Renewable and non-renewable energy — Geography Year 5

Renewable and non-renewable energy: Where does our energy come from?

Very Important Vocabulary:

Fossil Fuel: A fossil fuel is a natural fuel like coal, oil or gas that was made from ancient plants and animals buried underground for millions of years. We burn them to make energy, but they create pollution and will eventually run out.

Nuclear Power: Nuclear power is energy made by splitting tiny particles (atoms) in a process called fission. This happens in special power stations and creates a lot of electricity without releasing greenhouse gases, but it also creates dangerous waste that must be stored safely.

Renewable: A renewable energy source is something we can use again and again because it won't run out.

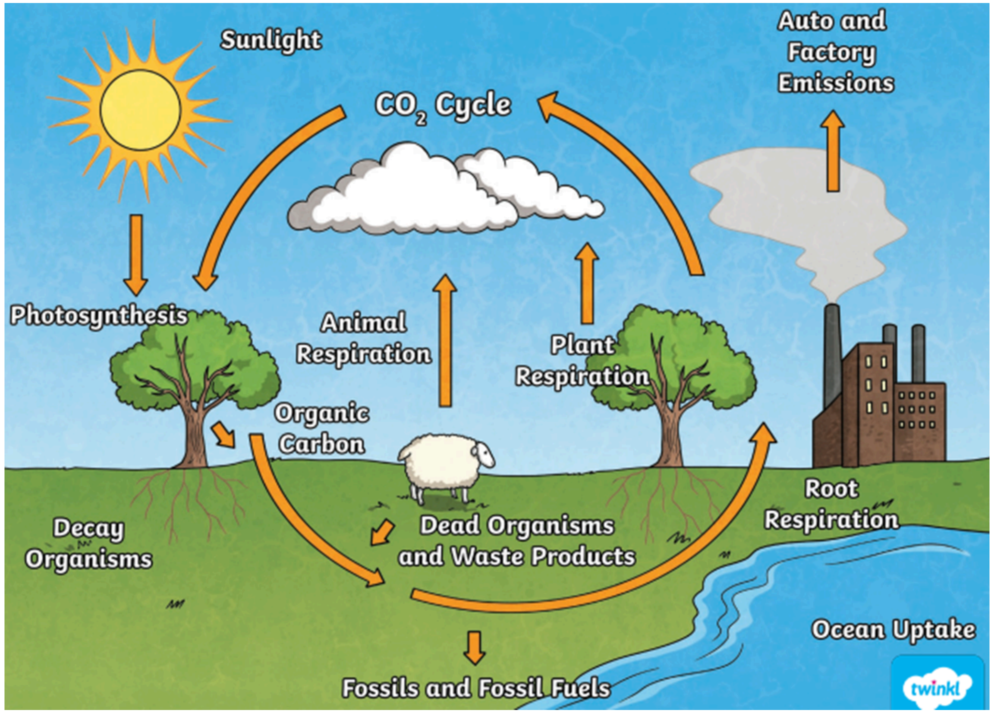
Non-renewable: A non-renewable energy source is something that can run out. These fuels take millions of years to form, once they have been used up, they're gone.

Greenhouse Gases: Greenhouse gases are gases like carbon dioxide (CO_2) and methane that trap heat in the Earth's atmosphere.

Emissions: Emissions are gases or particles released into the air, especially from cars, factories, and power stations.

Climate Change: Climate change means long-term changes to the Earth's weather and temperature.

Carbon Footprint: Your carbon footprint is the total amount of carbon emissions you create by what you do.



Energy is part of everyday life

We need energy to travel, heat and light our homes, power our devices, and run hospitals, schools, and businesses. Without it, many of the things we rely on wouldn't work.

There are two main types of energy sources

Energy can come from non-renewable sources like coal, oil, and gas, or renewable sources like sunlight, wind, and water. Nuclear energy is also used, which comes from splitting atoms to release power.

Fossil Fuels

Fossil fuels like coal and oil take millions of years to form and can't be replaced quickly. Burning them creates lots of pollution, including carbon dioxide, which causes climate change. When we burn fossil fuels, we release gases that trap heat in the atmosphere. This leads to global warming, melting ice, extreme weather, and damage to forests and wildlife.

Renewable Energy

Renewable energy sources, such as solar panels and wind turbines, don't run out and produce little or no pollution. They can also help reduce climate change and create new jobs. Some renewables depend on the weather. Solar panels need sunlight and wind turbines need wind. Big projects like dams can also affect wildlife and nearby communities.

Everyone plays a role in energy problems

Governments, companies, and people have all contributed to today's energy challenges. Fossil fuels were used for growth and industry, but this has damaged the environment over time.

We can all help create a cleaner energy future

Using less energy, switching to renewable power, insulating homes, and using electric cars or public transport are all ways to live more sustainably. Governments and businesses also need to support greener choices.