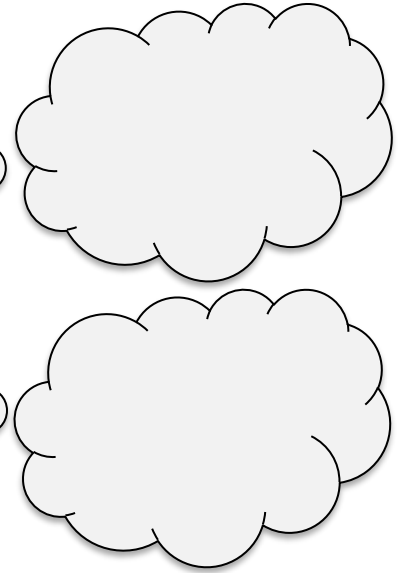
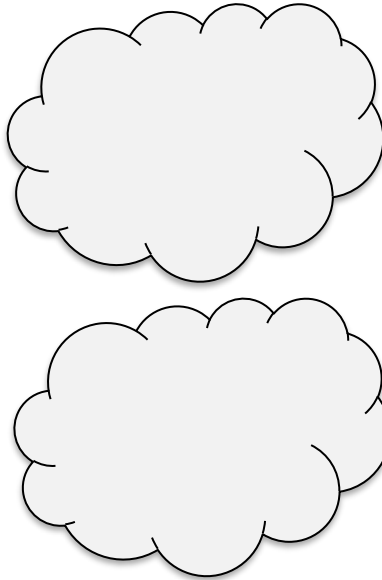


Lesson 4: Green Energy

- I can investigate renewable energy to understand its importance.

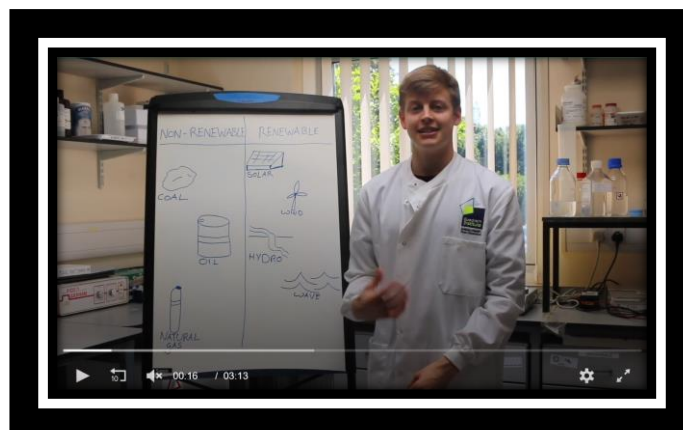
**Reflection Time**

Why is it important to reduce the amount of heat, transport, and electrical energy we use?

**From Fossil Fuels to Renewable Energy**

Watch the following video and answer the three questions below:

<https://developingexperts.com/s/missions/878>



1. What is renewable energy? _____
2. How many different sources of renewable energy are they? _____
3. What are the different sources called? _____



Renewable Energy – Pros and Cons

Even though renewable energy is greener and sustainable in the long term, there are also some downsides. Watch the video to find more: <https://developingexperts.com/s/missions/876>



The following tables have missing titles. Read through them and choose which energy source is described.

Hydro-electric power (HEP)

Solar

Wind farms

Wave or tidal energy

Advantages	Disadvantages
<ul style="list-style-type: none"> - Little pollution - Safe - Land beneath them can be used for other things - Cheap to produce energy - Some people find them interesting to look at - The farms can provide income for farmers and other landowners in rural areas of the UK - Wind is usually stronger in the winter, which is when there is more demand for electricity 	<ul style="list-style-type: none"> - Wind does not always blow - Some people say they spoil the environment - Noise pollution

Advantages	Disadvantages
<ul style="list-style-type: none"> - Little pollution - Produced in areas where few people live - Dams can reduce risks of flooding and water shortages - Lakes used for water sports 	<ul style="list-style-type: none"> - Expensive to build - Floods large areas and destroys the environment - Silt stays in reservoir rather than helping to fertilise nearby land - Methane and carbon dioxide given off by rotting vegetation in lake - Fish cannot migrate easily upstream

Advantages	Disadvantages
<ul style="list-style-type: none"> - No pollution - Can be used in remote areas - Usually produced where it is used - Easy to install 	<ul style="list-style-type: none"> - Expensive to set up - You need a large number of panels and a large area of land - Energy only produced in daylight hours - Depends on climatic conditions

Advantages	Disadvantages
<ul style="list-style-type: none"> - Waves and tide are free - Tides can be timed – regular supply - Little pollution - Safe 	<ul style="list-style-type: none"> - Wave energy expensive and difficult to transport energy to shore - Tidal barrages may affect habitats e.g. coastal mudflats - Affects shipping - Tidal barrages are very expensive



Biodiesel – Future Fuel?

Watch the following video to discover a new green fuel, biodiesel:

<https://www.bbc.co.uk/bitesize/clips/znfpyrd> What do you think?

Advantages	Disadvantages