

Lightning challenge



Did you know?

Electrical charges really are everywhere, just like it says in our animation - even in sweets. In fact, if you bang together sugar cubes or Polo mints, you can make sparks of light fly off them. The scientific name for this is triboluminescence or 'rubbing light'.

Science scene-setter

The reason triboluminescence works is still a bit of a mystery! Scientists think that when you break certain chemical bonds by ripping, crushing or tearing them, some of the electrons are released and interact with the air. Then we see that energy as light. It's a bit like the static electricity discharge that causes lightning if conditions are right in the sky.

Put it to the test

With your child(ren), kick up a storm and create your very own lightning. Can they make objects glow and spark in the dark without setting light to anything?



Energise Anything!

e-on

Key activity steps



1 Research



Watch our animation *Energy is electrifying*: eonenergy.com/primaryathome

- Can your child(ren) take you on a tour of places at home where there are electrical charges?

2 Design

Gather together some items to test for triboluminescence. Suggest your child(ren):

- Practise in the light first so you know what to do
- Wait until it's night-time or find a really dark place
- Then let your eyes adjust to the dark and rub your items together
- It might take a bit of practise, so try not to get discouraged if it doesn't work first time.

3 Test

Try to make sparks fly:

- Chomp on sugar cubes or Polo mints in the dark. Keep your mouth open and get your family to watch out for sparks of light
- Take a length of Duct tape and stick it to itself. Then pull it apart again quickly and watch for a blue light where it is unsticking (some brands work better than others)
- Stick down a self-seal envelope and then quickly pull the seal
- Bang together two pieces of rose quartz in the dark and watch for the glow (you may need goggles to protect eyes)
- Try crushing some sugar crystals in a pestle and mortar.



Equipment and resources

- Polo mints or sugar cubes
- Duct tape or sticky tape
- Self-seal envelopes
- Sugar cubes, pestle and mortar
- Rose quartz or plain quartz
- Glasses or goggles for eye protection when banging rocks together

E.ON's Energise Anything has already engaged over 25,000 young people. We asked some of their teachers to describe it in three words. Here's what they said most often!

