

Year 9 Resources Knowledge organiser

Resources

What are resources	A resource is a stock or supply of something that has value or a purpose. The three most important resources are food, water, and energy
Water	Essential for drinking Vital for crops Used to produce energy
Problems with a lack of water	Without proper sanitation water resources get polluted. Water borne diseases (e.g. cholera) kill millions each year.
Food	A balanced diet keeps us healthy, active and productive
Problems of a lack of food	People who aren't getting enough to eat may not perform well at school meaning they lack skills to help a country's economic development
Energy	Needed for light, heat and power. Powers factories Provides fuel for transport
Problems of a lack of energy	It would be impossible to develop as a country without this resource as industry would not function

Types of Energy – Electricity production

Non renewable - Coal	The solid compacted remains of ancient trees. Compacted for millions of years. Coal is burnt, heats water and the steam turns a turbine
Non renewable – Gas	The gaseous remains of marine (ocean) plants and animals. Gas is burnt, heats water and the steam turns a turbine
Non renewable - oil	Liquefied remains of marine (ocean) plants and animals. Oil is burnt, heats water and the steam turns a turbine
Renewable - HEP	Hydro electric power from water in a reservoir moving through and spinning a turbine at the base of a dam.
Renewable - wind	Power from the wind which spins a turbine
Renewable - solar	Power from the sun which is captured by a photovoltaic cell
Renewable - biomass	Power from waste material – wood pellets. These are burnt, heats water and the steam turns a turbine
Renewable - Biofuels	Power from plants that can produce a fuel – oil seed rape or sugar cane producing alcohol – This is burnt, heats water and the steam turns a turbine
Renewable - Tidal	Power from the movement of the tide going in and out which spins a turbine
Renewable - Geothermal	Power from the heat of the earth, heats water and the steam turns a turbine
Nuclear	Power from uranium – This is burnt which heats water and the steam turns a turbine

Problems of energy production

coal	Burning releases co2 into the atmosphere which adds to global warming issue, fuel is running out, Digging for coal creates environmental issues and habitat loss
Gas	Burning releases co2 into the atmosphere which adds to global warming issue, fuel is running out and we are searching for it in environmentally sensitive areas.
Oil	Burning releases co2 into the atmosphere which adds to global warming issue, fuel is running out, Drilling for oil creates environmental issues such as land and sea pollution and habitat loss
HEP	To create a reservoir we have to build an expensive dam and flood large areas of land to create a reservoir – this displaces people and destroys habitats
Wind	Some find wind turbines to be ugly and noisy. Some people think the turbines are a danger to birds
Solar	Photovoltaic cells need rare minerals to build them and these are getting scarce. Solar farms take up space and some people find them to be ugly
Biomass	The waste product do release carbon back into the atmosphere. Some waste products have to be transported long distances using more energy
Biofuels	The land taken up to grow biofuels could take up land needed to grow food
Tidal	Only certain coastal landscapes are suitable for tidal barrages
Geothermal	Only tectonically active areas are able to generate electricity from hot underground rocks
Nuclear	Nuclear waste stays radioactive and dangerous for hundreds of years and needs to be looked after. Nuclear accidents can have devastating consequences for people over a huge area

Blue header bar

1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

Green header bar

1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

Yellow header bar

1		
2		
3		
4		
5		

Grey header bar

1			
2			
3			
4			
5			
6			
7			
8			
9			
10			