

NATURAL RESOURCES

Activity NR04

Theme

Class activity (CA). Investigate where food comes from, how far it travels, the idea of 'food miles' and the potential effect this has on the environment.

Objectives

Encouraging students to think about where food comes from, the resources that are needed to process and transport it, how far it travels before it reaches our plates and the effects this has on our environment.

Curricular strands

SESE, Geography–Human Environments; Trade and development issues; People at work

SESE, Science–Living things; Human life

SESE, Science and Geography–Environmental awareness and care

SPHE–Myself; Taking care of my body; Food and nutrition

Skills

Questioning, analysing, estimating and measuring, a sense of place

Time

20 minute introduction; 30-40 minutes completing the questionnaire and discussing findings (could be split over two days)

Links to Green Schools

Energy and transport

Food miles

→ HOW WELL TRAVELLED IS OUR FOOD?

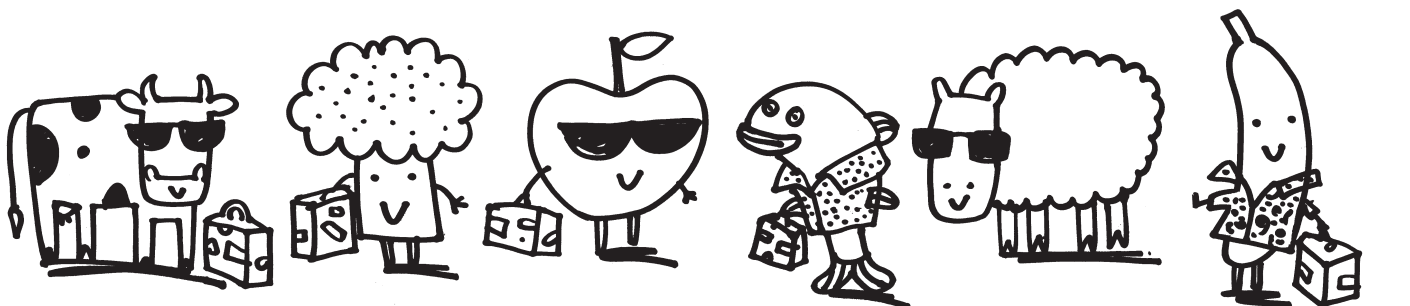
WHAT YOU NEED

- A selection of food and food packaging is assembled by the teacher, including examples of fresh local produce, processed food, food that requires freezing, food that has been locally grown and food that has travelled a long distance. Alternatively the teacher can outline the exercise and ask students to bring the items in.

Stick to examples for which pupils know the key ingredients. Include some foods with information on the pack about its origin and where it was processed or packed.

Examples: a bag of Irish potatoes, imported tomatoes, Irish tomatoes, a tin of mandarin oranges, bread, a carton of apple juice, dried raisins. If possible include an example of fresh produce from your county and an example of the same food that has been imported from another country.

- The packaging from frozen fish fingers, frozen peas, frozen burgers or another processed meat product.
- A copy of the questionnaire for each student or group. The teacher can decide if students are to answer the questions individually or as a group.



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Continued →

WHAT YOU DO

- 1 Discuss why we need food. Food gives us energy. We need a balanced diet to be healthy and grow. Explain that food is a resource that we get from nature. Make a list of some of the foods we eat on the blackboard and point out that all food comes from plants: animals eat plants or eat animals that eat plants, and humans eat food from plant and animal sources.
- 2 Give each group of students the list of questions attached and one of the foods or packages. Read through the questions if you feel it is necessary.
- 3 Explain that there may be information on the origin of the food or where it was packed on the packaging. Explain that the food is sometimes transported to be processed or packed in a factory. Ask for examples of foods that are fresh or processed, that have to be eaten by a given date, that need to be stored at a low temperature or that need special packaging to stay fresh.
- 4 Ask students to calculate the number of steps the food took from where it grew to get to their plate.

Questions

- 1 Could you grow this food yourself? Could you have found the same food grown nearer to where you live? If so discuss the benefits of the food being fresher, not having to be transported as far or packaged or processed to last longer. Which is healthier, fresh food or processed food?
- 2 Was energy used to grow the food in a greenhouse or transport the food? Was energy used to process or freeze your food? If so, fuel and electricity from fossil fuels were used. This contributes to air pollution and climate change.

Go further

The Travelling Banana Investigation

What you need

Two unripe or green bananas, one ripe banana, two clear plastic bags with ties

What you do

- 1 Put one of the green bananas in a bag with the ripe banana.
- 2 Put the other green banana in a bag on its own. Seal the bags and leave in a warm bright place for a few days.
- 3 You will notice the green banana in the bag on its own ripens more slowly than the one in the bag with the ripe banana. When fruit is ripening it gives off a gas called ethylene, which triggers fruit to ripen.

Bananas are sometimes picked when green and then chilled. When it is time for them to be exported they are ripened in warehouses by adding ethylene gas. This is an example of how food is treated if it requires long-distance transport.

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FOOD MILES SURVEY SHEET

What is your food? _____

What is the main ingredient in the food? _____

Which group does the main ingredient come from?

- ☐ Grain (wheat, rice, maize, oats)
- ☐ Fruit or Vegetable
- ☐ Poultry (chicken, turkey, duck, goose)
- ☐ Fish
- ☐ Livestock (cow, pig, sheep)
- ☐ Dairy (eggs, milk, cheese)

Is packaging used to make the food last longer? Is it canned, bottled, dried, sealed in a carton or plastic?

Where was the food grown? _____

Does this food grow in Ireland? Does the food grow in Ireland in this season? _____

Has the food been to a factory to be processed? For example has anything been added, has it been cooked, frozen, chopped or made into a particular shape?

Where was the food packed? _____

How do you think the food travelled to the shop? (you can tick more than one answer)

- ☐ By air
- ☐ By sea
- ☐ By rail
- ☐ By road

Did the food need to be frozen while travelling? _____

How many of these steps did the food take on its way to your plate?

- ☐ Came from outside Europe
- ☐ Came from Europe but not Ireland
- ☐ Came from Ireland but outside your county
- ☐ Came from your county
- ☐ Went to a factory to be processed
- ☐ Went to a factory to be packed
- ☐ Went to a factory to be frozen
- ☐ Went to a supermarket or shop