



Horrible Science Downloadable Experiments – 7 HOW TO BE A BRIGHT SPARK

Heinrich Hertz (1856-1894) made radio waves using an electric spark. He detected the radio waves using a wire loop with an electric current running through it. The radio waves caused a second spark to leap a tiny gap in the loop. Here's what you need to send your own radio waves and be a bright spark just like Heinrich on the right.



WHAT YOU NEED:



- Big blob of blu tack or modelling clay
- Rubber gloves
- A dark night (you could choose a graveyard at midnight – but this isn't strictly necessary.)
- Disposable aluminium flan dish
- Sheet of plastic or polythene
- A pair of scissors or some other metal object

WHAT YOU DO:

1. Stick the blob of blu tack to the bottom of the dish. Put on your rubber gloves to protect your hands from electric shocks.
2. Spread the plastic or polythene on the floor. Darken the room.
3. Holding on the blu tack rub the plastic about 50 times with the dish. Don't touch the dish itself. I said DON'T ... Or you'll get a shock if you've forgotten your gloves.
4. Still gripping the dish by the blu tack put the tip of the scissors close to the dish.

WHAT HAPPENS:

You should see a tiny electric spark and hear a tiny crack.

THIS IS BECAUSE:

When you rubbed the plastic with the metal you picked up electrons from the plastic. When you put the scissors close to the dish the electrons leapt across to the scissors forming an electric spark. Hertz used a similar spark to make radio waves and in fact your spark made a few radio waves too.

Bet you never knew!

Heinrich Hertz never enjoyed the fame his experiment brought him. He developed a deadly disease and a botched op led to blood poisoning. The suffering scientist died aged only 37 – but he hasn't been forgotten. When you tune your radio you use mega-Hertz – a measurement named in honour of the scientist who discovered radio waves.

