

Carbon Footprint Project

This work should be completed and returned by Monday 25th January.

Read the two pages below about carbon footprints.
Complete the following tasks.

Word bank

- **Carbon footprint**
A carbon footprint measures the impact of all our activities on the environment by calculating the total amount of greenhouse gases produced and describing this as an equivalent amount of carbon dioxide.

Carbon footprint
A **carbon footprint** is a measure of the impact that all our activities have on the environment. It calculates the total amount of greenhouse gases that you might expect to produce and expresses it as the equivalent amount of carbon-based natural resources used by a person, company, community or country over a given period of time. More-developed countries tend to have higher carbon footprints than developing countries. The world average is about 4 tonnes of carbon dioxide per person per year. Table 7.2 shows the average carbon footprints for a person in some countries, as estimated in 2012.

Table 7.2 *The average carbon footprint of a person in some countries.*

Country	Carbon dioxide emissions (tonnes/person/year)
Australia	18.8
USA	16.4
Canada	16.0
UK	7.7
China	7.1
Brazil	2.3
India	1.6

Source: European Commission and Netherlands Environmental Assessment Agency

Everyone has a personal carbon footprint. It is based on a number of things including:

- the amount and type of energy we use in our homes, especially for heating – using fossil fuels for energy produces most carbon dioxide
- the food we eat – producing meat creates more carbon dioxide than producing vegetables
- where the food comes from – food imported from abroad uses more energy than locally produced food
- the amount of travelling we do and the distance travelled – for example, flying abroad for holidays.

There are some simple things you can do to help reduce your carbon footprint, for example switching off lights when you leave a room and completely switching off electrical appliances when you are not using them.

? Did you know ...?
It has been estimated that the energy used to produce, deliver and dispose of junk mail produces more greenhouse gases than 2.8 million cars do.

? Did you know ...?
You can get an idea of what your carbon footprint is by doing an online survey. Type 'carbon footprint calculator' into a search engine to find an online calculator. There is a good one on the WWF website.

Governments are making some headway in reducing carbon footprints by, for example, promoting the use of alternative (non-carbon-based) energy sources (see the Paris Climate Change Conference agreement on page 95). The newspaper article below gives an indication of how using non-carbon sources of energy is helping reduce Scotland's carbon footprint.

Some countries argue that calculating carbon footprints per person doesn't give an accurate picture of which countries are the biggest greenhouse gas producers. Although Australia has a much higher carbon footprint per person than China, it has a much smaller population and so, as a country, produces much less carbon dioxide than China.



Figure 7.5 Making electricity from wind power is one example of a renewable energy source that can reduce a country's carbon footprint.

Drop in greenhouse gas emissions welcomed

Scotland has achieved the second-highest reduction in greenhouse gas emissions in Western Europe over a quarter of a century, Scottish government figures reveal.

The country managed a reduction of 39.5 per cent from 1990 to 2014.

This compared with drops of around 34 per cent for England and 33 per cent for the UK as a whole.

In Western Europe, Scotland's figures were bettered only by Sweden, which saw a decline of 54.5 per cent over the same period.

WWF Scotland director Lang Banks said: 'It's great to see more evidence that Scotland is in the vanguard when it comes to tackling climate change in Europe.'

'Thanks to strong government leadership over the years we've embraced renewables,

helping to de-carbonise our power sector. However, looking ahead there is no room for complacency if Scotland is to maintain its position as a leader on climate change and to capture the many social, health and economic benefits of moving to a zero-carbon future.

'Outside of the electricity and waste sectors, progress to cut carbon has been far too slow.' Ministers plan to introduce a bill which will set a target to reduce emissions by more than 50 per cent by 2020.

Environment secretary Roseanna Cunningham said: 'Scotland is a world-leader in tackling climate change, and these figures reaffirm that Scotland continues to outperform the rest of the UK and punch above its weight in international efforts to cut greenhouse gas emissions.'

Source: Metro, 1 August 2016

- 1) Give the 2 main sources of carbon dioxide produced by humans.
- 2) Look at table 7.2 write down why you think developed countries like the USA and the UK have larger carbon footprints than countries like Brazil or India.
- 3) Read the article “Drop in greenhouse emissions welcomed. “ Give an example of a renewable source of energy.
- 4) Draw a table to show the percentage reduction in greenhouse emissions between 1990 and 2014 for Scotland, England, the UK and Sweden.
- 5) Do the following
 - a. Write a list of what you could do to reduce your own carbon footprint.
 - b. If you can logon onto <https://footprint.wwf.org.uk/#/>
And calculate your own carbon footprint. How does it compare to other countries/people ?
- 6) Design a poster or leaflet using all the information you have gathered so far to inform people what changes they can make to their lifestyle to reduce their carbon footprint.
- 7) Take a picture off your work and email to Daniel.Fulton@whed.edin.sch.uk

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