

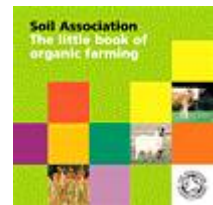


Food for Life Curriculum Pack

Topic 2: What do we really know about farming?

A farm visit is the best way to introduce children to many of the issues facing farmers today, and these can be arranged via our network of organic farms. Go to www.soilassociation.org/education to find out more.

A useful classroom resource for this topic is the Soil Association's *Little Book of Organic Farming*. It is packed full of information and activities to help children learn about organic farming. Copies are available free from the education department on 0117 914 2440.



The following activities introduce some of the issues linked to farming and are designed to help children consider the differences between organic and conventional methods of farming. Teachers may choose to pick two or three from the list depending on the age and previous knowledge of the pupils. We would recommend beginning with the first activity to introduce children to some important themes in farming.

The Soil Association works to promote the benefits of organic farming, both in terms of human health and impact on the environment. We hope that the activities will highlight some of the problems associated with some forms of conventional farming, in particular intensive farming. Teachers working in farming communities need to be sensitive to the fact that many of the children's parents will earn their living using conventional farming methods.

Activities for key stage two.

Activity 1: Thinking about farming

Activity 2: Animals have rights too!

Activity 3: Wild about wildlife

Activity 4: Soil matters – give back what you take out

Activity 5: Exploring food chains

Activity 6: Farming – harms or protects?

Activity 1: Thinking about farming

Curriculum links

Geography 1d, 3d, 3g, 4a, 4b, 5b, 6e

PSHE 1a, 2a

Objectives

- To help children see that farming has an impact on our environment and this impact can be harmful.

Resources

1. Teaching resource 5 *Farming pictures*. These need to be attached to A1 sheets of paper.
2. Activity sheet 4 *Things I know about farming*.

What to do

Discuss with pupils what they know about farming. What words and pictures come to mind? Do they think that being a farmer would be a fun job? Why/why not? Ask them to record these ideas in the first column of activity sheet 4 *Things I know about farming*.

Now split the class into six groups and give each one a picture mounted on an A1 sheet. The group must look at their picture and write questions and comments on the sheet. After they have had time to do this, each group passes their picture on, and they then try to answer the questions on the new sheet they have been given. The pupils should enjoy trying to answer each others' questions, and can write more questions of their own on the sheet.

As a whole class, discuss the comments and questions that have been recorded on the six sheets. Have the children found out anything new? What surprised them? Do they think that farming affects the environment? How?

When you discuss the children's findings, ask them if there are any themes that emerge, for example disease and pest control, animal welfare, land use. Pupils then fill in the other half of activity sheet 4 *Things I know about farming*.

Activity 2: Animals have rights too!

Curriculum links

Geography 1d, 2c, 3g, 4b, 5a

Science S2: 1a, 1c, 2b, 5a

PSHE 1a, 2a, 2d,

Objectives

- To understand the difference between intensive and non-intensive animal farming
- To consider the rights of farm animals by developing an animal welfare charter.

Resources

1. Teaching resource 5 *Farming pictures* – photo cards of animals.
2. Activity sheet 5 *Animal charter*.
3. Teaching resource 6 *How the other half live*.

What to do

Show the pupils the photo card with the battery hens and the sow in a farrowing crate. Ask them questions about it. For example: Why do they think the animals are kept in cages? Have they ever seen hens or pigs on a farm? Did they live in the same conditions? Compare with the photo card of free range hens and pigs. What do the children think about the animals on this card?

After looking at the pictures, divide the children into small groups and give them teaching resource 6 *How the other half live*. Ask them to read the information. Explain that they are going to draw up a charter for animals. Discuss the idea of a children's charter by way of introduction. What are their rights: somewhere comfortable to sleep at night, good food, an education? They should choose at least six statements for their charter and write them on activity sheet 6 *Animal charter*.

The following points are based on the Soil Association's organic standards and may be a useful reference. Animals should:

- Always have free range access to pasture
- Have natural light and ventilation when housed
- Have enough space to move around
- Be fed a natural diet and clean water
- Be allowed to grow at a natural rate
- Have comfortable bedding
- To be given medicine only when they need it, and not 'routinely'.

Activity 2: Animals have rights too! continued

Organic farms have strict welfare standards that need to be met in order to sell the produce as organic. These are regularly inspected by the Soil Association which awards its organic symbol to farms who meet the standards. Some other non-organic farms have high animal welfare standards as well, for example some are inspected by the RSPCA.

Children should present their charters to the other groups. They could then each produce a final version, and the best ones could be chosen for a display in the school hall.

Further activities

You could give the children an understanding of what confinement might feel like. Make a 2m² pen using ropes and posts or chairs. Fit in as many children as possible and then ask them to pretend to be battery farm chickens (you could explain that many battery farm hens only have as much floor space as a piece of A4 paper). How would they feel about spending all day like that? What would the problems be? This activity could be done during a PE lesson, as you could then let the pupils run around as organic chickens!

Children can find out more about how their charter compares to the organic standards by looking at the livestock section in the *Little book of organic farming* or by following the Sheepdrove farm trail which is at www.soilassociation.org/farmtrails

Show the children a selection of egg boxes: farm fresh eggs – laid by battery hens; barn eggs – from birds crowded together indoors in percheries; free range eggs – these birds have the most space and have access to the outdoors through holes in their huts; organic eggs – these birds have the most space, small flock sizes and free access to the outdoors. Do they think any of the terms are misleading?

Teachers' notes

The Compassion in World Farming (CIWF) Trust has a set of resources available free of charge. It contains activities, worksheets and three colour posters showing the contrasting conditions in which animals are reared. To order, email ciwftrust@ciwf.co.uk. Other useful resources can be found in the *Farm Animals* edition of the RSPCA's *Animal Focus* magazine. Go to www.rspca.org.uk and choose 'Education Services', 'Primary'.

Talking about animal welfare can be a very emotive subject, and it is important to remember that some children may be very sensitive about the issue. It may be worth sending a note home to let parents know you have discussed this issue.

Activity 3: Wild about wildlife

Curriculum links

Geography 3a, 3d, 4a, 4b, 5b, 6e

Science Sc2: 1a, 1b, 1c, 5a, 5b, 5d, 5e

Objectives

- To realise that hedgerows support a wide range of animals
- To understand the importance of conserving biodiversity on farms.

Resources

Teaching resource 7 *Wild about wildlife* and/or other pictures of wildlife habitats that might be found on a farm.

What to do

Children look at the hedgerow picture in pairs and try and identify as many animals as they can (rabbit, hedgehog, fox, badger, mouse, lizard, vole, blackbird, robin, wren, magpie, ladybird, bumblebee). Are they surprised at how many there are?

You can explain that the intensification of farming led to the physical destruction of hedgerows. In the last 50 years we have lost 40% of our hedgerows. In addition, the use of chemicals such as pesticides and herbicides can kill animals and plants that live in the hedgerow, either directly or indirectly by affecting the food chain. Why might it be important that these animals are protected? Many farms are now planting and restoring hedgerows under various countryside grant schemes. For more information on hedgerow management go to www.soilassociation.org/farmtrails and click on Elm Farm.

This can be linked to the work on food chains in activity 4, and you could ask them to identify and draw any food chains that might exist between the animals in the hedge.

Activity 4: Soil matters – give back what you take out

Curriculum links

Geography 4b, 5a, 5b, 6e

Science Sc2: 1a, 1b, 1c, 3c, 5a, 5f. Sc3: 1d

Objectives

- To understand how organic farming differs from conventional farming
- To appreciate how important maintaining good soil quality is to organic farming.

Resources

1. Bag of soil
2. A packet of garden fertiliser
3. Teaching resource 8 *six crop rotation pictures*.

What to do

Show the children the bag of soil. Ask some volunteers to come and feel it and describe what it is like. Ask the children what they know about soil. Where does it come from? What is it made of? Write ideas on the board. (If children have completed the Year 3 QCA Unit Rocks and soils they should have a good understanding already).

Ask the children to explain why plants need soil to grow. Their first idea may well be to do with needing somewhere for the roots to grow so that the plants are held up. Make sure that they also understand that plants need to get goodness from the soil in the form of nutrients.

Ask if any of the children know what a fertiliser is. Show them the packet of garden fertiliser and ask one of the children to come up and read the description.

Tell the children that they are going to find out how organic farmers build up soil fertility without adding chemicals to the soil. Explain that some plants build up soil goodness and some take it away. If you plant a range of different crops over a period of years you can keep the soil in balance. This is called a crop rotation. You may want to discuss the meaning of the word 'rotation'.

Ask for six volunteers to come to the front. Give each of them a crop rotation picture and accompanying text and ask them to read it out. Make sure that the steps of the rotation are not in the right order.

On the board draw a set of arrows making a cycle, and in the gap between each arrow, write year 1, year 2, year 3, year 4, year 5 and year 6. Ask the children for suggestions of how they would order the crops if they were a farmer.

Activity 4: Soil matters... continued

Assemble the crop rotation on the board. The correct order is shown below with accompanying teachers' notes on each crop and its role in the rotation:

Year 1: Clover ley – adds soil nutrients

Clover works as a 'natural' fertiliser. It belongs to the family of plants known as 'legumes'. As it grows in the soil, it draws nitrogen from the atmosphere and makes it available to plants growing in the soil, or following crops.

Year 2: Clover ley – adds soil nutrients

As above.

Year 3: Wheat – withdraws soil nutrients

Wheat is a demanding crop which takes up lots of nutrients from the soil. This is why it is important to have a good fertility building crop like clover before it.

Year 4: Beans – keep soil nutrients in balance

Beans are an excellent break crop. This means they give the soil a chance to recover after the nutrient demanding wheat planted the year before, and 'break' potential pest and disease cycles. Beans take up soil nutrients as they grow but this is balanced by the fact that, as a legume, they add some nitrogen to the soil through the action of the bacteria in their root nodules.

Year 5: Oats – withdraw soil nutrients

Oats take up nutrients from the soil, but are not as demanding as wheat. They are a useful crop for low nutrient situations as their roots scavenge deeply looking for nutrients, and are therefore ideal towards the end of the crop rotation. They are also a good form of weed control as their leaf structure shades out light and prevents smaller weeds getting established.

Year 6: Turnips – withdraw soil nutrients

Turnips act as a break crop after the oats grown the year before. While they do not add nutrients to the soil, they do not take as many nutrients out as the wheat and oats. Also, turnips will often be eaten by sheep and other animals which add manure to the soil as they are feeding.

The children could then draw their own version of a crop rotation.

Further activities

If any of the teachers or parents has a compost heap in their garden, ask them to bring in a sample of compost. Collect together some organic matter in a bucket, and ask them to compare. Can they believe that the vegetable peeling, fruit skins and so on can turn into rich brown compost? Ask them what is good about composting, for example putting the nutrients back into the soil.

Activity 5: Exploring food chains

Curriculum links

Geography 3a, 3d, 4a, 4b, 5b, 6e

Science Sc2: 1a, 1b, 1c, 5a, 5b, 5d, 5e

Objectives

- To understand that food chains are encouraged on organic farms and that this is important with regard to conserving biodiversity.

Resources

1. Teaching resource 9 *Food chain cards*.
2. Access to internet www.soilassociation.org/farmtrails – go to Church Farm.
3. Activity sheet 6 *On the Trail*.

What to do

Children begin by playing the food chain game. Five children are given a card with a picture on it: barley, aphid, ladybird, skylark and hawk. They have to arrange themselves to form a food chain that can be found on a farm.

The teacher then explains that the aphid has been sprayed with pesticide and so the child with that card has to leave the chain. This in turn affects the ladybird which has nothing to eat. It leaves the chain as do the skylark, and then the hawk, leaving only the barley. This shows how using pesticides can affect food chains all the way to the top predator.

Rather than spraying pests, ask children how could farmers use naturally occurring food chains to control pests such as aphids and slugs? For example, ladybirds eat aphids, and birds eat slugs. By encouraging these animals on farms, farmers are working with nature and are not allowing any one species to dominate.

To learn more about food chains on farms pupils could go to the Church Farm trail on the Soil Association website. The trail shows a variety of habitats and food chains that can be found on a farm, and introduces terms such as ‘producer’ and ‘consumer’. Children can complete activity sheet 7 *On the trail* as they follow the trail. Discuss what they have found out. Are they surprised at how many different habitats they saw on the trail?

Activity 6: Farming – harms or protects?

Curriculum links

Geography 1d, 3g, 4a, 4b, 5b, 6e

PSHE 1a, 2a, 2h

Objectives

- To develop pupils' understanding of the impact that farming can have on the environment
- To understand that environmental groups may want to persuade them of a particular point of view.

Resources

1. Copies of the leaflet 'Mad about Food' which can be ordered free of charge from Friends of the Earth on 020 7490 1555
2. Activity sheet 7 *Farming – harms or protects?*

What to do

This activity will be most suitable for pupils in upper key stage two. In pairs, pupils should read the 'Mad about food' leaflet written by Friends of the Earth. As the children read it, they need to decide whether each piece of information relates to things that protect or harm the environment. Pupils should then record what they have found out on the activity sheet *Farming – harms or protects?*

The poster refers to genetic modification, and you will need to discuss children's understanding of this term. You could ask one of them to read out the definition for GM given on the back of the poster. You might ask them what they have heard about GM on the news.

Finally, ask them if they have seen who prepared the poster (Friends of the Earth). Do they know anything about this organisation and what they are trying to do? Are they putting forward a particular point of view? Can they think of other similar organisations?

Further activities

More information on organic farming is available at the Yeo Valley site where you can take a virtual tour around an organic farm. Go to www.yeovalley.co.uk