



Names: _____

THE CARBON ON YOUR PLATE

Does what's on your plate change the climate?

Food produces around 1/4 of the world's greenhouse gas (GHG) emissions. This makes what we eat a geographical question, not just a personal one. Work through the datasets and then make a judgement.

Dataset 1: Comparing individual foods
Greenhouse gas emission per kilogram of food

1 kg of food	kg of CO ₂ e
Beef	99
Lamb and mutton	39
Cheese	24
Poultry meat	10
Tofu	3
Bananas	0.9
Potatoes	0.5
Nuts	0.4

5. Which diet type produces the least greenhouse gas emissions per day? Circle one.

A. Low Meat **B.** Fish **C.** Vegetarian **D.** Vegan

6. By how much do emissions from a high-meat diet exceed emissions from a vegan diet?

_____ kg CO₂e per day

7. Describe the pattern in emissions as diets move from vegan to high-meat.

8. "Switching to a plant-based diet is one of the most effective ways an individual can reduce their carbon footprint." Use Figure 2 and your own understanding to respond to this statement.

1. Which of the following foods has the lowest greenhouse gas emissions per kilogram? Circle one.

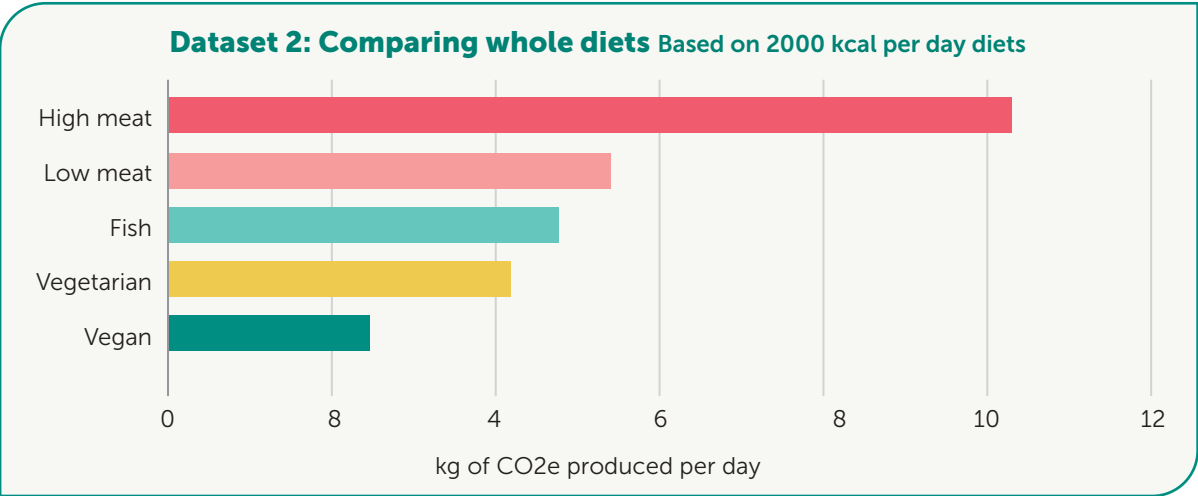
A. Potatoes **B.** Banana **C.** Nuts **D.** Tofu

2. What is the difference in greenhouse gas emissions between beef and tofu?

_____ kg CO₂e

3. Describe the pattern in greenhouse gas emissions shown by the foods.

4. Suggest reasons why animal-based foods generally produce higher greenhouse gas emissions than plant-based foods. Use Figure 1 and your own understanding.



Myth-buster: "surely buying local is greener?"
For most foods, the great majority of emissions come from farming and land use – not transport. Transport makes up only about 5% of food's emissions. So what you eat matters far more than how far it travelled.

9. A shopper says, "I buy local beef to shrink my carbon footprint." Using the data, how far does that work?

Conclusion: Does what's on your plate change the climate? Write a short, evidence-based answer. Use at least two figures from the data and explain the geography behind the pattern – why do animal-based foods tend to have higher emissions? (Think about land use, methane from livestock, and feeding crops to animals.)