

# Knowledge Organiser - Science - Looking after the environment - Upper Key Stage 2 (Year 5 and 6) - Spring 2025

Careers connected to Looking after the environment:  
Wildlife Biologist, Zoologist, Oceanographer, Marine Biologist, Landscape Architect.



## What I already know

- I have learned about the Earth as planet
- I have knowledge about living things and their habitats
- I have knowledge about different types of weather

## Sticky Learning

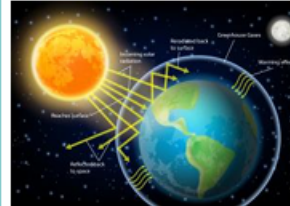
### Greenhouse gases

Some human activities produce **greenhouse gases** (carbon dioxide, methane, nitric oxide):

- Cutting down trees means more carbon dioxide stays in the air.
- Farming animals produces methane gas.
- Transport – fuels such as diesel and petrol produce carbon dioxide.

Scientists look at **trends** in weather data to track how the Earth's climate is changing.

### Climate Change/Global Warming



Greenhouse gases trap the heat from the sun and stop it leaving the Earth, causing the planet to become **warmer**.

A warmer planet means the ice will melt. Some animals will lose their habitat. Water levels will rise, causing some land to disappear under water.

### Energy Sources

#### Renewable

- Wind farms
- Solar farms
- Hydro power stations

#### Non-renewable

Oil  
Coal  
Gas  
(Fossil fuels)

### Reduce Reuse Recycle

How we can help:

1. **Recycle** as much rubbish as possible so factories don't have to use coal and oil to make new products.
2. Buy products with **recyclable** packaging.
3. **Switch off** lights and electrical appliances when not in use.
4. Walk, cycle or car share.
5. Use **renewable energy** sources for power if possible.
6. Plants and trees use carbon dioxide to make food so **planting** more helps reduce the amount in the atmosphere.
7. **Eat less meat** so less animals are farmed.

## Core Learning



1. Learn about climate change



2. Explore ways to reduce how much rubbish is sent to landfill



3. Explore ways to reduce energy consumption



4. Explore what happens when fuels are burnt



5. Explore the outcomes of COP26



6. Compare data associated with the weather





## Knowledge Organiser: Year 6 Looking after the environment

### *Before & After Test*



Tick the correct statements.

|                                                             |                          |                                                                   |                          |
|-------------------------------------------------------------|--------------------------|-------------------------------------------------------------------|--------------------------|
| Global warming means the Earth is on fire.                  | <input type="checkbox"/> | Oxygen is a greenhouse gas.                                       | <input type="checkbox"/> |
| Farming animals creates a greenhouse gas.                   | <input type="checkbox"/> | Carbon dioxide is a green house gas.                              | <input type="checkbox"/> |
| Using a diesel car creates a greenhouse gas.                | <input type="checkbox"/> | Scientists study weather data to see how our climate is changing. | <input type="checkbox"/> |
| Global warming means the Earth's climate is getting warmer. | <input type="checkbox"/> | Trees use carbon dioxide from the air.                            | <input type="checkbox"/> |

Name a renewable energy source.

\_\_\_\_\_

Name a non-renewable energy source.

\_\_\_\_\_

Describe global warming. Use these words to help you:

greenhouse gases    heat    sun    Earth    warmer

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Name an effect of global warming.

\_\_\_\_\_

\_\_\_\_\_

Write 2 ways humans can help prevent global warming.

1. \_\_\_\_\_

\_\_\_\_\_

2. \_\_\_\_\_

\_\_\_\_\_

## Science (Rocket) Words

| Word             | Meaning                                                                                                   | Word                  | Meaning                                                               |
|------------------|-----------------------------------------------------------------------------------------------------------|-----------------------|-----------------------------------------------------------------------|
| Global warming   | The process that causes the Earth to become hotter                                                        | Combustion            | Another name for burning                                              |
| Prevent          | To keep something from happening                                                                          | Coal                  | A type of fossil fuel                                                 |
| Climate          | Average weather conditions over a long period of time                                                     | Fossil fuel           | Fuels that are formed from the remains of dead organisms              |
| Climate change   | Change in the Earth's usual weather conditions over many years                                            | Fuel                  | Something that has stored energy                                      |
| Weather          | The condition outside at a particular time and place (such as cold and cloudy)                            | Industrial revolution | A period of major change in the way products are made                 |
| Rubbish          | Useless waste                                                                                             | COP                   | Conference of parties                                                 |
| Council          | A group of people who manage a city, county, or community                                                 | Sustainability        | Resources need to be retained for future generations to enjoy         |
| Biodegrade       | When an item naturally breaks down                                                                        | Subsidy               | Lower costs                                                           |
| Recycle          | The process of taking waste materials and turning them into something new as opposed to being thrown away | Pledge                | A promise                                                             |
| Landfill         | Big holes in the ground where rubbish is buried                                                           | Conference            | An organised meeting of people with common interests                  |
| Renewable        | A resource which can be used repeatedly because it is replaced naturally                                  | Natural disaster      | A natural event, such as a flood, earthquake, hurricane or drought    |
| Non-renewable    | A resource which cannot be used repeatedly                                                                | Vulnerable            | The possibility of being harmed                                       |
| Emissions        | A pollutant that is sent out into the environment                                                         | Species               | A group of living things categorised together because of similarities |
| Greenhouse gases | Gases in the Earth's atmosphere that trap heat                                                            | Sensitive             | Inability to survive under changing climate conditions                |
| Net zero         | The balance between how much greenhouse gas we add to the environment and what is taken away              | Habitat               | The home of an animal or plant                                        |