

Pouncing Cats

Using static electricity to make tissue paper cats 'pounce' onto a balloon

Approx time: 30 - 50 minutes

Key words / Topics:

- > Balloon
- > Charge
- > Material properties
- > Static electricity
- > Tissue paper

Introduction

Ever wondered why your hair sometimes sticks up and won't go down, or why you sometimes get a mild shock when you touch something? These are effects of the build-up of static electricity.



Purpose of this activity

In this activity you will investigate the effects of static electricity. You will rub a balloon against your jumper and use the build-up of static charge to make tissue paper cat shapes 'pounce' onto and stick to the balloon.

Introduction

We are going to investigate the effects of static electricity and use it to make paper cats 'pounce' onto a balloon. You will need balloons, tissue paper and a safe pair of scissors.



Making tissue paper cats

Using safety scissors cut out cat shapes from tissue paper.

Try using different coloured tissue paper to make different coloured cats for more visual interest.

Blowing up the balloon

Blow up and tie your balloon – ask someone for help if you need it. The balloon should be blown up fully and tied so that no air can escape.

Making static electricity

Now rub the balloon against your jumper several times to 'charge' it with static electricity. If you are not wearing a jumper, then use your hair instead.

Making the cats 'pounce'

Now hold the balloon just above your tissue paper cat shapes. The cats should 'pounce' onto the balloon and stick to it.

Have fun watching the cats leap around and start to think about why the cats 'pounce' onto and then stick to the balloon? How close does the balloon need to be for the cats to pounce? What is causing this to happen?

The science

The balloon is charged with static electricity when it is rubbed against the jumper or hair. The tissue paper cats are attracted to this so 'pounce' up towards the balloon and stick to it. When this static charge wears off, the cats will fall back off.

