

Edexcel Geography A-level

The Carbon Cycle & Energy Security

Definition Flashcards



Acidification



Acidification

The gradual reduction of pH of the oceans, due to dissolving carbon dioxide from the atmosphere.



Afforestation



Afforestation

Planting trees and vegetation in the aim of increasing forest cover.



Biofuel



Biofuel

Burning crops and vegetation for electricity and heat.



Carbon Capture & Storage (CCS)



Carbon Capture & Storage (CCS)

The capture of carbon dioxide emissions directly from the factory, pumped into disused mines rather than being released into the atmosphere.



Carbon Fluxes



Carbon Fluxes

The movement of carbon between stores.



Carbon Neutral



Carbon Neutral

A process that has no net addition of carbon dioxide to the environment.



Carbon Stores



Carbon Stores

Places where carbon accumulates for a period of time such as rocks and plant matter.



Choke Points



Choke Points

Points in the logistics of energy and fuel that are prone to restriction.



Combustion



Combustion

The process of burning a substance, in the presence of oxygen, to release energy.



Decomposition



Decomposition

The break down of matter, often by a decomposer which releases carbon dioxide through their own respiration.



Energy Mix



Energy Mix

The composition of a country's energy sources.



Energy Security



Energy Security

The ownership and full control of a country's energy source, production and transportation.



Energy Pathway



Energy Pathway

The movement of energy from its extraction or source, through pipes, freight logistics or cabling.



Energy Players



Energy Players

Key companies and individuals who own, distribute and sell energy and energy sources.



Enhanced Greenhouse Effect



Enhanced Greenhouse Effect

The build-up of greenhouse gases in the atmosphere, reducing the amount of solar radiation reflected into space.



Inorganic Carbon



Inorganic Carbon

Carbon stored in carbonated rocks.



Non-Renewable



Non-Renewable

A source of energy that can only be used once to generate electricity or takes thousands of years to replace. E.g. Fossil Fuels.



Nuclear Fusion



Nuclear Fusion

The process of joining atomic nuclei together, to produce energy.



OPEC



OPEC

Oil & Petroleum exporting countries. An organisation that supports and coordinates fossil fuel exporting countries.



Organic Carbon



Organic Carbon

Carbon stored in plant material and living organisms.



Outgassing



Outgassing

The release of dissolved carbon dioxide (e.g. at plate boundaries, warming the oceans).



Photosynthesis



Photosynthesis

The process of converting carbon dioxide and water into glucose and oxygen. All plants and some organisms rely on this process to survive.



Phytoplankton



Phytoplankton

Small organisms that rely on photosynthesis to survive, so intake carbon dioxide from the atmosphere.



Primary Energy



Primary Energy

The initial source of energy, as it is naturally found. This could be natural ores, water, crops or radioactive material.



Renewable



Renewable

Primary energy that can be re-used to produce electricity or has a short lifetime, therefore any used can be replaced quickly. E.g. Hydroelectric, biomass, solar.



Respiration



Respiration

The process of converting glucose and oxygen into carbon dioxide and energy. Some organisms rely on respiration to survive.



Secondary Energy



Secondary Energy

The product of primary energy, mostly electricity.



Sequestration



Sequestration

The transfer of carbon from the atmosphere to stores elsewhere - living biosphere, inorganic rocks, etc.



Thermohaline Circulation



Thermohaline Circulation

The movement of volumes of seawater from cold deep water to warm water surface water.



Tipping Point



Tipping Point

A critical threshold where any changes to a system after the tipping point are irreversible.



Urbanisation



Urbanisation

The growth of populations in towns and cities.

