

Educational Notes

This website offers an innovative way of gathering information about an organic farm. It has information available which is accessible for Key Stage 1, 2 and 3. Data could also be used for individual project studies at GCSE or AS level. The incorporation of animal welfare issues into the PSHE curriculum also means this could be a useful resource. Both *‘the appreciation of the contribution that farm animals make to our lives’* and *‘the appreciation that we as consumers can make an informed choice and support friendly ways of rearing farm animals’* feature as part of the new Citizenship Programme.

The layout is easy to follow and pupils can use the site independently to research words or find out about how the farm runs. Diagrams are clear and easy to follow- simply click on to find more information. There are lots of photos to give a feel of the farm and the type of landscape and these all serve to ease explanation of the text.

For those pupils researching GCSE or A level the site offers a range of information on the practicalities of sustainability and the issues facing farming as an economic activity today.

Links

www.rspca.org.uk

www.nfueducation.org.uk

Science Suggestions (teacher's notes)

Key Stage 1

SC 2 Life processes and living things.

Humans and animals

a) Recognition and comparison

Use the virtual farm tour to look at the differences between the cows and sheep. The easy to view diagrams show how the cycle for their use is different throughout the year. Compare and contrast the use of the cows and sheep and the products they produce.

b) Need for water

As the farm has no natural water source the creation and maintenance of the water supply is vital. Find the water sources on the map and think about how the farm needs to protect and keep these clean

e) Treatment of animals and their welfare

As this is an organic farm the welfare of the animals is high on the order of priorities. Organic farming allows the animals to have greater freedom and spend more time outside, receive fewer chemicals in their feed and generally eat more healthily. Finding out about how these differences can influence the life of the animals would make an interesting comparison with an ordinary, conventional farm. A simple 'what do they need' spidergram could be built up with a picture of the key animal in the centre.

f) Offspring and their growth

Descriptions are given of both the cow and sheep offspring and what happens to them on the farm. Both in easy to follow diagrams and picture it is possible to see the offspring and understand what happens on the farm to the young, whether they become part of the Farm or are sold on. The RSPCA magazine 'animal focus' May 2001 Issue 1 has simple teaching activities to supplement this. (Available from www.rspca.org.uk)

Key Stage 2

SC2 Life processes and Living things & Living things and their Environment (1a,1c,5a,5d,5e,5f)

a) Nutrition, movement, growth and reproduction

All of these can be researched for both the sheep and cattle on the farm. Simple tables could be made and the information filled in from either the text or the diagrams. The different types of food, the daily movement, the growth from young to adult and the methods of reproduction. For example, pupils can research this themselves given the simplicity of pictures.

e.g.

Cattle	My Research
Food to eat	I have found out that They also like to eatat certain times of year they eat.....
The movement of the cattle	Each day the cattle move.....They have to do thistimes .They havelegs but find it difficult on steep hills because they are quite
Having young When and how	A cow has aIt needs to have young so it can keep giving milk. The farmer helps the calf being born, the cow can have young.....
Growth How quickly do they grow up ?	The young calves stay with their mother for.....The female ones usually stay but the male ones Atthe cow can begin to have young .

c) To make links between life processes in familiar animals and plants and the environment in which they're found.

This follows naturally from the study of the relationship between the grass and the cattle and sheep. The importance of taking in the silage and using it during the winter when the cattle cannot get outside provides a good example of this. The need of the farmer to remove the weeds such as the thistles or the value of the sheep in removing the damaging ragwort.(Research cow/sheep and silaging)

Living things and their Environment

a) Living things and their environment are in need of protection

One of the key features of this website is the emphasis on sustainability and the need to maintain the environment in a careful fashion. There is a sustainability diagram where pupils can look at the main heading and see how the farm seeks to harmonise with its environment. A simplified version of this could be given.

5 d) Feeding relationships in a habitat

The farm provides a microhabitat and although the cow and sheep make up the mainframe of the habitat the local wildlife such as the birds, newts, etc also feature in this framework. The work of an organic farm seeks to harmonise the habitat with a balance towards maintaining the environment. No chemicals should affect the run-off or create pollution problems in the field. Again a simple feeding diagram can be built up.

5 e) All food chains begin with green plants

It is possible to build up several food chains from the farm account. Simple ones based on the sheep or the cattle and more complex one using the soil and the bird life. The mere also has its own food web.

5 f) Micro-organisms- the breakdown of materials by bacteria

The value of the silage and the reliance which farming puts upon bacteria cannot be stressed enough. Without the bacteria used in the creation of the silage then feeding the animals through winter would become difficult. It is useful to point out good applications of bacteria rather just the harmful ones!

Geography suggestions (teacher's notes)

Key Stage 1

1 b) Geographical enquiry- observe and record.

A farm visit would supply a vast array of opportunities to record and observe some of the information contained on this website. A run through the website itself would allow the leaning of information as mentioned above and below. Photos, diagrams, tables and maps all help to glean information.

2 a) Geographical vocabulary (hill, river, valley)

Looking at the website through the photos and the diagrams will allow the use of some of these key geographical terms, the farm is built on the side of a hill and the location is on part of the Manifold Valley. In either a visit or from the information provided in either the booklet or the website other key vocabulary can be built up in a more practical way.

b) Recording information on a plan.

The website and booklet both contain simple plans of the farm and the layout of the buildings. It is possible to obtain outline plans for pupils to record the buildings on their visit or pupils may wish to down load the plan and see if they can think what the buildings might be used for, finally comparing this to the existing plan. A more sophisticated exercise might ask them to record where they think some of the photos on the website were taken using their knowledge.

d) Ability to use secondary data sources- (use of the booklet and website)

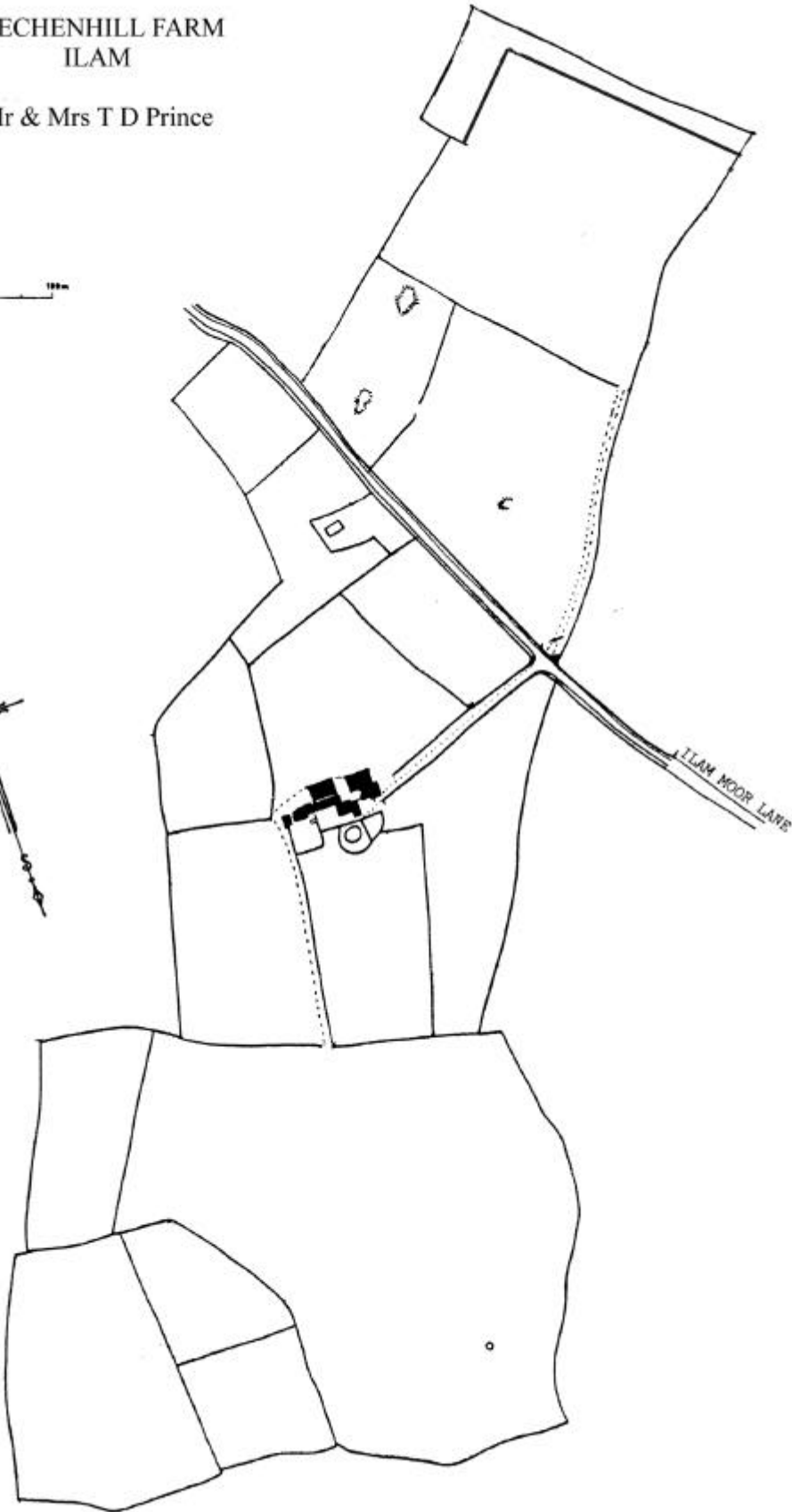
All the information on this website can be used to build up a picture of the running of the farm or show how simply life on the farm is more than just cows and sheep in a field. All data and diagrams are accurate and above all easy to follow.

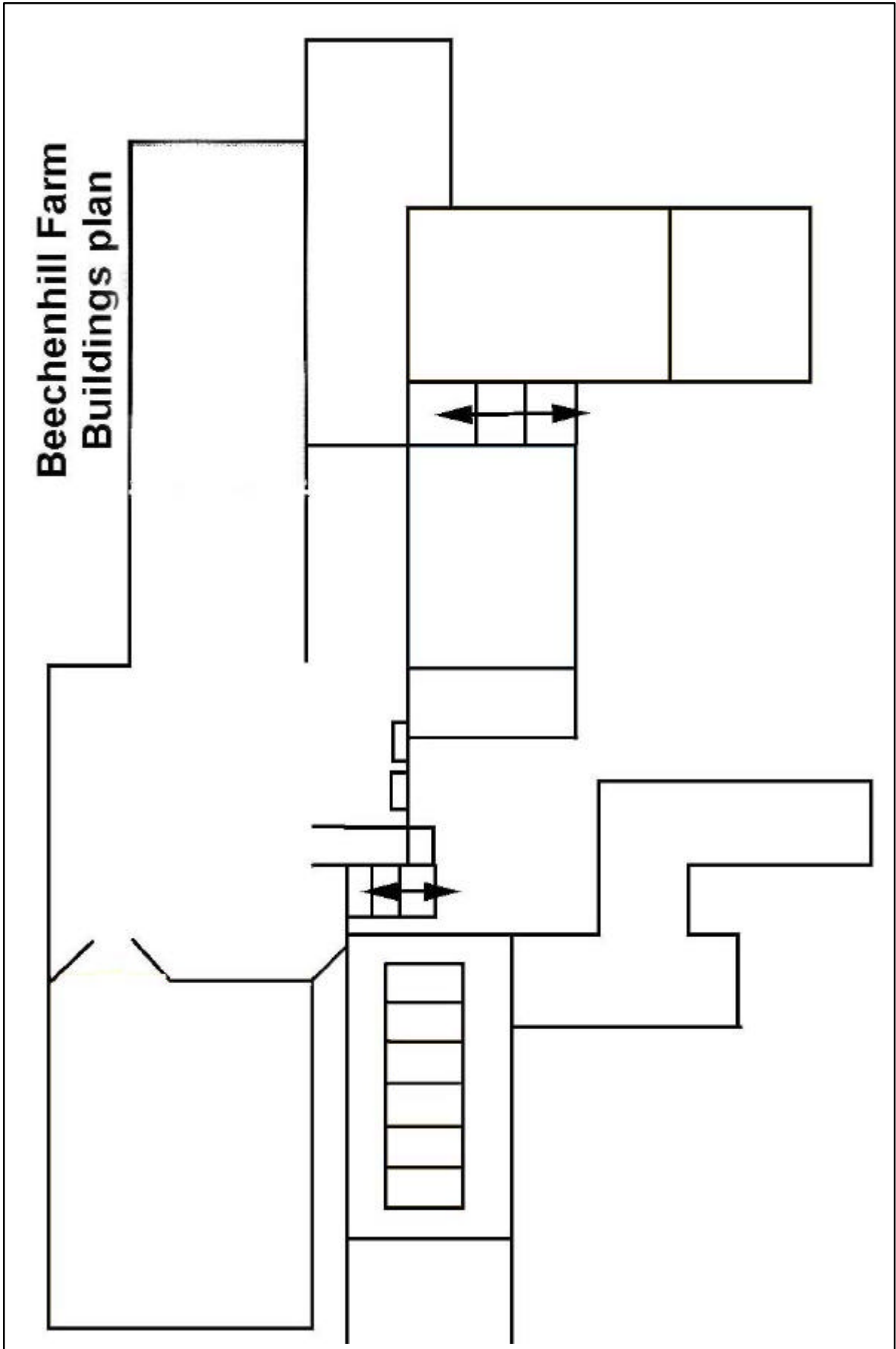
e) Making their own map or plan of the area.

Available for pupils who visit the farm making their own mental map of the farm and then comparing it with the one available.

BEECHENHILL FARM
ILAM

Mr & Mrs T D Prince





Knowledge and Understanding of Places

3 a) Identify what places are like

The information gives a good insight into a typical Peak District Farm for those who have not been either to the countryside or have never been to a hill farm area. Using two or three of the pictures pupils could try to describe what they think the landscape is like and how they think it may feel like to be there. To supplement ICT skills photos can be copied, pasted and then accounts built up around them.

3 b) Identify and describe places

-Recognise how places have become the way they are.

A simple description of the farm and the buildings would allow the pupils to describe the working day on the farm, along with the shape and layout of the fields

3 c) Recognise how places are changing over time

There is an extensive history time line for the farm and this charts the development of farming and puts the changing into the context of the local history and National events. Both the farm and the way farming is carried out in the area have changed.

Knowledge and Understanding of Pattern and Processes

4 c) Observation about where things are located and other features in the environment.

This allows the discussion of the layout of the farm but also the position of the farm in relation to the valley and the markets where the good from the farm are sent.

(See distribution map/local linkages)

4 b) Recognise changes in physical and human features

e.g. flooding in fields or consequences of changes in farming practices. The change to organic farming here has resulted in several changes in how the farm is run and also how the products from the farm have to be distributed.

Knowledge and Understanding of Environmental change and sustainable development

5 a) Changes in the environment

5 b) Recognise how the environment is improved and sustained.

A study of organic farming and its main aims reveals how this type of farming is more conducive to supporting the environment and how it is important to balance both what is put into and what is taken out of nature. Look at the sustainability diagram to see a summary of how these points are achieved. The National Park information and the information from the Soil Association are available for closer study.

Offers opportunity as 'Locality' study for the Peak National Park area.

OR

'Contrasting Locality in UK' for lowland environment. A visit the farm could be combined with a visit to Dovedale or Ilam village. The National Trust who administers Dovedale has wardens who are willing to supply information on the use of the park and provide guided walks. Information available from the website.

Key Stage 2

Knowledge, Skills and Understanding

Geography Enquiry Skills

Fieldwork sketches

Photos, map interpretation

Drawing of plans

All these above opportunities are available as with Key Stage 1. Pupils can use the website to produce their own sketches by clicking on the photos to enlarge them. They could also copy the photos into Word and produce their own annotations using simple box writing frames.

Knowledge and understanding of Places

3 e) Identify how and why places change

Using the time line to see how things have changed in and around the village. This would fit in well with Historical studies especially if the 'Victorian option' were chosen. Pupils are able to look at the school record book for the Victorian time and gain a flavour of the time. The focus could also be on the changes that have taken place in Ilam and how the farming village has changed and adapted as a tourist attraction. This is clearly shown in the need of the farm to diversify and supplement its income.

Knowledge and understanding of patterns and processes

4 a) Recognise and explain patterns made by individual physical and human features in the environment

The distribution of the materials from the farm would make an interesting study, showing where the products now go and where the service providers for the farm now come from. The maps available allow this to be easily plotted. A distribution pattern may also be examined and explained on where the tourists come from in their visits to this area.

Knowledge and Understanding of Environmental Change and Sustainable Development.

5 a) Recognise how people can improve the environment or damage it. How decisions about places and the environment can affect future life quality.

The change from conventional methods of farming to organic farming shows the many ways that this has affected the environment. A list could be drawn up of the actions taken to improve the environment during this change. The sustainability diagram offers the opportunity to study this under different headings and perhaps devise a scoring system for each

element of change requiring pupils to judge the effectiveness of the changes in their opinion.

b) Recognise how and why people seek to manage the environment sustainably and identify their own role in involvement. (i.e. changing purchasing policy)

This would require an account of how and why pupils thought the owners had decided to change their methods of farming. Pupils could then work out their own sustainability diagram for their school or home with the emphasis on what they might do to make their own pattern of living more sustainable.

6) Locality - UK Breadth of Study. Environmental issues and effecting a change to the environment to manage sustainably, this would make a good micro-level study on how it is both difficult and yet worthwhile to effect these changes in an environment on a small scale.

Key Stage 3

Knowledge and Understanding of Places

5) Knowledge and understanding of environmental change and sustainable development. Describe environmental change and recognise different ways of managing it. Explore the ideas of sustainable development and recognise the implications for people and places.

The website provides an excellent example of putting sustainability into practice. There are practical illustrations and the topic is explained on the website within the framework of the farm and the role of the National Park. The implications for the farm following their decision to become organic and therefore sustainable have proved far reaching. It would be possible to study this for an individual project using different headings; looking at the impact on the land, animals and distribution of products.

Breadth of Study

6 e) Ecosystems- how physical and human processes influence vegetation.

The need to change the sowing of the fields and the planting of some of the fields to clover, the use of careful management to control the growth of weeds and the timed release of manure all offer a simple insight into the way the organic ecosystem works to sustain and maintain the environment the way it is. A before and after diagram would show the differences between the two systems thus showing the impact that people can have on altering the farming ecosystem.

6 h) Changing distribution of economic activity and its impact on the geographical distribution of farming and tourism and the subsequent changes.

The need of the farm to expand and develop the income from Tourism gives an ideal case study of how modern farming has needed to diversify and supplement its economic base. A further look at tourism in the general area and its increasing provision shows that the area has come to rely on his source of economic activity. The advent of foot and mouth and the loss of the tourists have dealt a blow to many farmers and may result in financial difficulties for them.

6 j) Environmental issues

i) Conflicting demands

On the web site in the National Park ref. the conflicting demands between the tourism and the leisure of the Peak District is discussed. The fact that the British definition of National Parks does not meet the world definition can be discussed, why do we have to allow so many economic activities to go in these areas. The private ownership and the need for the land to provide a living for these people is starkly explained by the working of the farm.

ii) How and why attempts are made to plan and manage the environment.

A survey of the farm changes from conventional to organic will reveal the planning process needed to change the managing of the environment on this scale. This would provide an excellent micro - case study

iii) Effect of environmental planning and management on people and places

The role of the National Park in framing the activities on the farm is a recurring one. The landscape maintenance is both encouraged and incentives are given to maintain and encourage the status quo. The fact that the organic path fits in well with this is useful and could mark a potential way forward for the future..

k) Resource issues

iii) Resource planning and management

There are several possible sources of study here. Firstly the management of the water supply on the farm. The absence of continuous running water has meant that the farm has had to provide its own resource and manage it carefully with this area earmarked for future developments (i.e. the reed beds- similar schemes like this exist in homes and businesses e.g. Highgrove House and nearby Blue Circle Cement in Waterhouses)

The use of the soil is another important resource and the website allows access to information from the Soil Association which explains and details the importance of soil on a local and more importantly on a global scale. Maintaining the soil is a vital part of the Organic Farm and this can be easily verified by researching the management strategies.

GCSE - Local study on sustainable able practices offering contrast to lowland or non- organic farm.

Any of the Key stage 3 topics on Environmental Planning or sustainability could use the website to obtain data and provide useful case study material.

AS Level

Ecosystems - slope study

National Park -lack of meeting International Criteria and understanding of issues for this. Balancing of needs.

Looking at the organic farming methods as a way of maintaining a stable ecosystem and comparing them with a conventional farm and it management of the environment.