

A visit to a dairy farm: links to the Welsh Skills Framework and Education for Sustainable Development and Global Citizenship

This resource suggests activities and discussions that might be carried out before, during or after a visit to a dairy farm by Key Stages 2-4. It is intended to provide suggestions that can be adapted for all ages by varying the level of details. For instance at KS2 pupils may learn about selection in terms of a farmer choosing to breed from the cows that are the best milkers, while older pupils will use terminology such as 'artificial selection' and 'genes'. More ideas will be found by consulting the websites in the Resources list.

Learning outcomes

Pupils will:-

- Understand how a dairy farm works and the processes involved
- understand the importance of farming to the Welsh/UK economy
- explore animal welfare issues connected with farming
- explore wider sustainable development issues linked with farming and consumer purchasing.

Resources:-

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| Farm visits, hygiene, health and safety | www.face-cymru.org.uk/category/teachers * www.face-online.org.uk/codeofpractice | Food labelling | www.farmbehindthefood.org.uk |
| Dairy farming | www.thisisdairyfarming.com * www.foodafactoflife.org.uk * | Food security and sustainability | www.foodsecurity.ac.uk/resources/schools.html |
| Farming in Wales | www.countryside.wales.gov.uk * | Carbon, ecological and water footprints | www.zerocarbonbritain.org www.myfootprint.org www.waterfootprint.org |
| Animal welfare | www.rspca-education.org.uk * | Global citizenship | www.oxfam.org.uk/education/school-projects/food-for-thought |

* Bilingual resources available

| Links to Skills Framework | | | ESDGC Themes |
|---------------------------|---------------------------------|--|--|
| Section 1 | <i>Developing thinking</i> | Asking questions Activating questions Activating prior skills, knowledge and understanding Gathering information Determining the process/method and strategy | a. Identity and culture b. Wealth and poverty c. Consumption and waste d. Choices and decisions e. Climate change f. Health and wellbeing g. The natural environment |
| Section 2 | <i>Developing communication</i> | Developing information and ideas | |
| Section 4 | <i>Developing numbers</i> | Measuring Gathering information Using a variety of methods Recording and interpreting data and representing findings | |

| Topic | Key Message | Example | Discussion Points | ESDGC links | Curriculum links |
|------------------------|--|--|--|--|--|
| Health and Safety | <ul style="list-style-type: none"> • Health and safety is very important on the farm • There are germs that can be spread that can be harmful to animals and humans | <ul style="list-style-type: none"> • Show pupils how to wash their hands correctly. • Highlight hazards on the farm eg farm traffic, animals, machinery • Discuss BSE, TB, E. coli, Foot and Mouth | <ul style="list-style-type: none"> • Why is it important to wash hands properly? • What are the potential consequences of not doing this – to individuals, farms, the economy? | Health and wellbeing The relationship between animal and human health | Science |
| Who lives on the farm | <ul style="list-style-type: none"> • Introduction - the farmer and his/her family | <ul style="list-style-type: none"> • Who runs the farm? • What are the main jobs on the farm? • What is the history of the farm? • What animals are on the farm? | <ul style="list-style-type: none"> • Why do people choose to be farmers? • How has this farm changed during its history, and why? • What is it like working on a farm? | Identity and culture People, places and jobs; intensification of farming in response to economic and social factors | History – land use Geography – farming/land use |
| Dairy cows | <ul style="list-style-type: none"> • A cows must have a calf to give milk • There are different breeds of dairy cows. • Dairy cows that give milk are female | <ul style="list-style-type: none"> • The different breeds of cow eg dairy, beef, dual purpose • How often is the cow in calf in order to give milk production? • What does a cow need to produce good quality milk? | <ul style="list-style-type: none"> • Why do we have different breeds of cow? • What would you breed for? • What happens to male dairy male calves? | Health and wellbeing Animal welfare, our rights and responsibilities, use of resources | Science - reproduction Selection |
| The cowshed | <ul style="list-style-type: none"> • Cows sleep in clean, spacious stalls • The barn is well ventilated and clean to keep the cows comfortable • Stalls are well bedded to provide comfortable places for cows to lie down | <ul style="list-style-type: none"> • Look how the farmer provides care by providing the right diet, comfortable housing and regular inspection • What are the basic needs of a cow? • What are the special features of the shed that enable cows to have a better standard of life? | <ul style="list-style-type: none"> • Why is animal welfare important? • Compare animal welfare in intensive and non-intensive farming • Why is this important for the animals? • Why is this important to the farmer? | Health and wellbeing Animal welfare, our rights and responsibilities, use of resources | Geography Science |
| The feed store | <ul style="list-style-type: none"> • Cows are fed a well balanced diet (grass, silage and concentrates) and a constant supply of fresh clean water • A cow can eat up to 40 kg of feed a day and a bathtub of water • Feeds are blended together to provide right nutrition | <ul style="list-style-type: none"> • Show a number of samples of different feeds: silage, concentrates • Ask pupils to touch and smell different feeds • Show how much each cow would eat a day • Show how much water a cow drinks per day. | <ul style="list-style-type: none"> • Pupils to calculate how much feed is needed daily per cow / per herd. • Pupils to calculate how much water is needed per cow /per herd. • Where do feed ingredients come from? Why don't they just eat grass? • Look at the carbon and water footprints of milk | Consumption and waste Wealth and poverty The global feed trade; ecological footprints of meat and dairy production; food security; vulnerability to climate change and political instability | Geography – farming Science |
| Visit the calf housing | <ul style="list-style-type: none"> • Calves are bred on the farm • Calves are kept in different houses at different ages • Calves have different needs from full grown cows | <ul style="list-style-type: none"> • What happens to cows born on the farm? • Look at the different homes they live in and explain why this is. • What are the needs of calves and how they are met? | <ul style="list-style-type: none"> • How many calves are born on the farm each year? • What happens to some of the calves that cannot be raised for dairy production? | Health and wellbeing Animal welfare, food production | Science – reproduction |

| Details | Key Message | Example | Discussion Points | ESDGC links | Curriculum links |
|--|--|---|---|--|----------------------------------|
| Bottling and pasteurization | <ul style="list-style-type: none"> • Different types of milk products • The milk bottling process • Health and safety in the bottling process • Adding value to milk | <ul style="list-style-type: none"> • How is milk kept fresh? • Where is it stored? • How is milk tested? • What other products are made from milk? • What are milk quotas? | <ul style="list-style-type: none"> • Can the pupils name other products that can be produced from milk? • Explain how milk used to be bottled in glass. Is plastic packaging sustainable? • Which do you think uses more energy to make and store: fresh milk, butter, yogurt or cheese? • Why might a farmer prefer to sell direct to customers instead of to a supermarket? | Wealth and poverty Consumption and waste The food chain – economics, reducing waste, energy use, power relationships | Science Design and Technology |
| Milking parlour | <ul style="list-style-type: none"> • Cows must be milked 2 or 3 times a day • The average cow can give 60 litres of milk a day • The cow's udders are cleaned and sanitized before and after milking to keep the milk clean and fresh | <ul style="list-style-type: none"> • Look at the design of the milking parlour and relate it to animal welfare • Look at the milking cups: how are they attached to the cows? • Look at the measurement scale on the tanks | <ul style="list-style-type: none"> • Calculate how many cows can be milked at one time. • How are the cows kept in their stalls for milking? • How much milk can be collected in one milking? | Health and wellbeing Animal welfare, energy use | Geography Maths |
| Farm diversification | <ul style="list-style-type: none"> • Many farms have had to diversify into other areas to survive financially • Some farms are supporting other areas such as conservation/ education/novel crops/leisure activities | <ul style="list-style-type: none"> • Look at how the farm has diversified into different areas, eg food processing, education, woodland conservation, holiday accommodation, fishing. • Look at how farms promote nature conservation and sustainability in return for government payments | <ul style="list-style-type: none"> • Why have farms had to do this in addition to their main line of work? • How do farmers incorporate this into their working lives? • What other activities could farms support? | Identity and culture Choices and decisions The balance between food production and nature conservation; consequences of cheap food and globalization | Geography |
| Environmental practices on the farm | Farmers are careful about how they use resources | <ul style="list-style-type: none"> • What processes around the farm use energy/resources? • How does the farm demonstrate good use of resources? Look for water butts, solar panels, wind turbines, composting etc | <ul style="list-style-type: none"> • How could farming practices be more sustainable? | Consumption and waste Climate change Ecological footprints, energy conservation, recycling | Geography |
| | Farmers look after wildlife | <ul style="list-style-type: none"> • Look at a hedgerow/woodland/permanent pasture/pond/hay meadow • What wildlife does it support? • Name some food chains | <ul style="list-style-type: none"> • How do you balance nature conservation with food production? • Who pays for nature conservation? | The natural environment Climate change Biodiversity, resilience of ecosystems | Geography |
| Different types of farming | Food may be labelled as: <ul style="list-style-type: none"> • Free range • Farm Assured • Freedom Food • LEAF • Organic | <ul style="list-style-type: none"> • Find logos on food packaging and compare the requirements of each scheme • Where was the food produced? How important is it to buy local food rather than importing it? • How healthy do you think the food is? • How much energy was used to make and transport it? | <ul style="list-style-type: none"> • What type of farm are you visiting today? • How do you make your food choices? • Would you pay extra for these logos? | Choices and decisions Balancing food production with animal welfare and the environment; food security | Geography Science |