

STATIC MAGIC



YOUR CHALLENGE!

Using a balloon can you make objects from around your home move without touching them using static electricity?



SCIENCE OR MAGIC?



You will need:



Balloon's
Material made
from wool, nylon
or polyester

Have you ever rubbed a balloon on your clothes and found that it stays in place? Or maybe you put it above your head and had a hair raising experience!

Is it magic or is there a scientific reason? What you are experiencing is **static electricity!**

What to do:



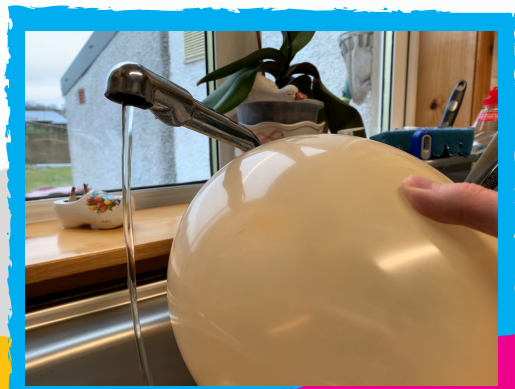
STEP 1: Blow up a balloon and tie it.

STEP 2: Rub the balloon back and forth quickly on a piece of material such as a t-shirt.

STEP 3: Start by holding the balloon above your head and watch what happens to your hair.

STEP 4: Next try holding the balloon close to some other objects such as an empty drinks can, running tap water, salt and pepper or a straw.

STEP 5: Rub the balloon again and try holding it close to different objects and watch what happens.



Does charging the balloon for longer make a difference?

What material works best for charging?

Do you notice a pattern in the type of objects the balloon attracts or repels?

Does it matter how far away the balloon is from the object?

Does the size of the object have an effect?



AND NOW FOR THE SCIENCE

When you rub two objects together, one object will have a positive electrical charge and the other a negative. Objects with different charges (positive and negative) will attract each other, while objects with similar charges (positive and positive) will repel each other. It's a bit like a magnet! That's why if you hold a charged balloon above your hair it will stand up.

The positive charges in the hair are attracted to the balloon which has a negative charge.