



# WEEK 19 - ELECTRICITY



## Science in the News



Whitelee wind farm (pictured), near Glasgow(PA)  
Photo credit: Phoebe Weston, Science Correspondent, The Independent.

### Parents:

For primary learners, work through our full 'electricity' lesson with your child. It is based around the national curriculum learning objectives for year 6 on 'electricity'. Download here – [Science Creates Outreach](#)

For secondary learners, the contents can be discussed in more depth using the [original online article](#).

### A BATTERY HALF THE SIZE OF A FOOTBALL PITCH!

A battery half the size of a football pitch is going to be installed in a wind farm near Glasgow, Scotland. When the wind is blowing, the turbines will convert this into power which will be stored in the battery. This means that when the wind isn't blowing, there will still be a supply of electricity generated by green sources to power more than 300,000 homes nearby.

The battery is a Lithium - Ion battery, which is the common type of battery that is used in mobile phones and computers. These types of batteries are rechargeable but don't last forever. Still, with the size of this battery and the amount of electricity it can store, it has twice the capacity of any other battery in the UK and is a step towards upping the amount of renewable energy in the UK.



### Try it at home - Make water bend!

#### What do you need?

- Access to a tap with running water
- A plastic comb OR a balloon (or both!)

#### What am I learning?

This is a very easy and simple experiment but the idea is quite complicated. When you rub the balloon or the comb on your hair, negatively charged particles are transferred to it. This means the object now has a *static charge* that is negative. The water in the stream contains both positive and negative particles, and is neutral. Because positive and negative charges attract, the negative object attracts the positive particles in the water and the water bends!

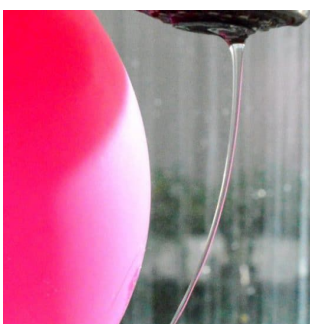
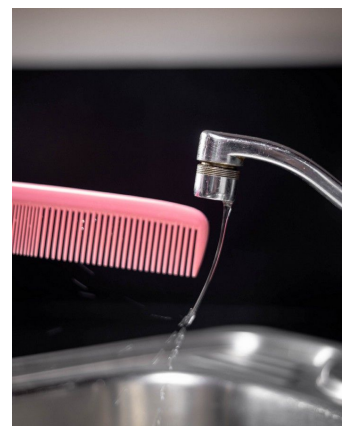
#### Instructions:

1. If you are using a balloon for this, blow up the balloon.

2. Turn on the tap so a narrow stream of water is coming out - you don't want the water to be flowing very strongly for this!

3. If you are using a comb, comb your hair like normal, running it through your hair 10 times. If you are using a balloon: rub the balloon against your hair for a few seconds.

4. Hold the object you have charged next to the running water and watch as it bends!



If you want to learn more about the science behind this, check out our lesson on our website – [Science Creates Outreach](#)

# outreach WEEK 19: ELECTRICITY

Solve the anagrams!

I C U  
C 1 R  
I T

T E L  
A 2 O  
G V

E B T  
A 3 R  
T Y

L S  
C 5 L  
E

I E R Y  
C 4 T  
C L  
E I T

A  
S 6 I  
C T  
T

Answers: 1. Circuit, 2. Voltage, 3. Battery, 4. Electricity, 5. Cells, 6. Static

## Read, Watch, Ask



Have a read of our [lesson](#) to learn more about electricity.



Want to construct your own circuit? Play [here](#) to put to use what you've learnt.



Got any questions about today's topic? Email us at [info@sciencecreates-outreach.co.uk](mailto:info@sciencecreates-outreach.co.uk) and we'll answer them!



### Did you know?

Lightning has a potential of 100 million volts! That's enough energy to power a small village for a day, or one light bulb for 6 months.

## Be Inspired...

In this section we interview inspirational members of the Science Creates science community so that you can learn more about different jobs, what they involve and how you can do the same! This week we interviewed Josephine from a company called FluoretiQ.

### What does FluoretiQ do?

Every now and then, we may feel poorly because foreign bacteria are invading our bodies. Today, it takes at least 2 days to work out which bacteria it is and which medicine would work best. FluoretiQ are creating a new test to diagnose infections in 15 minutes which means everyone can get better sooner.

### What is your job title and what do you do?

As the CTO, I lead the team who are making our 15 minutes test. Every day is different, some days I may be buried under stacks of documents for review, some I am planning and others I get more hands on with coding and data analysis.

### Do you like your job? Why?

I love my job. It can be tough at times but I learn new things every day and I get to work with a lot of different people.

### How did you get your job?

Like many other young women growing up in Cameroon, my parents had a major role to play in my choice of career. I studied science subjects at school and spent summers taking extra courses. At uni, I did a degree in Electrical and Electronics Engineering which led to a job in Oil & Gas, where I worked in Cameroon and USA before moving back to the UK to start FluoretiQ.

### Have you always wanted to do this job?

Starting a business wasn't something I thought was possible. I knew I wanted to be a pioneer in my field and I enjoyed problem solving. It really motivates me when I think about how many people our technology will help.

