

- Packets of Walkers crisps with 'carbon footprint' icons (not available in multi packs or catering packs)
- Two similar items made from different materials (eg. a plastic chair and a wooden chair)

Show the pupils the slide show and use the information here to lead a discussion.



[Download the PowerPoint Slideshow - Footprints \(942.85 kB \)](#)

Explain to the pupils that they are beginning a 'Footprint' project. Can they guess what a footprint is? They will probably have heard of carbon footprints which are slightly different to eco footprints. Carbon footprints calculate how much CO₂ has been emitted either from an activity such as flying, or to make a product such as a building. Walkers crisps are one of several companies working with the Carbon Trust. They now have carbon footprints on their packets to show how much CO₂ was emitted during the production of the bag of crisps. Pass around the bag of crisps so that everyone can see the symbol.

An eco footprint is different to a carbon footprint, because it measures the amount of land that is needed to produce everything that we need, to deal with our waste, and to sequester (capture and lock up) our CO₂ emissions. If we have a big eco footprint, we are using too much land and energy and have a negative impact on the planet.

Test for understanding by comparing two similar things that are made from different materials. For example a wooden chair, and a plastic chair with metal legs. What is the plastic chair made from? – they might not know that plastic is made from oil. Prompt them with some of these questions -

- How much land and energy has been used to extract the oil and metal ore from the ground?
- How much energy and land was used to turn the raw materials into the metal and plastic?
- How much energy was used to manufacture the chair itself?
- How long will the chair last until it is broken? How easy is it to repair?
- How much land and energy is required to dispose of the chair at the end of its life?

Now compare it to the wooden chair. Land will have been needed to grow the tree, but this is less than the land that will have been used to absorb the CO₂ produced by extracting the raw materials for the plastic and metal chair. Energy will have been used to construct the wooden chair, but not as much as to make the plastic and metal chair. The wooden chair is probably easier to repair and the wood could be put to good use at the end of its life, unlike the metal and plastic chair which is more difficult and energy intensive to recycle.

Ask the pupils which chair has the biggest footprint. They will probably answer correctly that the plastic and metal chair has the largest footprint, but if they don't, spend more time demonstrating with other examples.

Ask the pupils how many planet Earths they think we'd need, if everyone on the planet lived the same way as we do in Wales. The answer is nearly three.