1. As part of a healthy diet, we are all encouraged to eat at least 5 portions of different fruit and vegetables every day.
   - Make your own choice of 5 fruit and vegetables from the photographs provided.
   - Check the countries of origin of each of your choices from the labels on the food. Find the countries on the map and work out the distance each of your choices have travelled, using the data sheet to help you.
   - Write down your choices and the total number of ‘food miles’ involved in getting them to you.

2. Now look at the photographs again and try to choose 5 items that you would eat (be honest!) and that have the lowest possible ‘food miles’ score.
   - Make a note of your new choices and score
   - Challenge the other members of your group to come up with a lower score
   - Which of your favourite fruits or vegetables might you have to give up eating to keep your ‘food miles’ score low?

3. How might the produce available and the countries of origin differ if these labels had been collected 6 months ago? Can you explain these differences?

4. Make a list of all the places where you can buy fruit and vegetables (you should be able to think of at least 3). For each one, give at least one advantage and one disadvantage of shopping there. Write your answers in a table.
5. One way of cutting down the distance travelled by your food is to grow it yourself in your garden or on an allotment.
   - Does your family already grow any of its own food? If so, what items?
   - Can you think of any advantages to growing your own food other than reducing the number of food miles?
   - What are the possible problems involved in growing your own food?

6. As well as looking at the country of origin of food, you may want to consider whether the food is **organically-produced** or **Fair trade**.
   - Write a short explanation of each of these terms
   - How do you decide whether to buy an organic, Fair trade item from abroad or the same item produced non-organically in the UK? What sort of factors might affect your decision?

7. The term 'food miles' or 'food kilometres' - the distance travelled by food from field to plate - was first coined in the 1990s. It is now generally agreed that many other processes contribute to the 'carbon footprint' of our food (how much CO\(_2\) is given off at every stage of production). For the 2 examples given below, try to make a list of all the processes involved in the production and distribution of the food item that will emit CO\(_2\) into the atmosphere.
   - A mango produced non-organically in Gambia, transported by sea to the UK and then by lorry to your local supermarket.
   - A strawberry produced non-organically in heated greenhouses in Spain, transported by air to the UK and then by lorry to your local supermarket.

8. One way of avoiding having to transport 'unseasonal' food large distances is to preserve seasonal food for use at other times of the year.
   - Make a list of all the ways you can think of for preserving food
   - How do you think these processes might contribute to CO\(_2\) emissions?

9. The Carbon Trust and other organisations are helping organisations to reduce the impact of food production on climate change by working out a way of measuring how much CO\(_2\) is given off at every stage of production. The following label is now appearing on packets of crisps in the UK manufactured by Walkers
Once this information is available for a wider variety of food, shoppers will be able to choose food with a low carbon footprint. Is this a good thing?

In the meantime, shoppers have to make choices without this information. Write a list of 5 points to help people choose their '5 A Day' whilst doing the least possible damage to the environment.

Developed for CarboSchools by Phil Smith and Carol Hince, Teacher Scientist Network, Norwich, UK
ts.network@bbsrc.ac.uk (last change: 1st-Dec-10)

This publication has received funding from the European Community’s Seventh Framework programme under grant agreement number 217751. It is licensed under Creative Commons Attribution-Noncommercial-Share Alike 3.0 License.
For details see http://creativecommons.org/licenses/by-nc-sa/3.0