

Glossary

A

Absorbed

Taken in, the opposite of reflect.

Acid rain

Rain water or snow containing chemicals, such as sulphur and nitrogen, and other pollutants. Acid rain is a result of human activities and can be harmful to trees, crops and buildings.

Adapt

Change to suit a different situation, climate or environment.

Agriculture

The growing of crops and rearing of livestock.

Alloy

A mixture of two or more metals.

Alternative

Relating to other possibilities.

Artificial

Man-made, not naturally occurring.

Atmosphere

The layers of gases enveloping the Earth. It consists mainly of nitrogen and oxygen and small amounts of other gases, for example argon, ozone, carbon dioxide, methane, sulphur dioxide and water vapour. The atmosphere has different layers at different heights above the Earth: Troposphere (nearest to the Earth), Stratosphere, Mesosphere, Thermosphere (including the Ionosphere) and Exosphere.

Atoms

An atom is made of electrons that surround a nucleus made up of protons and neutrons. However the nuclei of hydrogen atoms consist of a single proton.

B

Biodegradable

Able to decompose or be broken down so that no traces are left.

Biodiesel

Liquid fuel made from biomass that can be used to power vehicles.

Biofuel

Fuel made from plant or animal matter.

Biomass

Plant or animal waste that can be used as an energy source.

Biomes

The term used to describe major ecosystems that have developed as a result of a particular climate. Different biomes will have characteristic vegetation and animal life.

Businesses

Organisations set up with the aim of making money.

C

Carbon

An abundant, naturally occurring element that is found in all organic matter.

Carbon dioxide (CO₂)

A chemical compound composed of one carbon atom attached to two oxygen atoms. Carbon dioxide is a greenhouse gas that contributes to climate change. It is released into the atmosphere when fossil fuels are burnt and when we breathe out.

Carboniferous period

A geological period from around 360 to 286 million years ago. At this time, much of the planet was covered by vast swamplands and carbon-rich vegetation.

Celsius

A unit commonly used for measuring temperature.

Clean energy

The term used to describe sources of energy that do not give off any greenhouse gases or other pollutants.

Climate

The 'average' weather in a region or area.

Climate change

Long term changes in the expected climate of a region as a result of increased amounts of carbon dioxide in the atmosphere.

Coal

A hard black sedimentary 'rock' formed from the remains of dead plants. Coal is mined from underground and used as a fuel.



Combustion

The process of converting fuel into heat by burning, a process that requires oxygen.

Compound

Something made up of two or more elements or parts.

Compressed

Flattened down.

Consume

Eat or use.

Contaminate

To pollute or make impure.

D

Deforestation

The process of clearing forests by cutting and burning to provide land for agriculture, buildings, roads or for providing wood for building materials or fuels. Loss of trees is said to contribute to climate change because trees reduce greenhouse gases by absorbing carbon dioxide.

Developed world

Countries that have a relatively high standard of living through a strong, high-technology, diversified economy.

Developing countries

Countries that are developing a higher standard of living through becoming industrialised.

Disposable

Designed to be thrown away after use.

E

Eco-friendly

Not harmful to the environment.

Economy

The wealth created in a place or country through producing and selling goods, and how that wealth is saved or spent.

Ecosystems

Animals, plants and other organisms living together and affecting one another in a habitat.

Efficient

A way of using things so they are not wasted.

Electricity

An energy source created from the flow of electrical charge.

Electrolysis

The process by which electricity is used to split water into hydrogen and oxygen.

Electrons

An extremely small particle that forms part of an atom and has a negative electric charge.

Element

A 'pure' substance that is made up of only one kind of atom.

Emissions

Pollutants released into the atmosphere.

Energy

The strength or power required for work or action.

Environment

Where people, animals or plants live - their surroundings, the air, the weather, the soil and all natural living things around them.

Evidence

Any information that tends to prove or disprove something.

Extinct

When an entire species dies out.

F

Fission

The separating of something into parts.

Flooding

When water covers land that is normally dry.

Fossil fuels

The term given to fuels, such as coal, oil and gas, which were formed over millions of years ago from the remains of plants and animals. They are a major source of energy.

Fractional distillation

Separation of liquid into fractions that have different boiling points and chemical composition.



Fuel

A source of energy for powering cars or machines.

Fuel cell

A device used to generate electricity.

Fusion

The joining together of separate items.

G

Geological

A term relating to the study of the Earth's structure and processes. For example, geologists might study volcanoes, earthquakes, soil, rocks and minerals.

Geothermal

Relating to heat under the surface of the Earth, where the Earth's crust is thin and the melted rock heats water flowing underground.

Greenhouse effect

The effect in which greenhouse gases in the atmosphere trap heat from the Sun, causing the Earth's temperature to rise.

Greenhouse gases

Gases found in the Earth's atmosphere that trap heat from the Sun, preventing it from escaping out of the Earth's atmosphere into space.

H

Habitats

Places in which organisms live.

Heat

A type of energy that can be produced as a result of chemical reactions.

Hydrocarbon

A type of compound composed only of carbon and hydrogen. Hydrocarbons are the main components of oil and natural gas.

Hydroelectricity

Electricity generated by using moving water to drive a turbine that powers a generator.

Hydrogen

A chemical element represented by the formula H, which can provide a source of clean energy for the future.

I

Industrial revolution

A change in the way communities earned money and produced goods (first began in England around the mid-1800s). People went from making goods in their own homes and local areas with simple tools to making them in large factories, in mass quantities with complicated machinery. Many rural areas became urban as cities spread and grew around the industrial activity.

Industrialised

Where industry and manufacturing has developed on an extensive scale.

Infrared

A form of radiation that cannot be seen by the human eye.

Insulation

Materials used to cover something so that electricity, heat or frost does not get through.

K

Kyoto Protocol

A worldwide agreement that sets out targets for reducing greenhouse gas emissions.

M

Manufacture

To make articles by transforming raw materials into finished goods, usually for sale, using industrial tools or machines.

Methane

A colourless, odourless gas with the chemical formula CH₄. It is a major part of natural gas.

Mined

The process of digging into the Earth in order to get minerals, such as coal, ores or precious stones, from underground.

Mobile

Able to travel or move from one position to another.

Molecules

Tiny particles made up of two or more atoms.

Natural gas

A fossil fuel found naturally underground or under the sea.

N

National Grid

The network of lines or electric power connections around the country.

Non-renewable

Fuel sources that cannot be easily replaced.

Nuclear power

Energy generated by a nuclear reaction.

Nuclei

The central core of the atom, that is made-up of particles called neutrons and protons.

Nutrition

The process by which living creatures get energy from food and drink for growth and maintenance.

O

Oil

A liquid fossil fuel that is found underground and formed over millions of years from the remains of plants and animals.

Organic

Made from material belonging to organisms that are or were once alive.

Oxygen

A colourless, odourless gaseous element important for the survival of all living creatures and a major component of water.

P

Petrol

A type of liquid fuel produced from crude oil.

Photosynthesis

The process by which plants store energy from the Sun by making food (sugar) from carbon dioxide and water.

Pollute

To release harmful substances into the atmosphere, water or on land.

Population

The inhabitants of a particular place, country or the world.

Protect

To keep something safe, guarding or shielding it from harm.

Protons

A particle in an atom with a positive electric charge. Protons form part of the nucleus of an atom, sometimes in combination with a particle known as a neutron. In a hydrogen atom the nucleus only consists of a single proton.

R

Rechargeable

When an item takes up and stores electricity again.

Recycle

Use a product again after its initial use, either as it is, or in another form.

Reduce

To lower in number or amount.

Refines

Makes something pure or useable.

Renewable

Able to be renewed or used again without ever running out.

Reservoir/s

Place/s where liquid is stored for later use.

Reuse

Use something again.

S

Scientists

People who investigate the world or universe through observation or experiments.

Sedimentary

A type of rock that has formed from sediment, for example chalk, sandstone and shale.

Solar

Relating to the Sun. Solar is the name given to the type of energy we get from the Sun.



Solar panels

Devices consisting of many solar cells, which collect the Sun's energy and convert it to electricity.

Steam

The vapour gas formed from water when it is boiled. The heated water molecules spread out and expand in every direction.

Sulphur dioxide

A chemical compound represented by the formula SO_2 . It is given off when coal is burnt.

Sustainable

Able to be maintained at a consistent level without draining natural resources or causing damage to the environment.

Sustainable development

The term used to describe a way of doing something that meets the needs of people today without compromising the ability of future generations to meet their own needs.

T

Technology

Tools, inventions or machines designed to ease work and improve performance, production or the quality of life.

Temperatures

Measurements of how hot or cold something is, usually measured in degrees Celsius.

Thermostats

Devices that control temperature by reacting to temperature changes.

Transport

The process of moving things or people from one place to another.

Turbines

A machine or engine that is driven by an energy source (for example, stream, wind or flow of water).

V

Vehicles

Machines designed for transporting people and goods from one place to another, for example cars, trucks, lorries and motorbikes.

Viscous

When liquids do not pour freely and have the consistency of syrup or honey.

W

Waste

Things that are thrown away.

Weather

Atmospheric conditions in a location at a particular time, for example temperature, wind speed, wind direction, humidity and cloud cover.

Wind farm

A collection or group of wind turbines all sites together to maximise harnessing of the power of wind in a particular area to generate electricity.

Wind power

Energy derived from the use of wind turbines.

Windmills

Machines that are powered by wind energy