

This term our topic is...

Electricity

Concept cartoon

WALT: Think scientifically
Context: Concept cartoons



The balloon will create electricity because it will make her hair move.



The balloon will not create electricity because it is not plugged into anything.

My first thoughts...

Watch this video

- <https://www.bbc.co.uk/bitesize/clips/zwqd7ty>

Think – pair - share

- What do you have at home that uses electricity?

What is Electricity?

Definition:

When we refer to **electricity**, what we usually mean is **electric current**, which is the **flow of electric charge**.

Electricity occurs naturally. Some examples include:



Lightning



Static electricity



Bioelectricity is produced in living things, such as electric eels

What is Electricity?

Electricity powers many of the things we use everyday - televisions, phones, computers, lights and microwaves. Electricity occurs naturally, such as in lightning, or even in your body to send messages from your brain to your organs!

Over time, scientists worked out how to use electricity to make things work. They also discovered ways to generate, or make, electricity. This meant that electricity was more readily available and things could be powered more easily. This sort of electricity is known as current electricity.

Current electricity is a flow of electrical charge through a material. Often it flows through wires to travel from a power source to an appliance.



Where Does Electricity Come From?



So there are several different ways of generating electricity for us to use to power our appliances.

Some of these methods of generating electricity are renewable. This means they will never run out, so we can use them to generate electricity for ever.

However, some methods are non-renewable. This means that they will run out, and when they do we will not be able to use them to generate electricity.

Can you sort the following types of energy sources into renewable and non-renewable?

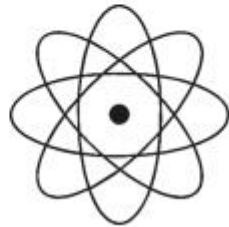
Fossil Fuels

Coal, oil and natural gas are fossil fuels. Burning them produces heat, which generates electricity.



Nuclear

This is the energy that is created when atoms are either combined or split, creating heat. This can be converted into electricity.



Hydro and Wind

Water is used in dams, and wind is used to turn windmills. These both generate electricity.



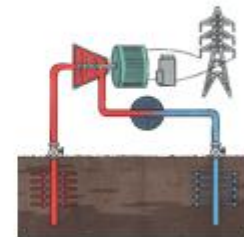
Solar

The sun's rays shine on special panels, which convert its energy into electricity.



Geothermal

Geothermal energy is heat from the Earth, which can be converted into electricity.



WALT: Sort

Context: Renewable and non-renewable energy sources

_____ electricity occurs naturally and an example is _____.

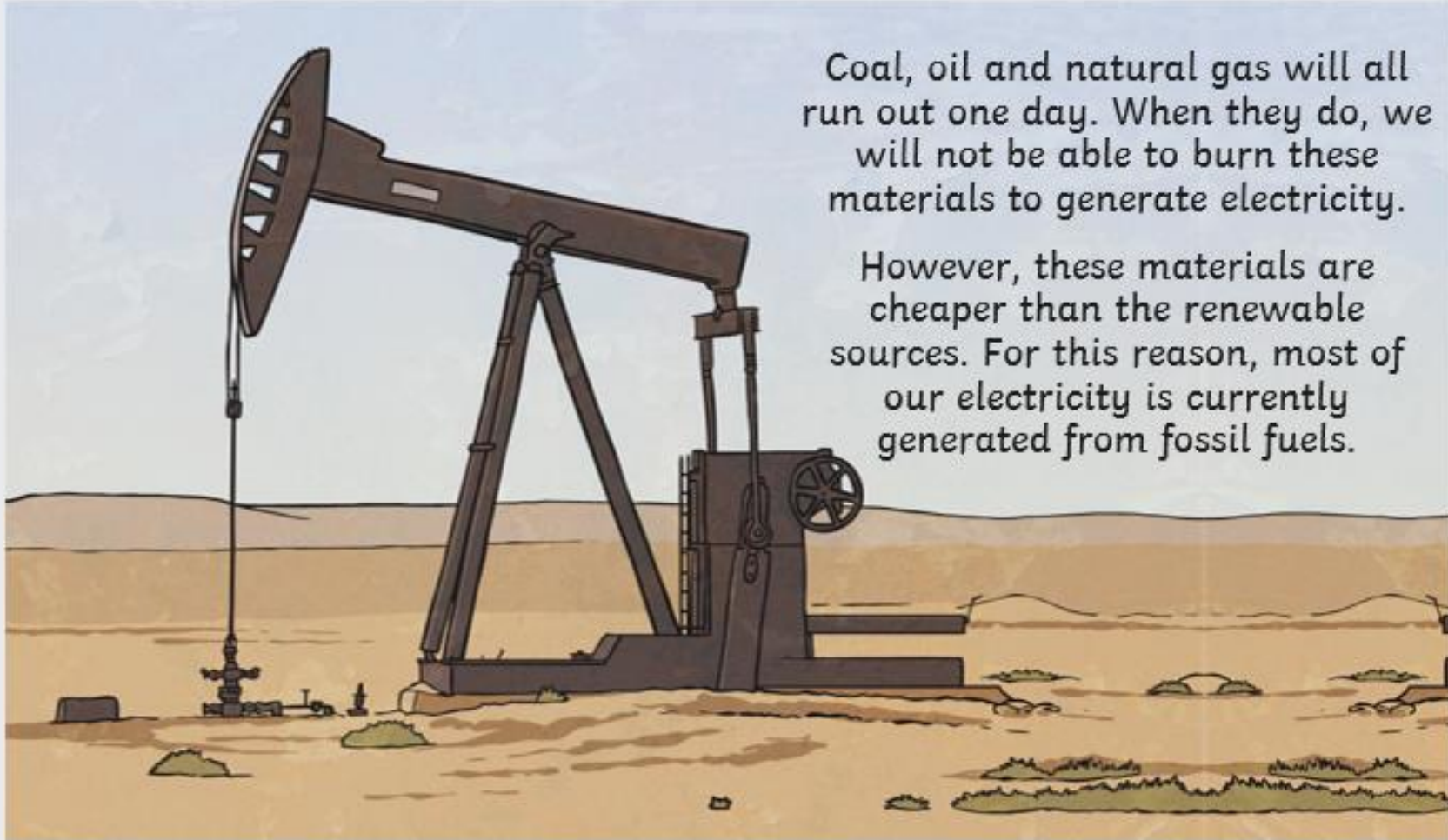
All other electricity has to be made from an energy source. Some are renewable and some are non-renewable.



Renewable	Non-renewable



Where Does Electricity Come From?



Coal, oil and natural gas will all run out one day. When they do, we will not be able to burn these materials to generate electricity.

However, these materials are cheaper than the renewable sources. For this reason, most of our electricity is currently generated from fossil fuels.

Concept cartoon – have you changed your mind?

WALT: Think scientifically
Context: Concept cartoons



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