

Investigation 2 Carbon detectives

Now you are a carbon detective. Your job is to investigate different products and find out where the carbon is hiding.

For each item on the supermarket shelf below, list ways that carbon might be emitted in its production. Choose three items from your pantry, fridge or wardrobe, and draw the extra products on your shelf. If there is an address or country of origin on the label, record it underneath your drawing.

Use Google Maps <http://maps.google.com.au> to measure the distance from where the product was made to its present location.

Record the distance travelled by each product in the spaces provided.

Slippers China _____ Km	Towels Germany _____ Km	Washing Powder America _____ Km	Window Cleaner Japan _____ Km
Mushrooms NSW _____ Km	Broccoli WA _____ Km	Tomatoes SA _____ Km	Bananas QLD _____ Km
Cereal Ireland _____ Km	Coffee Brazil _____ Km	Jam England _____ Km	Bread VIC _____ Km
Milk NSW _____ Km	Cream TAS _____ Km	Butter WA _____ Km	Salami Italy _____ Km
_____ Km	_____ Km	_____ Km	_____ Km

Questions

Compare the distances travelled by different products.

- Which types of food or goods come from far away?
- Why do you think that is?
- Are there local alternatives?
- What are the reasons local alternatives might/might not be used e.g. expense, taste, packaging design, marketing?

Extra activity - How far has your lunch travelled?

Using same method, try to calculate how far the contents of your lunchbox has travelled to get to school (and not just from your home).

Think about the bread in your sandwich, fillings like cheese or salami, fruit, snacks, drinks.

Fresh fruit and vegetables can be harder to work out. Sometimes fruit will have a sticker on it that tells you where it comes from. Some vegetables will have a sign that says, 'Product of ...' in the supermarket. Ask your parents or teacher if you're unsure.

Add up all the distances for each ingredient in your lunch.

- How far has your lunch travelled? _____ (km)

The National Average Carbon Emissions (NACE)* for all new light vehicles sold in Australia for 2007 was 226.1g CO₂/km**. Federal Chamber of Automotive Industries.

http://www.fcmai.com.au/library/NACE_Fact_Sheet.pdf

Using this formula, calculate the amount of carbon emissions that might have been generated in the transportation of your lunch.

- Distance travelled (km) x 226.1 = _____ g CO₂.

* Federal Chamber of Automotive Industries.

** This is only an average figure used to simplify calculations. Larger trucks, diesel powered engines and various other conditions will affect the amount of CO₂ produced per kilometre.