



Beef and greenhouse emissions mystery

Overview

Students sort and use information cards about national and international beef production to suggest a course of action from personal and / or national perspective. They work in groups to discuss and categorise information cards in turn with the support of a Plus, Minus and Interesting (PMI) chart.

Suggested approach

The supporting PowerPoint presentation provides some background information about the issue: British farm produce is of a very high standard, is farmed responsibly to reduce carbon emissions and reduces transport costs.

Students work in groups of 2-4, depending on your preference. Provide each group with a set of information cards and a PMI chart, ideally on A3 sized paper. Explain that the information cards should be sorted into three columns: Plus (for those statements that are positive / low greenhouse gas emissions), minus (for statements that are negative / high greenhouse gas emissions) or interesting (for those statements that are informative, but neither positive nor negative). You may consider removing some of the cards for lower attaining students.

Once students have sorted the cards, they use information from them to complete one or more tasks:

- Develop a personal / family action plan based on cards in the Plus column. They use the cards to develop an argument for action at home and make a bullet list of actions they and their family could take.
- Create a poster promoting key messages about British beef / British farming standards based on cards in the Plus column. The poster should be A4 in size, contain text and images, and persuade British families to buy British produce.
- Write a letter to McDonald's, Burger King or Supermarkets to demand they consider low greenhouse emission products. They should use information from the cards placed in the Minus column to support writing their letter.
- Write a letter to World leaders at COP26 to request they put pressure on all countries to farm responsibly based on cards in the Minus column.
- If they were the Prime Minister of Britain, what would they do? Students make a bullet list of actions based on cards from all three columns of the PMI chart and use the list to create a speech.

Curriculum links:

GCSE Combined Science and GCSE Biology:

The principle of material cycling

- Recall that many different materials cycle through the abiotic and biotic components of an ecosystem.
- Explain the importance of the carbon cycle (and the water cycle) to living organisms.

GCSE Combined Science and GCSE Chemistry:

- Carbon dioxide and methane as greenhouse gases.
- Describe the potential effects of increased levels of carbon dioxide and methane on the Earth's climate and how these effects may be mitigated, including consideration of scale, risk and environmental implications.