard plastic or cardboard



cover fill stir

★ **d** _____ the glasses with water.

★ Put two large spoons of salt into the first glass and **e** _____ it.

★ Add a few drops of food colouring into the other glass.

★ **f** _____ the glass of coloured water with the cardboard/plastic. Turn it upside down and put it on top of the glass of salt water. Pull the cardboard/plastic out from between the glasses.

★ **The coloured water and the salty water won't mix!**

HOW IT WORKS

The coloured water and the salty water stay apart because salt water is heavier than [4] *normal / warm* water. The [5] *heavier / lighter* salt water stays at the bottom of the glass and the [6] *heavier / lighter* coloured water floats at the top.

GETTING AN EGG INTO A BOTTLE

YOU WILL NEED:

- ✔ an egg
- ✔ a towel
- ✔ a glass bottle with a 25–30 mm lid
- ✔ some hot water



boil pour shake wrap

★ **g** _____ the egg for 4 minutes, until the white of the egg is hard but the yolk is soft. Let it cool. Then peel it.

★ **h** _____ the hot water into the bottle. Put on the lid, **i** _____ it in a towel and **j** _____ it well.

★ Take off the lid and pour out the water.

★ Put the egg in the opening of the warm bottle.

★ **After a few minutes the egg is pulled into the bottle.**

HOW IT WORKS

The egg is pulled into the bottle because the hot water in the bottle makes the bottle [7] *smaller / warm*, and the air in the bottle gets warm too. Hot air expands: it gets bigger and takes up more space than [8] *cold / hot* air. Cold air contracts, in other words it gets smaller and takes up less space than warm air. So as the air in the bottle goes back to room temperature, it gets [9] *smaller / warmer*, and so it pulls the egg into the bottle.

ABOUT YOU

Are you more into science or arts? Why? What scientific experiments have you done at school?

VOCABULARY Doing experiments

EP 1 **Look at the instructions for three experiments and complete a–j in the sentences with the words in each box.**

76 2 **Choose the correct words to complete the *How it works* explanation for each experiment. Then listen and check.**

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LIVEWORKSHEETS