

Energy Resources

<p>Energy resources</p>	<ul style="list-style-type: none"> •Energy is needed to make things happen •Energy resources provide us with energy •The energy provided by energy resources always comes from the Sun originally. •Energy is transferred from one store into another, e.g. chemical energy stored in fuels is transferred to the thermal energy store of water or the surroundings. •Energy is transferred from one store into another using different pathways. 	<p>Biomass/biofuel</p>	<ul style="list-style-type: none"> •This is a fuel produced by a living thing, for example faeces from farm animals or ethanol produced from the fermentation of sugar cane. •The fuel is a store of chemical energy •Advantages: Might use waste products, renewable •Disadvantages: Releases carbon dioxide when burned, so contributes to global warming.
<p>Fossil fuels</p>	<ul style="list-style-type: none"> •Fossil fuels are fuels made up of the remains of plants and animals that died millions of years ago. •Heat and pressure acted on the remains and changed them into fossil fuels. •Coal, oil and natural gas are fossil fuels. •Petrol and diesel used in vehicles come from oil. •They are a store of chemical energy •Burning fossil fuels releases carbon dioxide, a greenhouse gas that contributes to global warming. 	<p>Wind power</p>	<ul style="list-style-type: none"> •The wind causes a turbine to spin. This causes the generator to spin and generates electricity. •The bigger the wind speed, the more electricity is generated. •Advantages: No carbon dioxide released, renewable •Disadvantages: Noise pollution, visual pollution, unreliable as they only work when the wind blows
<p>Renewable energy resources</p>	<ul style="list-style-type: none"> •These are energy resources that will not run out and are continuously being replaced •Renewable energy resources include wind power, solar power, tidal power, wave power and geothermal energy. 	<p>Wave power</p>	<ul style="list-style-type: none"> •Wave power uses the movement caused by tide going in and out to move a generator to generate electricity •Advantages: No carbon dioxide released, renewable •Disadvantages: only produce electricity at certain times, the cables can spoil the coastline, could affect the habitats of birds and other animals.
<p>Non-renewable energy resources</p>	<ul style="list-style-type: none"> •Energy resources that will one day run out are non-renewable. •Once they are used we cannot use them again. •They are usually fuels with a store of chemical energy 	<p>Using less energy</p>	<ul style="list-style-type: none"> •Burning fossil fuels releases carbon dioxide into the atmosphere. •Carbon dioxide is a greenhouse gas. Greenhouse gases trap more of the Sun's energy in the atmosphere as heat and so causes global warming. •Using less energy means less fossil fuels are burned and less carbon dioxide gets into the atmosphere. •We can use less energy by switching off appliances when not in use, increasing the efficiency of our appliances, insulating our homes effectively, and by walking or using a bike rather than driving when possible.
<p>Solar power</p>	<ul style="list-style-type: none"> •In a solar heating panel, heat energy from the Sun is used to heat water for the heating system of a house. •In a solar cell, electricity is generated when energy from sunlight shines on a special type of silicon. •Advantages: No greenhouse gases produced, costs nothing to run when installed, good for use in remote places •Disadvantages: Only work when the Sun is shining, expensive to buy, lots needs to generate a useful amount of electricity. 	<p>Fuels for the future</p>	<ul style="list-style-type: none"> •We need to use more renewable energy resources to limit global warming. •Scientists are developing new energy resources to generate electricity whilst limiting the impact we have on the planet. •One example is hydrogen fuel cells. These are special batteries that use water to produce hydrogen gas. The gas is then burned to produce the heat energy needed for a car engine to work. •The only waste product is water, but fuel cells re expensive to make and need to be recharged.
<p>Geothermal energy</p>	<ul style="list-style-type: none"> •Heat energy released by radioactive rocks deep under the Earth's surface •The heat is used to heat water to make steam. The steam then turns a turbine, which turns a generator which generates electricity. •Usually built in volcanic areas. 		