



Carbon

What are fossil fuels?

There are three major forms of fossil fuels: coal, oil and natural gas. All three were formed many millions of years ago during the time of the dinosaurs from the fossils, or remains, of dead animals and plants that were buried under dirt and rock. Heat from inside the earth and pressure from dirt and rock change these fossils into oil, natural gas and coal. Because it takes millions of years to make or “renew” more fossil fuels, we call them “nonrenewable fuels.” Humans are currently using the fuels that were made more than 65 million years ago. Once this fuel is gone, it is gone for good.

Carbon footprint

When we use fossil fuels, like heating oil, to keep our house warm or petrol for our family’s car, carbon dioxide is created (CO₂). Carbon dioxide is a greenhouse gas. Many scientists believe that greenhouse gases are making the earth too warm. Our carbon footprint is the total amount of CO₂ we create. A big carbon footprint means we are producing a lot of CO₂ and are having a bigger impact on the planet.

Carbon dioxide (CO₂) is waste energy

Every time we use energy that comes from fossil fuels, we create CO₂, increasing our carbon footprint. Think of CO₂ as waste energy; it’s what’s created as we undertake our daily activities.

Electricity

The electricity we use in our home is the largest contributor to our carbon footprint. Although electricity doesn’t create greenhouse gases at the time we use it, the power plants that make electricity using coal as the fossil fuel do, creating CO₂.

Heating your home

Keeping warm in the winter is the second biggest source of CO₂ and it contributes to our carbon footprint. Our houses use fossil fuels like oil, gas or electricity to run central heating systems to keep us warm. The amount of CO₂ our home creates depends on the type of fuel we use and how high we set our heating thermostat.

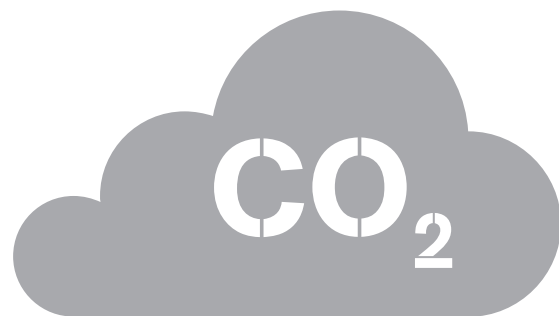
Other sources of carbon dioxide

When we use the family car, it contributes to our family’s overall carbon footprint. That’s because a car uses petrol or diesel as fuel and creates CO₂ as waste. Buses, trains and planes also create CO₂. Our rubbish also contributes to our carbon footprint. Over time, rubbish produces CO₂ and methane (another type of greenhouse gas) as it decomposes.

Reducing your carbon footprint

The best way to reduce our carbon footprint is to use less electricity and less fossil fuel. For example:

- Be sure to turn off the computer when not in use
- Turn off the television and lights when not in use
- Lower the temperature in your home during the winter
- Use public transport instead of a car journey, or even better cycle or walk
- Reduce the amount of rubbish created by recycling and reuse items where possible.



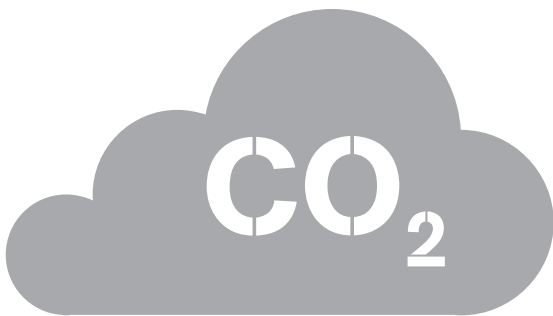


Trees are a carbon store

Planting trees is an effective way to lower your carbon footprint. While they are growing, trees absorb carbon dioxide from the atmosphere through the process of photosynthesis and store it as carbon in the form of wood.

Whilst a tree is healthy and growing it will continue to hold on to the carbon and absorb more throughout its life. If the wood is used for building the carbon is 'locked away' until it is burned or allowed to rot.

Planting more trees also provides multiple benefit as part of the sustainable management of natural resources, providing habitats, food sources, shelter for wildlife, cleaning the air, stabilising soils and preventing flooding



"Thank you to Natural Resources Wales for sharing this resource with Outdoor & Woodland Learning Scotland"