

# meaty matters



section 2:

# Back at the farm

## **Section two: meanwhile back at the farm...**

**Looking after the animals means growing  
better meat for you**

**Activities: early stages**

**Class discussion**

**Looking after cows, sheep and pigs**



# Section 2: Meanwhile back at the farm...

## Teacher's notes

## Class discussion

### Aims

By reading poems about cows, sheep and pigs you can introduce the concept that farmers have to take proper care of their animals. If the animals eat well and are well cared for, then the meat we get from them tastes better.

### Materials/resources

- Katie Bairdie poem → page 45
- Baa Baa Black Sheep poem → page 44
- This little pig went to market poem → page 43
- **Scottish cattle on the Stodart Farm; Scottish pigs on the Peddie Farm; Scottish lambs on the Lennox Farm** sheets, including photographs → pages 36 - 42.

### Lesson outline

- Read out all three poems (there's a good version of the Katie Bairdie tune on [www.pteratunes.org.uk/music/music/lyrics/KatieBairdie.html](http://www.pteratunes.org.uk/music/music/lyrics/KatieBairdie.html), if you prefer to sing it!)
- These poems are all about cows, sheep and pigs - but what's it really like on a farm? How do farmers look after their animals?
- Ask children if they have been on a farm? If any of them have, ask them to describe their experiences.
- Farmers have to look after their animals. They have to make sure the animals eat proper food, have somewhere to sleep and that they are looked after properly when they are ill. If farmers care for their animals, they grow meat that tastes better.
- Use **Information sheets: Scottish cattle on the Stodart Farm; Scottish pigs on the Peddie Farm and Scottish lambs on the Lennox Farm** to summarise what animals eat, where they sleep, illnesses they can get and how they are treated. Show pupils photographs.
- Explain idea of tagging and passport - then we know which farm cattle and sheep have come from and we can be sure they've been well looked after.
- Explain that farmers have to follow rules - the same as pupils - and that people called inspectors come out to make sure that they are doing that.

# Section 2: Meanwhile back at the farm...

## Teacher's notes

### Looking after cows, sheep and pigs

#### Aims

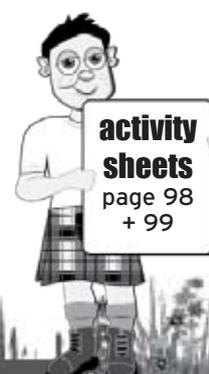
The aim of this activity is to reinforce (and assess) pupils' knowledge and understanding that farmers care for their animals - not only because it's a good thing to do, but because they grow better meat as a result.

#### Materials/resources

- pupils' existing knowledge and understanding
- **Information sheets: Scottish cattle on the Stodart Farm; Scottish lambs on the Lennox Farm; Scottish pigs on the Peddie Farm sheets**, including photographs → pages 36 - 42.
- **Activity sheet: looking after cows, sheep and pigs**
- **SSPCA game** - this teaches pupils about different native breeds of cattle and sheep [www.sspcaeducation.org/farming/images/TYPESCOT/game/SCOTSTOCKgame.swf](http://www.sspcaeducation.org/farming/images/TYPESCOT/game/SCOTSTOCKgame.swf)

#### Lesson outline

- Hand out **Activity sheet P98/99: looking after cows, sheep and pigs**
- Remind pupils of the poems, and the class discussion about how farmers look after their animals.
- Go over activity sheet - pupils have to match the photographs, write a little about each photograph, and then draw a vet visiting the animals.
- Pupils are also asked to design a passport for a cow! Explain that a steer is a male calf and a heifer is a female calf. Steers and heifers are bred for their meat. A bull is male and is used for breeding (if anybody asks!) Pupils might want to choose one or the other.
- Make sure pupils understand what they have to do then ask them to complete the activity sheets. Pupils can look at the photographs on the information sheets if they get stuck.
- If B level pupils finish quickly, they can access the SSPCA website and learn about different native breeds of cattle and sheep by playing the game.



# Section 2: Meanwhile back at the farm...

## Information sheet

### Scottish cattle on the Stodart Farm

\* See the Beef Story on CD-Rom for photographs.

#### We look after our animals so that we grow better meat for you

Rob and Alison Stodart have two farms - one in Angus and one in Dumfries and Galloway - where they grow cattle to sell as food. Here's how they look after their cattle, so you get better meat.

#### Passports/tagging

Calves have to get tags put in their ears within 21 days of being born. Rob usually tags his within 24 hours. They also get a passport! The number on the tag is the same as the number on the passport application that the farmer sends or e-mails to the British Cattle Movement Service (BCMS). The BCMS sends back a passport - it looks a bit like a chequebook. The passport must be signed by the farmer, and he has to put his quality assurance sticker in it. The passport shows the mother and Date of Birth of the calf, along with the breed.

And this passport is pretty much like a human one - you can't leave home to go to a foreign place without it! The passport travels with the animal wherever it goes - for example, to another farm, a market or to an abattoir. All the tag, passport and cattle movement details are recorded at the BCMS so everybody from the farmer to the customer who eventually buys the meat knows exactly where the animal has been.

#### What cattle eat

They eat a lot! Animals that have been weaned (stopped drinking their mum's milk) and store cattle (animals that are being fattened to sell as meat) are fed on a mixture of barley, straw, potatoes, carrots and silage. Store animals are also put on grass during the summer. They are fed in late summer, as the grass goes off. It gets them used to people being in the field, and it also gets them used to following a feed bag home.

Cows that are feeding their calves eat their way through fields of grass in the summer. As the grass stops growing in the late summer, they are fed a barley mix. In winter they can be fed on silage, straw and sometimes barley. Calves drink their mothers' milk, but they quickly learn to graze on grass.

# Section 2: Meanwhile back at the farm...

## Information sheet

### Scottish cattle on the Stodart Farm (continued)

Rob and Alison have two farms for two good reasons. The farm in Angus is in the east, and it provides food and straw for the winter. The farm in Dumfries and Galloway is in the west, and it provides good grass for the summer.

Nearly all the beef producers in Scotland (including Rob and Alison) are members of QMS farm assurance schemes. This scheme sets out strict rules that farmers have to follow - just like you have to follow rules at school. The vet comes to the farm every three months to make sure the animals are well.

There are also assessors who go round each farm regularly to make sure that the farmers are following the rules. They look out for things like how many cattle there are, the food and water they drink and the space they live in. Sometimes people from the Scottish Society for Prevention of Cruelty to Animals (SSPCA) come to the farm with them to make sure the animals are looked after.

To be called Scotch Beef, animals must be born, reared for all their lives in Scotland on an approved farm, and slaughtered in Scotland in an approved meat plant.

# Section 2: Meanwhile back at the farm...

## Information sheet

### Scottish cattle on the Stodart Farm (continued)

**If they are fed properly, look how much these animals can weigh!**

newborn calf	50 kgs
nine-month-old calf	300 kgs
18-20-month-old steer	500 kgs
24-month-old finished steer	650 kgs

Just as there are different breeds of dog, so there are different breeds of cattle. Rob and Alison have Limousin, Charolais and Simmental breeds on their farm.

#### Where cattle sleep

Straw is used for bedding the animals in the winter. When the courts (where the animals sleep) are cleaned out, the dung is put into a midden, to be spread onto fields as organic fertilizer. The animals are fed twice a day, seven days a week. They're bedded every day, even at Christmas and New Year!

#### Looking after the health of the animals

The animals need to be looked after carefully. They can get pneumonia at any time, but this happens especially in late autumn when the weather turns cold and then gets mild again. You can see the steam rising from them in the sheds!

Pneumonia can cause a lot of heartache and extra work for farmers, because the whole batch in the shed can need a dose of medicine. There is nothing the farmer hates more than going out to the shed and finding a dead beast.

Just like humans, there are signs when an animal is ill. An experienced farmer will spot problems early on - one of the first signs there is a problem is that the animals get runny noses. The farmer also looks out for problems with breathing, and lack of interest in food - this is called 'hanging back at the feed trough'. But there are always times when the worst happens and the farmer just couldn't have done anything about it.

Animals too need to have a healthy, balanced diet. There can be problems if they don't eat enough calcium or magnesium. For example, during calving time, cows can get milk fever because they lack calcium. This means the cow can't stand up, and will sometimes die if she's not treated. A whole bottle of calcium is injected into her, and she's usually ok within an hour.

# Section 2: Meanwhile back at the farm...

## Information sheet

### Scottish lambs on the Lennox Farm

\* See the Lamb Story on CD-Rom for photographs.

#### We look after our animals so that we grow better meat for you

Bobby and Anne Lennox have a farm near Loch Lomond where they grow lambs to sell as food. Here's how they look after their lambs, so they grow better meat for you.

#### Tagging

The law is that each lamb is tagged in the left ear any time before it leaves the farm. If the lamb is bought by another farmer, he puts his farm tag in the lamb's right ear. If the lamb has any other owners, they also put their tag in the lamb's right ear. So if you want to know where a lamb has been during its life, you just have to look at the tag numbers - you can tell which farms it has been on. It's just like a name and address label!

#### What lambs eat

Scottish sheep and lambs eat a lot of grass. Lambs that have been weaned or taken away from their mum in August/September and are being sold later in the year eat grass until October or November. So do smaller lambs that have been weaned from their mum, but are being sold from January to March. But sometimes there isn't enough grass from December because it's too cold for it to grow, so the farmer helps all these lambs to find food, and brings them hay and conserved grass called silage.

Most farmers who have upland or hill farms have to sell their lambs to lowground farmers, because there isn't enough grass to feed and grow the lambs properly. These lambs are called store lambs.

Lambs can grow up to 35kg - 45kg - that's roughly the same as forty-five 1kg bags of sugar!

#### Where lambs sleep

Most lambs are kept outside all the time.

#### Looking after the health of the animals

Even though the farmer looks after his lambs carefully, they can still get sick - just like humans.

# Section 2: Meanwhile back at the farm...

## Information sheet

### Scottish lambs on the Lennox Farm (continued)

Pneumonia and tetanus type infections can kill lambs, and the farmer prevents this from happening by giving them a vaccination.

Sheep and lambs can also get footrot - and it can make them lame. The farmer treats this by giving the sheep and lambs a special footbath that kills the bacteria. And did you know that sheep have to have their feet trimmed regularly? It's just like when you have to get your toenails cut!

Sheep can also be hurt and upset by dogs who are running through fields without a lead. So if you have a dog and you're walking in the country, don't go near fields with animals in them!

Nearly all the lamb producers in Scotland (including Bobby and Anne) are in the Quality Meat Scotland farm assurance scheme. This scheme sets out strict rules that farmers have to follow.

There are inspectors who go round each farm at least once every year to make sure that the farmers are following the rules. Sometimes an inspector from the Scottish Society for the Prevention of Cruelty to Animals (SSPCA) comes with them.

To be called Scotch Lamb, animals must be born, reared for all their lives in Scotland on an approved farm, and slaughtered in Scotland in an approved meat plant.

# Section 2: Meanwhile back at the farm...

## Information sheet

### Scottish pigs on the Peddie Farm

\* See the Pork Story on CD-Rom for photographs.

#### We look after our animals so that we grow better meat for you

Gwen and Andrew Peddie have a farm in Anstruther where they grow pigs to sell as food. Here's how they look after their pigs, so you get better meat.

#### What pigs eat

Pigs are given a very high quality, expensive diet that's specially made to suit their weight and needs. This diet changes as they grow. There's a lot of science goes into the making up of pig diets!

The pig puts on weight and grows very quickly - from 7kgs to an amazing 100kgs! It can put on 600 to 750+ grammes a day. Now you know why the phrase 'to eat like a pig' came about!

#### Where pigs sleep

Gwen and Andrew keep their pigs outdoors in paddocks, and they sleep in arcs, which have an arched shape. About 30 per cent of the pigs in Scotland (that's about a third) are kept outside in this way. The rest are kept in special buildings.

#### Looking after the health of the animals

Pigs are happiest and healthiest when they live in good clean accommodation, with plenty of room. This helps to prevent them getting diseases. So it is important to put the pigs into accommodation that has been washed and disinfected and allowed to dry out for a few days. However, sometimes pigs can fall ill - just like humans - no matter what the farmer does.

Pneumonia is a disease that can go round the herd. It is treated by medication in the pigs' food.

Pig wasting disease happens a lot in Scotland, and it's very difficult to treat. Usually the farmer will give the pigs medication in their food rather than jag each pig, because it's less stressful for the pig.

Pigs can also be hurt and upset by dogs who are running through the fields without a lead. So if you have a dog and you're walking in the country, don't go near fields with animals in them!

Nearly all the pig producers in Scotland (including Gwen and Andrew) are in the Quality Meat Scotland farm assurance scheme. This scheme sets out strict rules about looking after the animals - and farmers have to follow them. This is like the rules you have to follow at school.

The vet comes to the farm every three months to make sure the animals are well.

# Section 2: Meanwhile back at the farm...

## Information sheet

### Scottish pigs on the Peddie Farm (continued)

There are also assessors who go round each farm every 12-18 months to make sure that the farmers are following the rules. They look out for things like how many pigs there are, the amount of water they have to drink and the space they have to eat in. Sometimes a person from the Scottish Society for the Prevention of Cruelty to Animals (SSPCA) comes with them to make sure the pigs are being looked after.

## Section 2: Meanwhile back at the farm...

### This Little Pig

This little pig went to market;

This little pig stayed at home;

This little pig had roast beef;

This little pig had none;

And this little pig cried, Wee-wee-wee!

All the way home.

Anon



## Section 2: Meanwhile back at the farm...

### Baa Baa Black Sheep

Baa, baa, black sheep,

Have you any wool?

Yes, sir, yes, sir,

Three bags full;

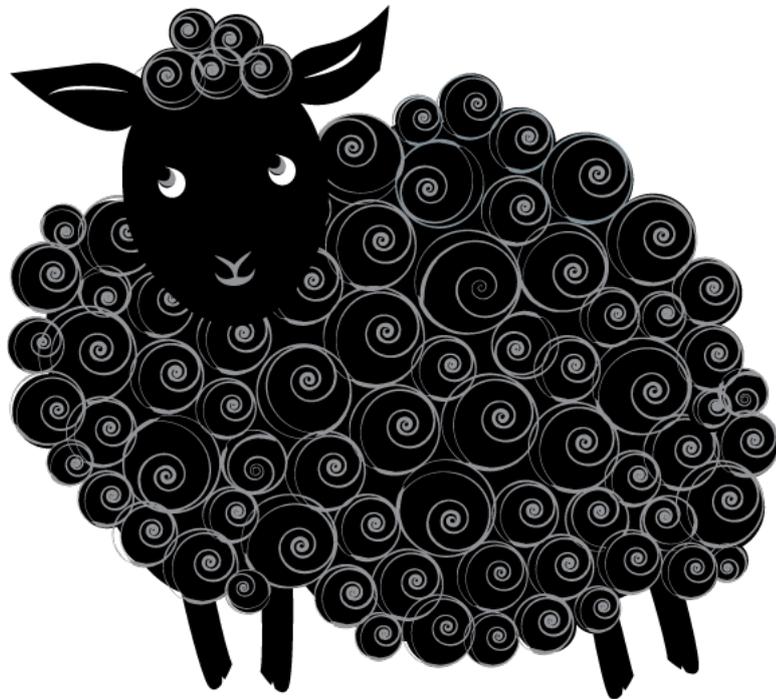
One for the master,

And one for the dame,

And one for the little boy

Who lives down the lane.

Anon



## Section 2: Meanwhile back at the farm...

### Katie Bairdie

Katie Bairdie hid a coo,  
Black an' white about the mou';  
Wisna that a dainty coo?  
Dance Katie Bairdie.

Katie Bairdie hid a cat,  
She could catch baith moose and rat;  
Wisna that a dainty cat?  
Dance Katie Bairdie.

Katie Bairdie hid a hen,  
She could lay baith but an' ben;  
Wisna that a dainty hen?  
Dance Katie Bairdie.

Katie Bairdie hid a wife,  
She could use baith fork an' knife;  
Wisna that a dainty wife?  
Dance Katie Bairdie.

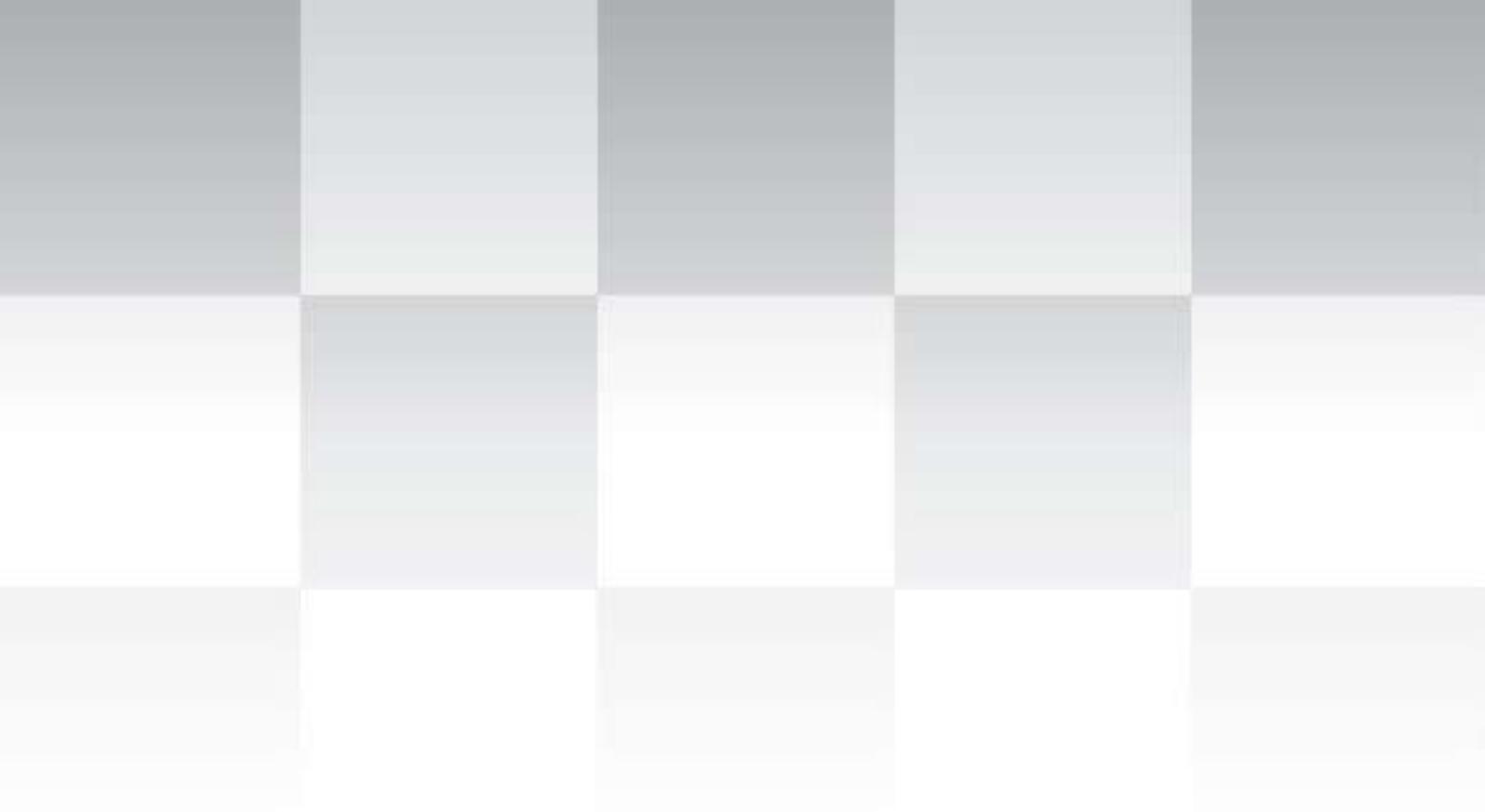
Katie Bairdie hid a wean,  
Widna play whan it cam' on rain;  
Wisna that a dainty wean?  
Dance Katie Bairdie.

Traditional



There's a good version of the Katie Bairdie tune on:

[www.pteratunes.org.uk/music/music/lyrics/KatieBairdie.html](http://www.pteratunes.org.uk/music/music/lyrics/KatieBairdie.html)



## **Section two: meanwhile back at the farm...**

**Looking after the animals means growing  
better meat for you**

**Activities: middle & upper stage**

**Interactive game: find the animals!  
What is organic farming?**



# Section 2: Meanwhile back at the farm...

## Teacher's notes

### Interactive game: find the animals!

#### Aims

This is a game that will reinforce pupils' knowledge and understanding of how and why farmers look after their animals - they need to read the sheets or watch the CDrom about the three farms before they can take part in the game.

#### Materials/resources

- **Information sheets: Scottish cattle on the Stodart Farm; Scottish pigs on the Peddie Farm; Scottish lambs on the Lennox Farm**
- pupils' own knowledge and understanding
- **CD-ROM interactive game: rescue the animals!**
- **SSPCA game** - this teaches pupils about different native breeds of cattle and sheep (more for middle stages)  
[www.sspcaeducation.org/farming/images/TYPESCOT/game/SCOTSTOCKgame.swf](http://www.sspcaeducation.org/farming/images/TYPESCOT/game/SCOTSTOCKgame.swf)

#### Lesson outline

- Hand out the three information sheets Pages 36, 37, 38, 39, 40, 41 + 42 and go over them.
- Discuss how and why farmers look after their animals - first of all because they care about them, because it's humane and they have rules to follow, but also because it means that they grow better meat for us to eat.
- Discuss various aspects of looking after animals - what they eat, where they sleep, what happens when they're ill.
- Introduce CD-ROM and tell pupils how to play the game. Divide class into pairs, each with a slot at the computer.
- Pupils to take turns at playing the game.
- Once pupils are finished, they can access the SSPCA website and learn about different native breeds of cattle and sheep by playing the game.

# Section 2: Meanwhile back at the farm...

## Teacher's notes

### What is organic farming?

#### Aims

This is an extension activity that aims to develop pupils' knowledge and understanding of different approaches to farming. It will also develop pupils' research and communication skills.

#### Resources

- Pupils' research, reading and writing skills
- **Activity sheet: what is organic farming?** → page 100
- Soil association website: [www.soilassociation.org](http://www.soilassociation.org) (education and information centre sections)

#### Lesson outline

- Recap on what you've been learning about non-organic ways of farming.
- Introduce idea that some farmers choose to use organic farming methods.
- Pupils' task is to research the key elements of organic farming methods. Suggest that pupils use the following headings: Introduction; Key elements of organic farming; Differences between organic and non-organic farming; Summary and conclusions.
- Suggest that pupils use a mind map to help structure their report and organise their thoughts.
- Hand out **Activity sheet: what is organic farming?**
- Ask pupils to research and write the report.



# Section 2: Meanwhile back at the farm...

## Teacher's notes

### Meanwhile back at the farm - early last century!

#### Aims

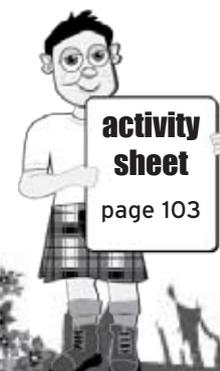
This activity aims to introduce pupils to the concept of what farming was like around 100 years ago. Farmers used to employ many more people to work on their farms - including children - and this sometimes affected their ability to go to school! It gives pupils the chance to hear primary evidence describing people, events and societies of significance in the past. It also develops their knowledge and understanding of change and continuity, cause and effect.

#### Materials/resources

- **Information sheet: education and farming** → page 51
- **Account by ex-resident of Cornceres Farm Cottages, Anstruther of life on a farm 90 years ago**
- **Activity sheet: meanwhile back at the farm - early last century!**
- **Kittochside, The Museum of Scottish Country Life, East Kilbride (National Trust for Scotland/National Museums of Scotland)**
- **CDRom**

#### Lesson outline

- Give out **Information sheet: education and farming**. Discuss with pupils what life was like then - farmers needed a lot of people to help them, because they didn't have the machines and technology they do now.
- Point out that children were often used to help on the farm. Go through the information sheet and discuss the Education Act, School Boards and how they worked.
- Now play the CD-ROM with the old lady's account of life on a farm to pupils. Help them with any words they don't understand.
- Hand out **Activity sheet: meanwhile back at the farm - early last century!** and go over it with pupils. Pupils are asked to use the information from the sheet and the old lady's account to describe what life was like on a farm early last century. Write down any dialect, terms or vocabulary they don't know and explain what they mean.



# Section 2: Meanwhile back at the farm...

## Information sheet

### Education and farming

Children in Victorian Scotland didn't get much of an education until the Education Act of 1872 came along.

This Act meant that all children aged 5-14 had to go to school. The schools were run by School Boards. Members of the Boards were elected from members of the local community.

Working class families would rise with their fathers early in the morning, and the older children would help to get the younger children ready. If the mother worked on the local farm, then the older children might stay home from school to look after the babies.

Lots of children stayed off school during busy times such as potato planting and harvesting so that they could help the farmer.

But if children were off school too often, the headmaster might report them to the School Board, because they had to go to school until they were 14. Here is an extract from The Scotsman newspaper, dated 23 December 1915. It tells us how a farmer was found guilty of employing a school-age girl when she should have been at school.

### EMPLOYMENT OF SCHOOL CHILDREN BY FARMERS ATTITUDE OF EDUCATION AUTHORITIES TEST CASE

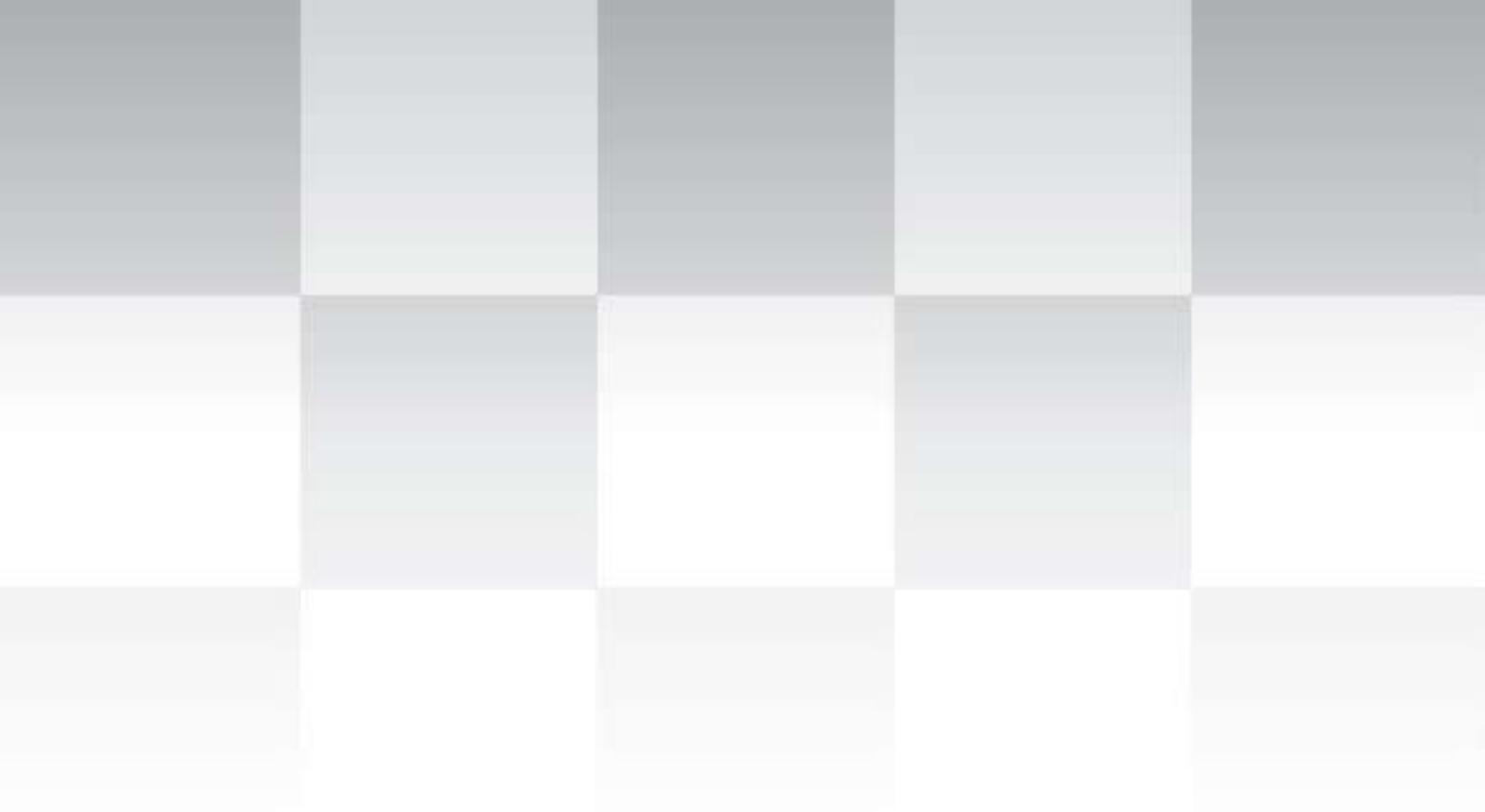
*A decision as to the employment of school children by farmers was given by Sheriff Substitute Umpherston in Kinross Sheriff Court yesterday, when Mr Colin C. Syme, J.P., farmer, Seggie, a well-known agriculturist, was charged at the instance of Orwell School Board with having in November employed, for the purpose of spreading manure on one of his fields at Seggie Farm, Catherine Millar, a child between 12 and 14 years, and also Robert Reid for carting turnips between the hours of 9 a.m. and 3 p.m., neither or whom had obtained exemption from the obligation to attend school from the School Board of the parish of Orwell.*

**Extract taken from *The Scotsman*, 23 December 1915, page 8**

So the farmer here - Mr Syme - was told off for taking children out of school! He had to choose between paying a fine (money) to the court, or going to jail!

Some teachers took children as young as two or three into the classroom so they could help out working mothers. This also meant that the older children didn't have to miss school by staying at home to look after them.

**Information source:** The National Trust for Scotland Education Website: Teachers' resources  
[www.ntseducation.org.uk/teachers/victorians.html](http://www.ntseducation.org.uk/teachers/victorians.html)



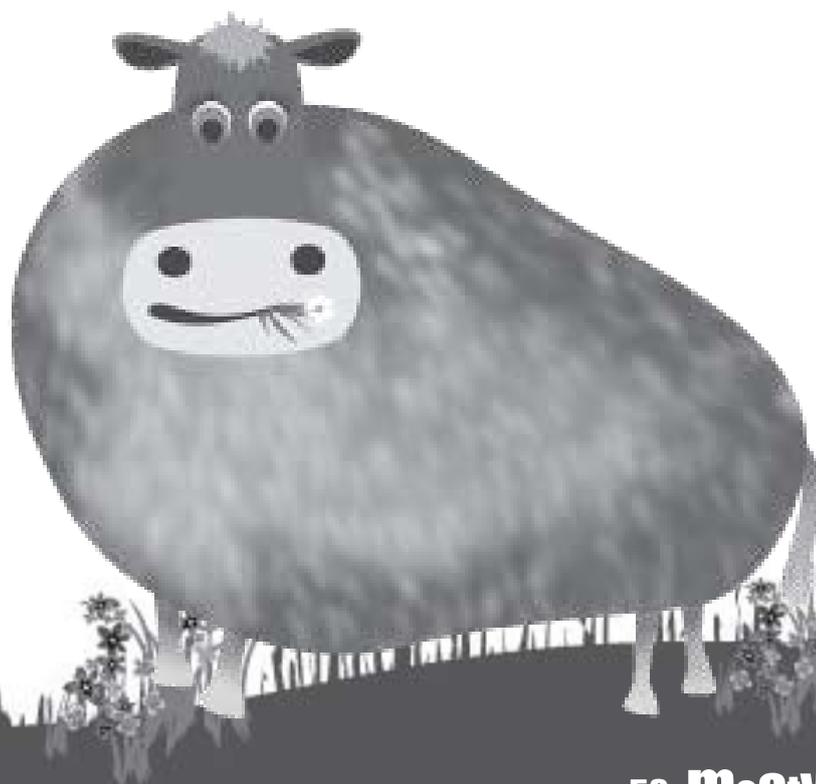
## **Section two: meanwhile back at the farm...**

### **From farm to plate - the processes of meat production**

#### **Activities: early stage**

##### **Class discussion**

**What happens when? Put the pictures in the right order**  
**What happens when? Put the sentences in the right order**



# Section 2: Meanwhile back at the farm...

## Teacher's notes

### Class discussion

#### Aims

The aim of the class discussion is to assess pupils' current knowledge and understanding of the processes of meat production, and to develop that knowledge and understanding by discussing the flow chart.

#### Materials/resources

- **Information sheet: flowchart of production process** → page 56
- children's current knowledge and understanding
- whiteboard/blackboard to write down key words

#### Special note

This activity contains a sensitive issue – basically, the killing of animals for meat. You know your own class, and will know best how to handle this. Some pupils in your class may be vegetarian, or unable to eat meat for religious and cultural reasons, and this concept may be upsetting to them. However, many children are pragmatic about the fact that we have to kill animals for meat, and understand that this is what happens. You may wish to gloss over the abattoir stage, or just tackle it head on. You might, for example, develop a 'farm frieze' and remove some of the animals one morning before the pupils come in – and wait for them to ask where they have gone. You may even think it best to miss this activity out – we leave it to your professional judgement. The lesson outline is written on the basis that the pupils in your class are pragmatic!

#### Lesson outline

- Ask pupils if they know where the meat they buy from the butcher or supermarket comes from.
- What happens once the animals have been sold and leave the farm?
- Use the **Information sheet: flowchart of production process** to describe to pupils what happens.
- Ensure at the abattoir stage that pupils understand that animals are killed humanely – they are stunned (this makes them unconscious) before they are killed. A vet is there with them to make sure that they are calm and comfortable, and don't suffer any pain at all.
- Discuss pupils' ideas and experiences, then summarise and write down key words and phrases.

# Section 2: Meanwhile back at the farm...

## Teacher's notes

### Activity sheet: What happens when? Put the pictures in the right order

#### Aims

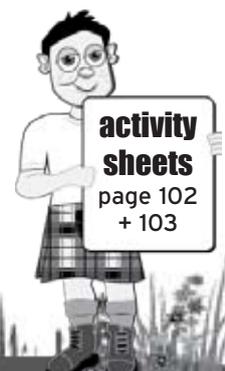
The aim of this activity is to develop pupils' knowledge and understanding of the processes of meat production from farm to plate.

#### Materials/resources

- **Activity sheet: what happens when? Put the pictures in the right order**
- **Information sheet: flowchart of production process** → page 56
- Pupils' knowledge and understanding of process

#### Lesson outline

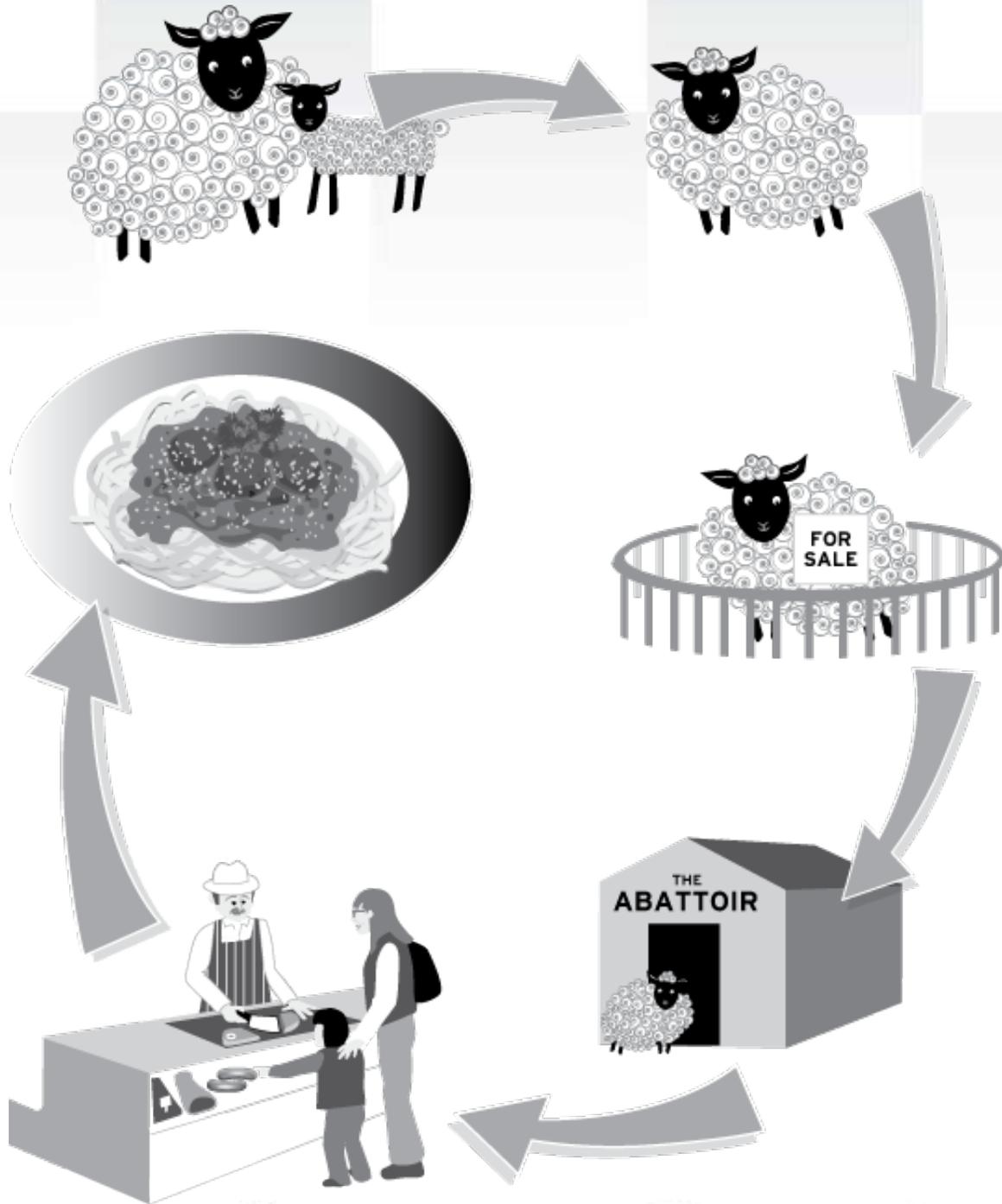
- Hand out **Activity sheet: what happens when?** Put the pictures in the right order and go over it with pupils.
- Remind them of discussion - what the stages of the production process are.
- Tell pupils they can look at the flowchart if they get stuck.
- Now ask pupils to complete the activity sheet.



# Section 2: Meanwhile back at the farm...

## Information sheet

### Flowchart of production process



# Section 2: Meanwhile back at the farm...

## Teacher's notes

### Activity sheet: what happens when? Put the sentences in the right order

#### Aims

The aim of this activity is to develop pupils' knowledge and understanding of the processes of meat production from farm to plate.

#### Materials/resources

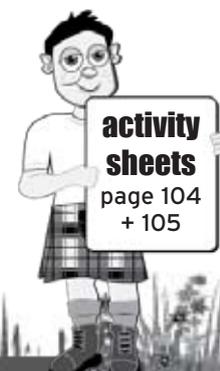
- **Activity sheet: what happens when? Put the sentences in the right order**
- **Information sheet: flowchart of production process** → page 56
- Pupils' knowledge and understanding of process

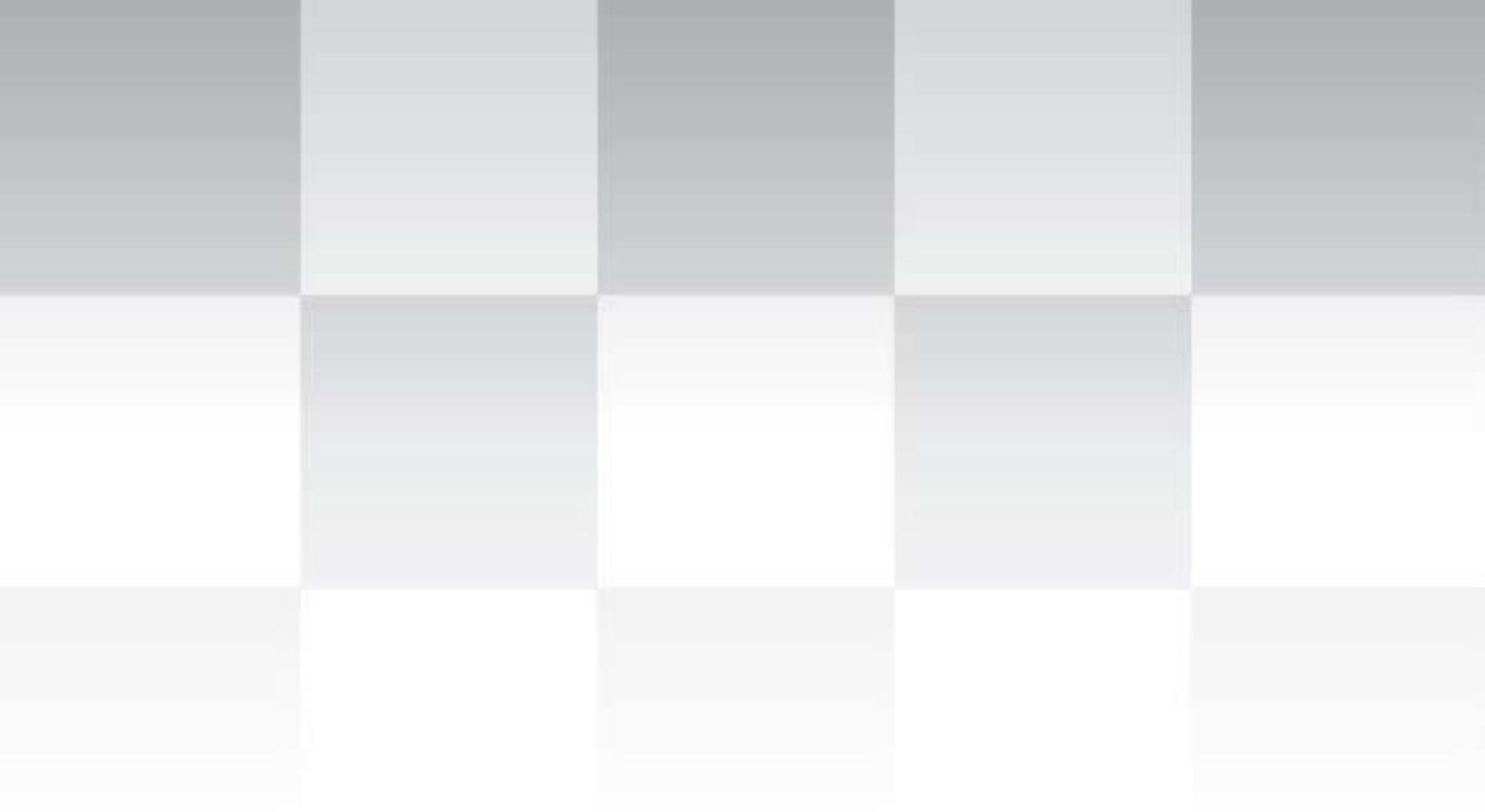
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#### Lesson outline

- Hand out **Activity sheet: what happens when? Put the sentences in the right order** and go over it with pupils.
- Remind them of discussion - what the stages of the production process are.
- Ensure at the abattoir stage that pupils understand that animals are killed humanely - they are stunned (this makes them unconscious) before they are killed. A vet is there with them to make sure that they are calm and comfortable, and don't suffer any pain at all.
- Tell pupils they can look at the flowchart if they get stuck.
- Now ask pupils to complete the activity sheet.





## **Section two: meanwhile back at the farm...**

### **2. From farm to plate - the processes of meat production**

#### **Activities: middle & upper stage**

**Flowchart - the processes of production from farm to plate  
From shop to plate**



# Section 2: Meanwhile back at the farm...

## Teacher's notes

### Flowchart - the processes of production from farm to plate

#### Aims

The aim of this activity is to develop pupils' knowledge and understanding of the processes of meat production from farm to plate.

#### Materials/resources

- **Information sheet: beef from the Stodart Farm to your plate** → page 61 - 62
- **Information sheet: pork from the Peddie Farm to your plate** → page 63 - 64
- **Information sheet: lamb from the Lennox Farm to your plate** → page 65 - 66
- **Activity sheet: flowchart - the processes of production from farm to plate** → page 106
- QMS photographs of animals, farms, butchers, supermarkets, etc for illustrating flowcharts
- coloured pens, rulers and sheets of A4 and A3 paper for flowcharts (drafts and final versions)
- pupils' existing knowledge and understanding

#### Special note

This activity contains a sensitive issue - basically, the killing of animals for meat. You know your own class, and will know best how to handle this. Some pupils in your class may be vegetarian, or unable to eat meat for religious and cultural reasons, and this concept may be upsetting to them. However, many children are pragmatic about the fact that we have to kill animals for meat, and understand that this is what happens. You may wish to gloss over the abattoir stage, or just tackle it head on. You may even think it best to miss this activity out - we leave it to your professional judgement. The lesson outline is written on the basis that the pupils in your class are pragmatic!

#### Lesson outline

- Hand out information sheets and discuss the processes for each animal from farm to plate.
- Ensure at the abattoir stage that pupils understand that animals are killed humanely - they are stunned (this makes them unconscious) before they are killed. A vet is there with them to make sure that they are calm and comfortable, and don't suffer any pain at all.
- Hand out **Activity sheet: flowchart - the processes of production from farm to plate**
- Divide class into three groups of pairs - the pairs in group one will do their flowchart for beef, the pairs in group two will do their flowchart for lamb and the pairs in group three will do their flowchart for pork. Go over sheets with each group. First of all, pupils have to read the information sheet for their group. Then, working with their partner, they have to work out the production process for their animal, make a draft flowchart on A4 and then produce a final version on A3 paper, using photographs, coloured pens, captions and graphics (they could use the computer for this).



# Section 2: Meanwhile back at the farm...

## Information sheet

### Beef from the Stodart farm to your plate

\* See the Beef Story on CD-Rom for photographs.

Rob and Alison Stodart have two farms - one in Angus and one in Dumfries and Galloway. Here's how the beef they grow becomes the steak on your plate.

#### Technical terms

Suckler cows	cows that are feeding their calf or calves
heifers	female who has not had a calf
bull	male animal, mostly used for breeding, but can also be used for meat
weaning	when calves stop drinking their mum's milk
store steers	weaned male calf, that is fattened for meat

#### Birth

Suckler cows have one calf per year (this can sometimes be twins). The cows are pregnant for 9 months - the same as a human. Bull or heifer calves are born in the spring or early summer.

When a calf is born, it weighs around 50kgs (same as fifty 1kg bags of sugar). It stands up within minutes of being born, and its mum gives it a good licking all over! The calf has to drink its mother's milk - and especially the colostrum (the first milk that's full of good antibodies) within the first six hours - or it might not thrive, and may die.

Calves have to get tags put in their ears within 21 days of being born. Rob usually tags his within 24 hours. They also get a passport! The number on the tag is the same as the number on the passport application that the farmer sends or e-mails to the British Cattle Movement Service (BCMS). The BCMS sends back a passport - it looks a bit like a chequebook (see the photograph below). The passport must be signed by the farmer, and he has to put his quality assurance sticker in it.

And this passport is pretty much like a human one - you can't leave home to go to a foreign place without it! The passport travels with the animal wherever it goes - for example, to another farm, or to an abattoir. All the tag, passport and cattle movement details are recorded at the BCMS so every animal can be traced - from birth to plate.

# Section 2: Meanwhile back at the farm...

## Information sheet

### Beef from the Stodart farm to your plate (continued)

#### Weaning and growing

When steers and heifers are weaned after nine months, they are then called store heifers or steers. On Rob and Alison's farm, weaning takes place in the autumn. After they have been weaned, store steers and store heifers are allowed to grow until they are about 20 months, and they are 'finished' or fattened for selling at about 24 months.

#### Selling

Some of the cattle are sold to the market, but most of the cattle are sold direct to the abattoir.

#### The abattoir

Once they have been sold and taken to the abattoir, the cattle are made unconscious and then killed and prepared for sale to butchers and supermarkets. A vet is always at the abattoir to make sure the animals are calm, and suffer no pain.

#### Butcher or supermarket

The butcher or supermarket buys the beef from the meat contractor, the abattoir or the auction market.

#### Buying from the butcher or supermarket

Your parent or carer buys the beef from the butcher or supermarket.

#### Plate

The meat is cooked and put on your plate.

# Section 2: Meanwhile back at the farm...

## Information sheet

### Pork from the Peddie farm to your plate

\* See the Pork Story on CD-Rom for photographs.

Gwen and Andrew Peddie have a farm in Anstruther. Here's how the pork they grow becomes the bacon on your plate.

#### Technical terms

boar	male pig
sow	female pig that has produced piglets
farrowing	giving birth
service	making the female pig pregnant
weaning	when pigs stop drinking their mum's milk
DLWG	daily live-weight gain

#### Birth

Pigs are pregnant for 115 days. When a sow farrows, the piglets stay with her for between 3-4 weeks, and then they are weaned. Pigs can produce anything from two to 20+ piglets, Piglets weigh 1kg-1.5kg at birth! Farmers prefer if they produce 11-12, because if a sow has a huge number of piglets, their birth weight is very low and they are more likely to die or become crushed by their mum.

If a sow has a big litter, the farmer will take some of the piglets and foster them out to a sow who doesn't have so many. When this happens, it's easier to keep the foster sow more confined in crates, so that she won't crush their piglets. But if the sow is outdoors, the farmer has to watch it, because she'll chase the farmer, especially if she hears the piglet squealing!

The pigs don't need to be tagged, because they are kept on Gwen and Andrew's farm from birth to slaughter. However, if they are sold to another farm, they need to be 'slapped' - that means that they have 'PED 1' printed on them. It's sort of like a tattoo!

#### Weaning and growing

Weaning takes place when the piglets are about 28 days old. The piglets then usually weigh about 7kgs. Gwen and Andrew's pigs are weaned into insulated huts outside, with straw for bedding. Indoor producers wean their pigs into specialised buildings - these often have controlled temperature and ventilation.

Once the sows are all weaned, the boar can make them pregnant again four to five days later. The sows will then farrow again 115 days after that.

# Section 2: Meanwhile back at the farm...

## Information sheet

### Pork from the Peddie farm to your plate (continued)

Gwen and Andrew have 250 sows that are kept outdoors in paddocks and sleep in tin huts or arcs. Every week they have:

- 10 sows farrowing (giving birth)
- 10 sows weaning
- 10 sows being served by boars (getting pregnant)

The piglets are given a very high quality expensive diet that's made specially for them. It changes as they grow. Pigs grow very quickly - they can put on 600 to 750grams a day, and grow from 7kgs to 100kgs!

#### Selling

Gwen and Andrew aim to produce 100 pigs for selling to the abattoir every week. They sell their pigs through a co-operative business - Scotlean Pigs - and this co-op then sells the meat on to butchers and supermarkets.

#### The abattoir

Once they have been sold, the pigs are taken to the abattoir, where they are made unconscious and then killed and prepared for sale to butchers and supermarkets. A vet is always present at the abattoir to make sure the animals are kept calm, and suffer no pain.

#### Butcher or supermarket

The butcher or supermarket buys the pork from the meat contractor (co-op) or sometimes direct from the abattoir or the auction market.

#### Buying from the butcher or supermarket

Your parent or carer buys the pork from the butcher or supermarket

#### Plate

The meat is cooked and put on your plate.

# Section 2: Meanwhile back at the farm...

## Information sheet

### Lamb from the Lennox farm to your plate

\* See the Lamb Story on CD-Rom for photographs.

Bobby and Anne Lennox have a farm in Loch Lomond. Here's how the lamb they grow becomes the roast lamb on your plate.

#### Technical terms

lamb	name for the animal from when it's born to when it's weaned
store lamb	name for the animal from when it's weaned until it's slaughtered
ewe	a female sheep over two years old
ram	a male sheep over a year old
weaning	when lambs stop drinking their mum's milk

#### Birth

Sheep are pregnant for five months and five days. Lambs are born in the spring. They are born in March or April if the sheep are on the low ground, or in April or May if the sheep are on the high ground. The time they are born is usually the same as the time when the grass starts to grow - because they need to eat the grass to grow themselves! They stay with their mother for about five months.

The law says that each lamb should be tagged in the left ear any time before it leaves the farm. If the lamb is bought by another farmer, he puts his farm tag in the right ear. If the lamb has any other owners, they also put their tag in the lamb's right ear. So if you want to know where a lamb has been during its life, you just have to look at the tag numbers - you can tell which farms it has been on. The tag is just like a name and address label!

#### Weaning and growing

Lambs are weaned from their mothers in August/September. After they've been weaned, some of the biggest lambs will be sold later in the year to the abattoir. Smaller lambs will be sold later in the year, once they've grown more.

Lambs that have been weaned or taken away from their mum and are being sold between January or March for their meat eat grass until October or November. Sometimes there isn't enough grass in winter, so the farmer helps the lambs to find food, and brings them hay and conserved grass called silage.

Most farmers who have upland or hill farms have to sell their lambs to lowground farmers, because there isn't enough grass to feed and grow the lambs properly. These lambs are called store lambs.

#### Selling

About 60 to 70 per cent of farmers sell lambs direct to the abattoir, while other farmers sell them at the auction market, where the abattoir bidders bid for them. Some farmers sell lambs to the big companies that sell the meat on to butchers and supermarkets.

# Section 2: Meanwhile back at the farm...

## Information sheet

### Lamb from the Lennox farm to your plate (continued)

#### The abattoir

Once they've been sold, the lambs are taken to the abattoir, where they are made unconscious and then killed and prepared for sale to butchers and supermarkets. A vet is always present at the abattoir to make sure the animals are kept calm, and suffer no pain.

#### Butcher or supermarket

The butcher or supermarket buys the lamb from the meat contractor, the abattoir or the auction market.

#### Buying from the butcher or supermarket

Your parent or carer buys the lamb from the butcher or supermarket

#### Plate

The meat is cooked, and put on your plate.

# Section 2: Meanwhile back at the farm...

## Teacher's notes

### From shop to plate

#### Aims

This activity aims to develop pupils' knowledge and understanding of the world of work and of the importance of red meat to the rural and national economies by asking pupils to visit a local butcher or supermarket. This activity will also develop pupils' skills in research, report writing and general communication.

#### Materials/resources

- **Information sheet: beef from the Stodart Farm to your plate** → page 61 - 62
- **Information sheet: pork from the Peddie Farm to your plate** → page 63 - 64
- **Information sheet: lamb from the Lennox Farm to your plate** → page 65 - 66
- **Activity sheet: from shop to plate** → page 107 + 108
- Pupils' research, communication and writing skills
- Pupils' existing knowledge and understanding of the meat production process from farm to plate.

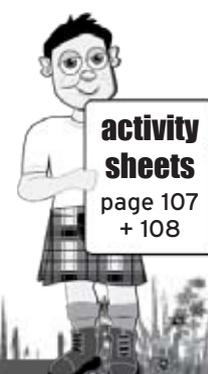
#### Special note

This activity contains a sensitive issue - basically, the killing of animals for meat. You know your own class, and will know best how to handle this. Some pupils in your class may be vegetarian, or unable to eat meat for religious and cultural reasons, and this concept may be upsetting to them. However, many children are pragmatic about the fact that we have to kill animals for meat, and understand that this is what happens. You may wish to gloss over the abattoir stage, or just tackle it head on. You may even think it best to miss this activity out - we leave it to your professional judgement. The lesson outline is written on the basis that the pupils in your class are pragmatic!

#### Enterprise in Education

This activity aims to develop some of the attitudes, skills and knowledge recommended in *Excellence through Enterprise - National Guidance: Enterprise in Education, Learning and Teaching Scotland, 2005*, and in *Career Education in Scotland: A National Framework, Learning and Teaching Scotland, 2001*. The Health Promoting Schools initiative also suggests that the School Nutrition Action Group in each school might like to tackle a link with local food providers 'such as farmers or manufacturers, to learn more about how food is produced via project links and visits'.

According to the national guidance for enterprise in education, 'The contribution enterprise in education makes to the personal growth of children and young people can enhance their life chances and choices. It can help them to become *successful learners, confident individuals, responsible citizens and effective contributors* to society and at work, with a clear understanding of their roles in the world.' Excellence through Enterprise, Learning and Teaching Scotland, 2005, p.9.



# Section 2: Meanwhile back at the farm...

## Teacher's notes

### From shop to plate (continued)

Schools are encouraged to consider a wide range of approaches to teaching, including viewing the world beyond the classroom as a resource for learning: 'Schools, together with the other educational establishments, will need to provide the right blend and balance of learning opportunities for each child or young person suited to their particular stage and circumstances. To enhance choice and permit more personalised learning experiences, schools may need to utilise expertise and resources beyond their own establishments.' Excellence through Enterprise, Learning and Teaching Scotland, 2005, p.13.

By visiting a local butcher or supermarket, pupils will also become more aware of the importance of red meat to the rural and national economies.

Your school will have local authority guidelines to follow for school visits, and you will need to consult these before embarking on this activity.

### Lesson outline

- Hand out three Information sheets (Pages 61 - 66) and discuss with pupils.
- Encourage pupils to identify main stages in the farm-to-plate production process.
- Tell pupils that they'll be looking at the latter part of that production process - what happens when the meat gets to the butcher or supermarket for you to buy?
- Hand out Activity sheet: from shop to plate (Page 107).
- Go over the activity with pupils - they are required to organise a visit to a local butcher or supermarket to discuss various aspects of the meat industry. This means that they will have to write a letter, organise a time to visit, ask and record responses to a number of questions, then summarise their research findings and write a report. Ask pupils to brainstorm the questions they might ask. Discuss 'closed' and 'open' questions - which are most effective and why? Here are suggestions for the questions pupils might ask, in case they need a prompt after the discussion:
  - Where does your meat come from? All beef in butchers' shops and supermarkets must show where the animal was born, reared and slaughtered, along with the cutting plant numbers. Pupils should look for this information. All Scottish abattoir numbers begin with 1 - so if the number is not one, it's not Scottish.
  - Also, remind pupils that the definition of Scotch is that the animal must be born, reared for all its life in Scotland on an approved farm, and slaughtered in an approved abattoir in Scotland. If it doesn't tick all these boxes, it isn't Scottish.
  - How do you store your meat when it comes in?
  - What hygiene and health and safety rules do you have to follow?
  - How can your customers be sure that your meat is of really good quality?  
What if your customers want to know where the meat has come from - could you tell them?
  - How do you weigh your meat?

# Section 2: Meanwhile back at the farm...

## Teacher's notes

### From shop to plate (continued)

- How do you package your meat?
  - What is PGI? What does the PGI logo look like?
  - How much do you pay for the meat?
  - How much do your customers pay for the meat?
  - How much of each type of meat (beef, pork or lamb) do you sell every week?  
Compare this to other types of food.
  - Conclusions
- Divide class into groups that are responsible for different tasks:
    - group one** to contact butcher or supermarket by letter and ask to visit
    - group two** to produce question sheet for research
    - group three** to be responsible for asking questions and writing responses
    - group four** to summarise information and produce word-processed information sheet for report.
  - Once back in class, discuss findings with pupils. Their questions might have thrown up some interesting issues - such as how much the butcher/supermarket pays for the meat, and how much he/she/supermarket sells it for. Encourage pupils to think about concept of profit and loss.
  - Divide class into pairs to write reports.
  - Display all research information, general evidence of process and final reports in class and invite representatives from butcher or supermarket to come into class for a presentation.

