



The lesson explores and uses a range of concepts from the maths curriculum in the context of Citizenship. The food we eat often comes from thousands of miles away, and home grown produce may travel to and fro across the UK before it reaches our local shops.

The topic provides excellent opportunities to develop and use data, solve numerical problems and use percentages. By developing the data themselves, students will engage more closely and understand the relationships more effectively.

Preparation

In previous lesson ask the class to record the ingredients and source of their evening meal.

Resource 1 'Where does food come?' from contains examples of products from different countries and the UK. Adding an example of a local product would be useful in discussion.

You will find more information on food miles on the BBC website among other sources.

http://www.bbc.co.uk/food/food_matters/foodmiles.shtml

Starter – How far has it travelled?

Use Resource 1 Where does food come from?

Ask class to estimate how far these items have travelled. Compare with the food miles for each item (in km!)

Ask the class how they think the products have reached the shop. List the different kinds of transport.

Main activity

Use Resource 2 'Food miles facts' and Resource 3 'Food miles record sheet'.

Students work out food miles for the ingredients for the evening meal.

If appropriate, ask them to work out amount of greenhouse gas given off as well.

Ask them to consider how they could have made their meal more environmentally friendly.

Plenary

Discussion focusing on:

- What makes a meal environmentally friendly?
- Are there any pros and cons to eating more locally?
- Possible ideas – variety in diet, healthy eating, how local?, employment in producer countries – effect on economy if people stop buying beans from Zambia?

Homework

Write a report entitled 'Should we eat locally?' using graphs, percentages and demonstrating problem solving.

Food miles resource 1 Where does food come from?



Food miles resource 2 Food miles facts

Working out the food miles

1 kilo of goods transported for 1 mile

- Lorry 0.2 MJ (mega joules)
- Ship 1.0 MJ
- Air 26.0 MJ

Products travelling 5000 miles
release 4500 g of greenhouse gas

This means that:

- A kilo of beans, sprouts or plums travelling 20 miles by lorry consumes 4 MJ
- A kilo of broccoli or strawberries travelling 700 miles from Spain consumes 140 MJ
- A kilo of lamb or apples travelling 11 700 miles by sea from New Zealand uses 11 700 MJ
- A kilo of mange tout from Zambia travelling 500 miles by air uses 13 000 MJ

What about a pizza?



Flour	North America	5400 miles
Tomatoes	Italy	100 miles
Tuna fish	Mauritius	5600 miles
Pineapple	Kenya	4500 miles
Peppers	Holland	400 miles
Mushrooms	UK	200 miles
Black pepper	India	5000 miles

Common UK food imports

Asparagus	Peru	6000 miles
Pears	Argentina	6500 miles
Carrots & peas	South Africa	5900 miles
Chicken	Thailand	6500 miles
Prawns	Indonesia	7000 miles
Apples	USA	10000 miles
Grapes	Chile	7200 miles
Potatoes	Israel	2200 miles
Tomatoes	Saudi Arabia	3000 miles
Sprouts	Australia	10000 miles
Lamb	New Zealand	14000 miles
Sugar snap peas	Guatemala	5000 miles

