



Carbon Capture & Storage - Resources

Thank you for downloading this Carbon Capture & Storage resource from the *GeoBus* website.

This resource pack was developed in partnership with [The Crown Estate](#), with support from [The Global CCS Institute](#), [Royal Dutch Shell](#) and [SCCS](#). Special thanks are due to Megan O'Donnell and Katy Relf for their involvement. These resources, and further carbon capture and storage education materials can be found on the [CO₂ degrees challenge](#) website.

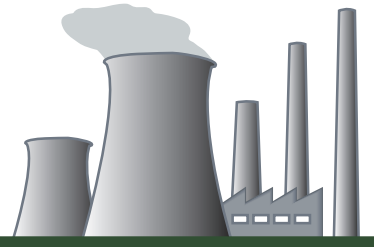
The development of this resource would not have been possible without the generous support of the *GeoBus* sponsors, which we gratefully acknowledge.



Earth & Environmental Sciences



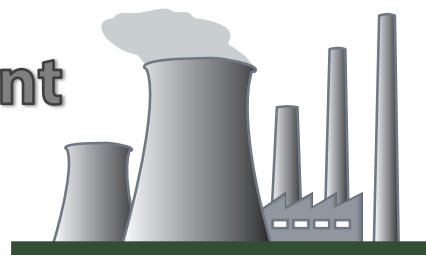
Chapter 1



1. Calculating Your Carbon Footprint

Calculating Your Carbon Footprint

Teacher Notes



Activity Description

Students learn about CO₂ emissions, what a carbon footprint is and calculate their individual carbon footprint. They consider how behavioural changes could reduce their carbon footprint.

Time

20mins / 40mins

Learning Outcomes

- To understand where carbon emissions come from
- To define a carbon footprint
- To ascertain ways in which lifestyle changes can affect your carbon footprint

Student Organisation

Individual (calculation) and Groups (discussion)

Materials Needed

Calculating Your Carbon Footprint; Student Worksheet and My Energy Diary



Talking Points

How much electricity do you think you use? How often do you travel by car? Do you travel by aeroplane? Do you eat lots of red meat or imported fruits?

Homework Task

Ask the students to take home the Student Worksheet and My Energy Diary and fill them in over a period of a week.

What is a Carbon Footprint?

A measure of CO₂ emissions attributed to an individual/family/business based on their lifestyle and behavioural choices.



Classroom Activity

In a following lesson use the worksheet answers to complete the carbon footprint calculator online at:

<http://mothersagainstclimatechange.com/kidscarboncalculator.php>

Ask the children in turn to read out their total carbon footprint values and create a scatter graph to show the class results (either using Excel or by hand).



Talking Points

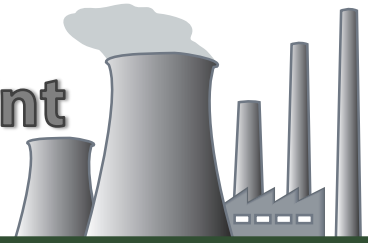
What kind of behaviour affects your carbon footprint? What could you be doing to reduce yours? What could the school be doing to reduce theirs?

Tip!

Ask the students to leave the first question on the worksheet blank. To determine the distance from the school to each student's house they can measure the distance on Google Maps during the classroom activity. This activity, the graphing exercise plus further discussion will extend the 20 minute session to 40 minutes.

Calculating Your Carbon Footprint

Student Worksheet



What is a carbon footprint?

You are going to calculate your carbon footprint using an online calculator.

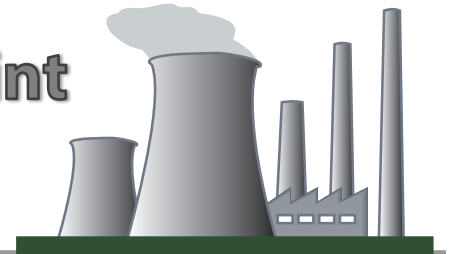
In order to complete the calculator next lesson you need to find out the following:

(use estimates if necessary)

- | | |
|--|----------------------------|
| 1. How far is your house from the school? | <input type="text"/> km |
| 2. How many hours a day do you spend watching TV? | <input type="text"/> hours |
| 3. How many hours a day do you spend on the computer? | <input type="text"/> hours |
| 4. How many light bulbs are there in your bedroom? | <input type="text"/> bulbs |
| 5. What is the wattage of the bulbs in your house? | <input type="text"/> watts |
| 6. How many hours do you leave your lights on in summer? | <input type="text"/> hours |
| 7. How many hours do you leave your lights on in winter? | <input type="text"/> hours |

Calculating Your Carbon Footprint

My Energy Diary



Make a note of the following activities for a week to give you an idea of how much energy you are using. Base this on your individual usage.

Day/Energy	Mon	Tues	Wed	Thu	Fri	Sat	Sun
TV (hours)							
Computer (hours)							
Mobile Phone (# of charges)							
Microwave (# of uses)							
Lights (hours)							
Car Journeys (hours and minutes)							
Showers (minutes)							
Hairdryer / Straighteners (minutes)							
Games Console e.g. Playstation / Xbox (hours)							
Other (hours)							