

ENERGY KNOWLEDGE ORGANISER

How do we energise our homes and country?

National Curriculum Objectives:

Locational Knowledge

- Begin to identify the equator, N and S hemisphere, Arctic and Antarctic Circle

Human and Physical Geography

- describe and understand key aspects of physical geography, including: climate zones, biomes and vegetation belts, rivers, mountains, volcanoes and earthquakes, and the water cycle.
- human geography, including: types of settlement and land use, economic activity including trade links, and the distribution of natural resources including energy, food, minerals and water

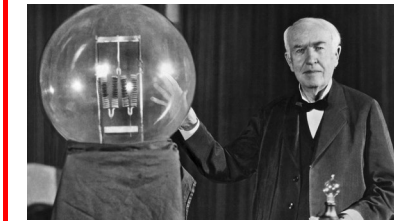
Discretionary Knowledge:

- Know about some of the human features related to the UK, e.g. industry and environment
- Know about the importance of power in our lives
- Know how important electricity is for homes and industry
- Know what is meant by fossil fuel
- Know some types of renewable energy
- Know why it is important to find more environmentally friendly sources of energy

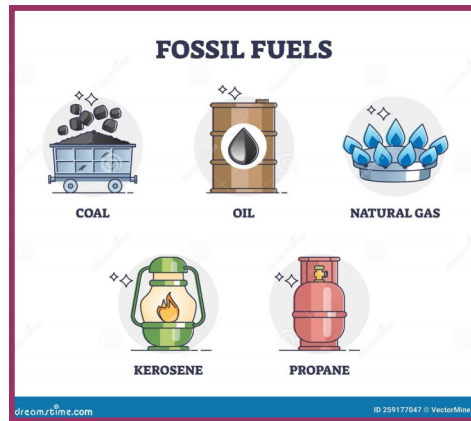
Where does our power come from?

What types of power stations do we have?

What does a power station do?



Thomas Edison invented the lightbulb in 1879.



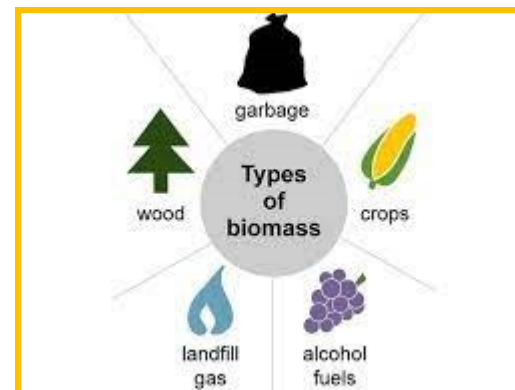
What is meant by fossil fuel?

How are fossil fuels made?

What types of fossil fuels are there?

How do Power Stations convert fossil fuel into electricity?

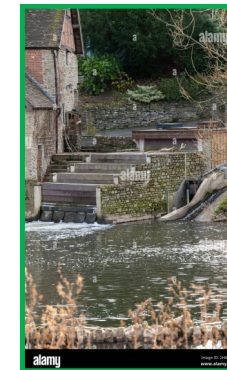
What are the drawbacks of using fossil fuels?



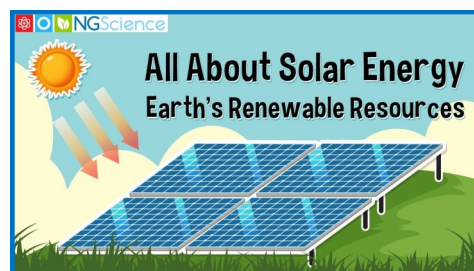
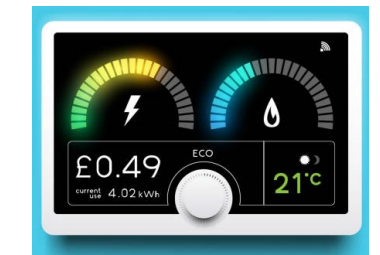
Biomass is a clean, renewable energy source.

It is generated from burning wood, plants and other organic matter. It releases carbon dioxide when burned but is much less than fossil fuels.

Why do you think it is beneficial to have a renewable energy source?



How are smart meters used? How do they help us track our energy usage? Are they effective in reducing our energy usage?



Renewable energy:

Why do we need to try and find more forms of renewable energy?

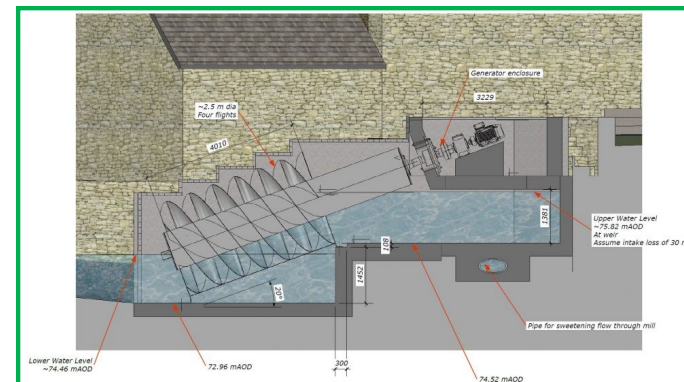
How does solar and wind energy work?

How does it get turned into electricity?

A visit to a Hydro-Electric Power Station in Ludlow. The Ludlow Hydro Co-operative (LHC) was created in 2015.

It generates enough electricity to supply 40 houses in Ludlow each year. (about 170,000 kWh per year).

An Archimedes Screw was chosen because it is the most fish-friendly turbine design, enabling fish to pass through it without suffering any harm.



Key Vocabulary:

Hemisphere, North East, South East, North West, South West, Symbol, Key, Natural, Human, Coast, Island, Hill, Cliff, Port, Village, Human, Physical Electricity, Solar power, Wind Power, Natural resources, Hydro-electric Power, Biomass, Renewable energy, Fossil fuels, Industry