



Teacher's Pack

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Quantock Issues

'IS TRAFFIC A PROBLEM ON THE QUANTOCKS?'

INTRODUCTION:

The Quantock Hills was designated as the first 'Area of Outstanding Natural Beauty' in England, over 50 years ago, in 1956. This was in recognition of the unique mix of environmental, cultural, historical and economic elements which give the Hills their special character, and which draws visitors into the area.

Maintaining this special character is a constant balancing act for the AONB service, and others who manage the Quantocks, raising many issues and sometimes conflicting interests.

This pack shows how schools could investigate one Quantock issue, that of Traffic on the Hills, and suggests others. The sample KS2 Geography Unit, 'Is traffic a problem on the Quantocks?' is built around fieldwork at Crowcombe Park Gate, an area on the hilltop popular with visitors. Other areas could be used.

The pack was prepared and piloted in 2004 by Sophie Chattin (Yr 5 teacher, Nether Stowey Primary School) working with Sam Woodhouse (Associate Consultant for Geography and Citizenship, Somerset).

Except where otherwise indicated, the material in this pack can be copied for school use only.

QUANTOCK ISSUES

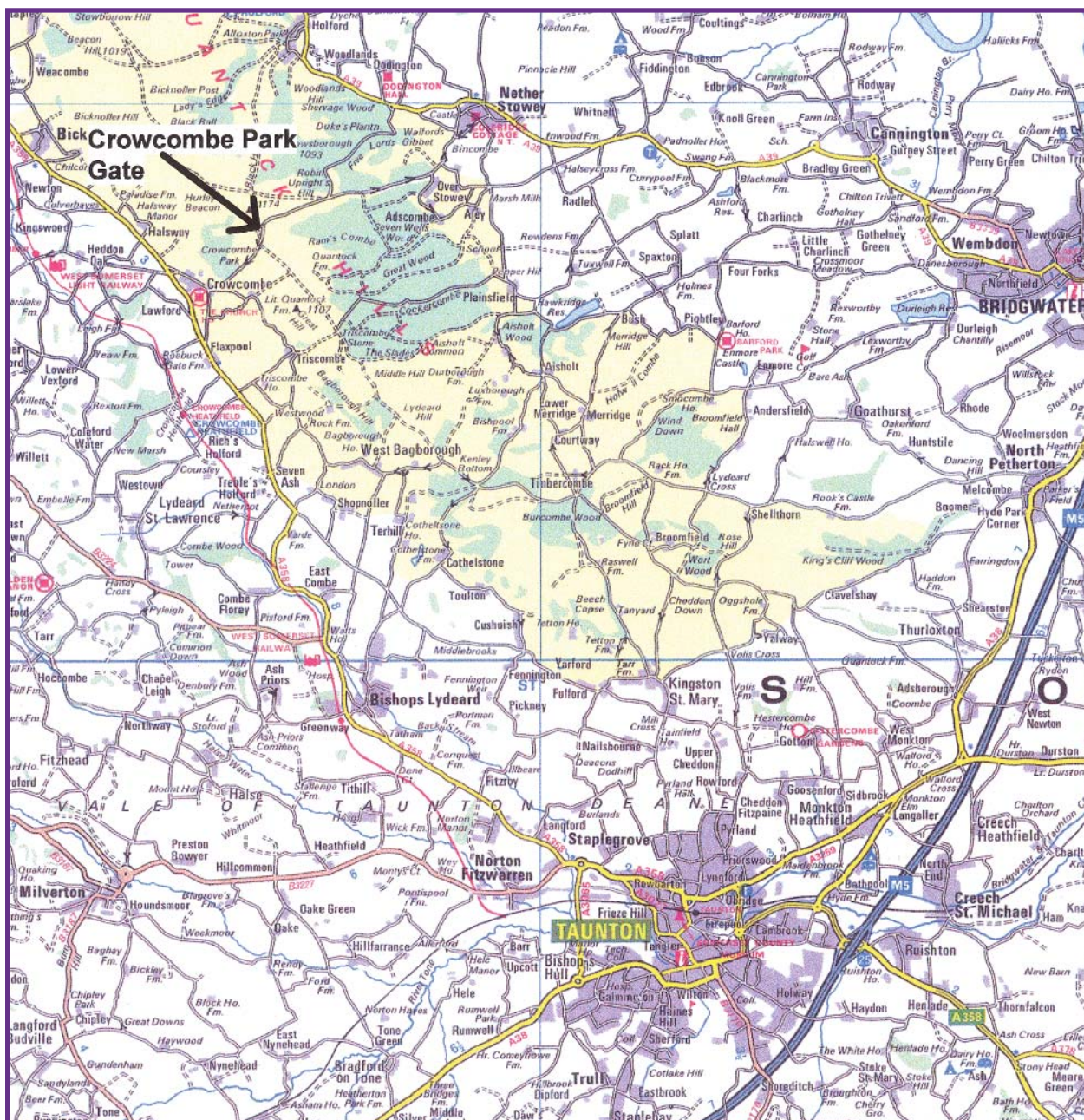
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VISITING QUANTOCK COMMON

WHY VISIT QUANTOCK COMMON?

Quantock Common, an area of open heathland is an ideal location for walking, riding, wildlife such as the Red Deer.

There are only a few places that you can easily access Quantock Common as there is only one road that crosses it. There are a number of car parks along this road, such as Withyman's pool, Dead Woman's Ditch and Sandy Beds. Crowcombe Park Gate is an informal car park, where the landowner currently allows parking. These car parks allow people the opportunity to get into the heart of the hills easily, which provides opportunities for them, while increasing issues for the AONB.



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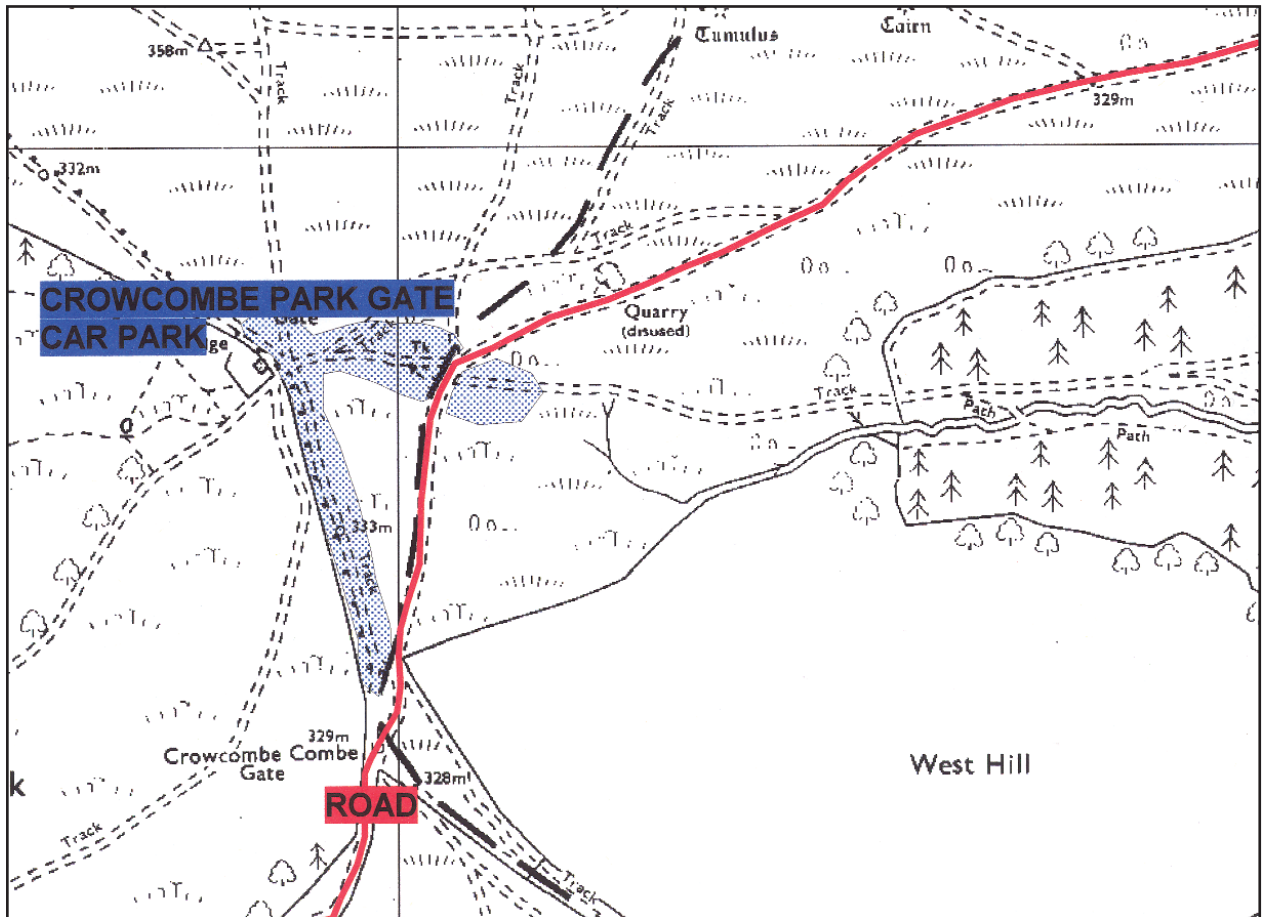
SITE HEALTH & SAFETY REVIEW

Leaders Name:	
Activity:	Crowcombe Park Gate Visit
Date & Time:	

First Aid Provision:		
Lone Working Procedures:		
Emergency Procedures:	Report back to vehicle at car park.	
Incident reporting Procedures:		
Identified Hazards	Who is at risk?	Risks from hazards (high, medium, low) (Include how they will be managed)
Other vehicles in car park	Students & Leaders	Low. Supervise students when on main car park. Do not allow students to cross to roadside.
Route surface	Students & Leaders	Low. Routes are on rights of way and should be surveyed. Any problems found with route to be reported at the earliest possible time to AONB Service.
Weather	Students & Leaders	Low. Leaders to be aware of weather (check night before trip and morning of trip) as site can be exposed).

Conditions:

1. This form is for visits that fall outside the CDM Regulations.
2. The leader is aware and agrees to comply with all Health & Safety Legislation.
3. The contractor shall keep the site tidy and clear of rubbish at all times and comply with the relevant waste management regulations. At the completion of the contract the site should be left clean and clear of rubbish.
4. All accidents should be reported to the event leader with 24 hours.



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Signed and agreed as an accurate statement of Health & Safety matters

Signed on behalf of

(School)

Dated

PLANNING THE ACTIVITIES

Methodology and process

Pupils are required for KS2 Geography to study “an environmental issue, caused by change in environment, and attempts to manage the environment sustainably” (National Curriculum, Geography KS2, 6e)

In order to make this study “rich, varied and exciting” (ref. “Excellence and Enjoyment”, DfES) this issue needs to be a real one for the children, relevant to their lives, and one which they can study at first hand. The “off-the-peg” QCA environmental unit “Should the High Street be closed to traffic?” was only meant as an example, to be adapted by teachers to reflect their own environmental issue.

The unit exemplified in this pack provides an example of just such an adaptation. It is modelled on work which took place at Nether Stowey Primary School in the summer of 2004, in which the teacher, Sophie Chattin, adapted the QCA unit (they have no High Street!) to present a real issue for the children to study, based in their local area. If your school is on the edge of the Quantocks, this unit would be ideal for your use, without much further adaptation, as it will be about issues real to your children as well. If you come from a different area, you are invited to adapt it to suit your own issues and your own area. The methodology could remain the same, the content needs to be adapted.

This unit also demonstrates how work can be based around the enquiry approach. The unit itself is based around a question, and the process over the 7 weeks follows the “Enquiry process” (see below), with each individual session posing a question from this framework. In this way the children lead themselves into the discovering and the learning; the role of the teacher is as facilitator and guide.

The unit will be described as it was undertaken by the children, but with additional suggestions for further work, and extensions, should there be time and aptitude.

This can be used for any study of geography.

1. Awareness raising	<p>What would we like to solve / know / find out about?</p> <p>Identify a focus</p>
2. Generate and formulate questions	<p>Who is involved in this issue?</p> <p>How can we best find out their views?</p> <p>How can we best find out about the issue?</p> <p>Devising ways to collect information</p>
3. Collecting and recording information	<p>Primary data (e.g. questionnaires, tape recordings, surveys, field sketches)</p> <p>Secondary information: (e.g. maps, atlases, photos, radio, TV, newspapers, magazines, the Internet)</p>
4. Processing the information	<p>e.g. Use of ICT eg data base, DTP package to annotate photos</p>
5. Drawing conclusions	<p>What have we found out?</p> <p>What are the advantages and disadvantages of alternative solutions?</p> <p>Who or what would benefit and who or what would lose?</p> <p>(Make decisions, take action if appropriate)</p>
6. Sharing the learning	<p>Presentations, with variety of media, or written.</p>

IS TRAFFIC A PROBLEM IN THE QUANTOCKS?

A sample unit of work
for KS2 Geography

ABOUT THE UNIT

This unit is based on work which took place with a Year 5 group at Nether Stowey Primary School in the summer of 2004. Although the unit was developed in the context of a very beautiful and environmentally sensitive area – the Quantock Hills – the work outlined below can be adapted and applied to any environment. This unit also includes examples of methodology and outcomes from Nether Stowey.

This is a long unit. The work as described would take at least 7 teaching sessions, preferably one afternoon a week for half a term.

It provides an example of a unit of work based on the enquiry approach. Each session follows the enquiry process closely, starting with awareness raising, generating questions, collecting and analysing the information, and presenting the findings (see Appendix 1). The unit also develops fieldwork skills, and presupposes previous fieldwork experience by the children.

The unit offers links with science, citizenship, numeracy, literacy, art, and PSHE.

The main curriculum objective for the unit is to cover one of the three main themes for KS2 Geography ““An environmental issue, caused by change in environment, and attempts to manage the environment sustainably” (KS2, 6e)

Places

- School locality
- Widening range of scales
- How and why places change
- Physical and human features

Skills

- Ask geographical questions
- Observe and question
- Collect and record evidence
- Analyse and communicate
- Use geographical vocabulary
- Undertake fieldwork
- Use ICT

Themes

- Environment: impact, sustainability
- How people can improve or damage the environment

Vocabulary

In this unit, children are likely to use:

- hills, traffic, environment, erosion, tracks, trails, vegetation, damage, litter, living things, leisure, recreation, over-use

They may also use:

- words connected to their survey findings about people's opinions

Resources

- visitors from the AONB
- appropriate recording equipment for the fieldwork, eg clipboard, tally sheets, a camera
- local people
- database and graphing software
- local large scale maps

Prior learning

It is helpful if the children have:

- experience of fieldwork
- some knowledge and understanding of the Quantocks, or the area to be studied

Expectations - at the end of this unit

Most children will:

Identify some of the problems of the Quantocks which are caused by traffic and over-use, and understand why people need to look after this environment

Some children will not have made so much progress and will:

Identify at least one problem of overuse of the Quantocks, and realise that people have an effect on this environment

Some children will have progressed further and will also:

Clearly identify how and why the Quantocks need managing and looking after, and identify particular solutions which they and the local community could put in place

TEACHING PLAN



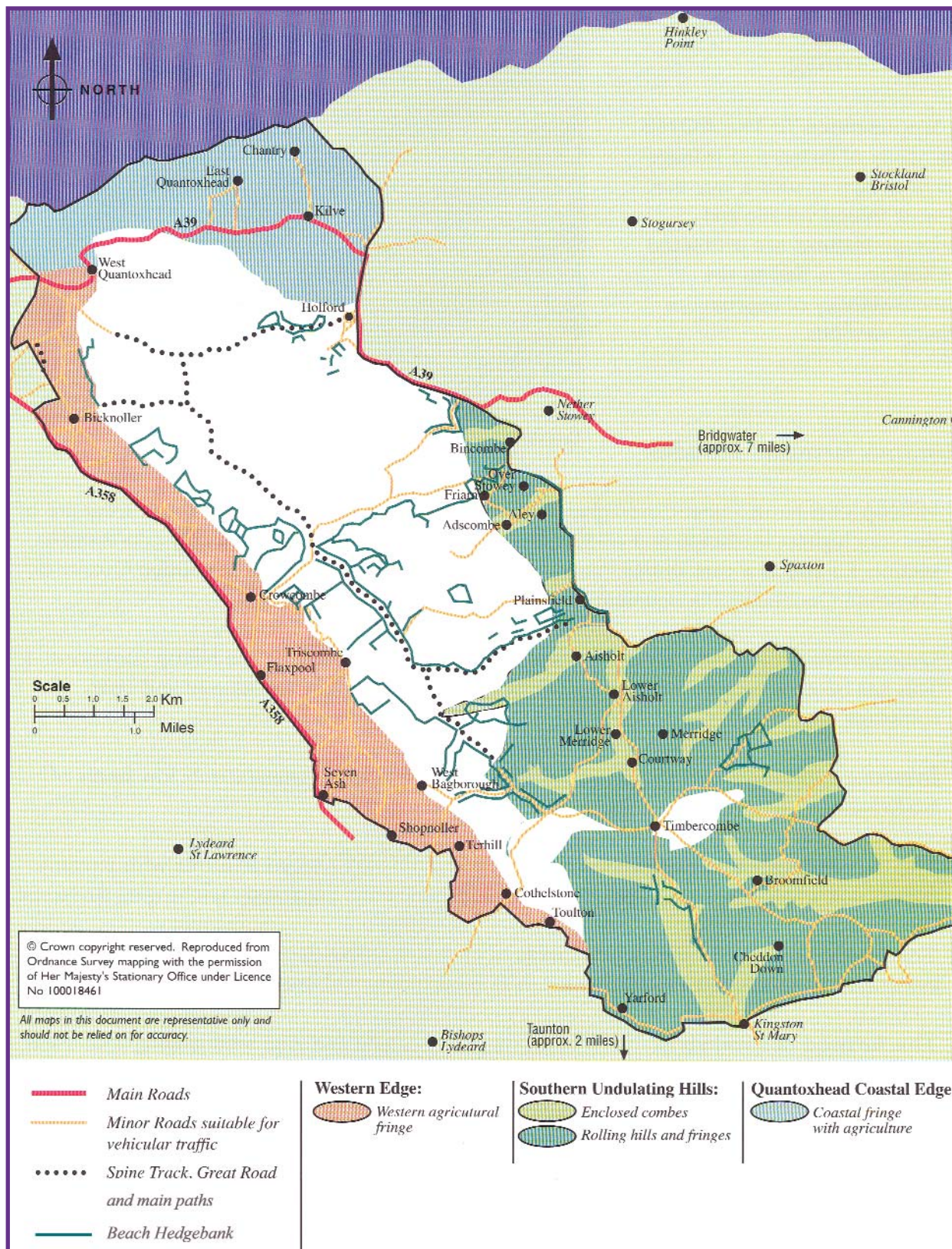
Learning objectives	Possible learning activities	Resources
<p>I. FAMILIARISATION, ORIENTATION</p> <ul style="list-style-type: none"> To identify a place, the Quantocks, and to describe what it is like (3a) To use maps, and secondary sources of information to find out about a place (2c,d) 	<p>Key question: “What do we know about the Quantocks?”</p> <ul style="list-style-type: none"> Brainstorm the children’s existing knowledge about the Quantocks. Eg. Where are they / have I been there / what is it like there / do I like it there? Class discussion. Ask the children to draw their own map from memory of the Quantocks – marking on the map any particular features they know / their house if it is near / their school. Ask them to annotate it with comments e.g. I like this place because ... / I went here last week and I didn’t like ... / people use this place for ... Either use a worksheet e.g. Pupil Sheet ‘ My Map of the Quantocks, or a free-drawn map by the children. (Keep these maps and comments as a base-line of their existing knowledge and understanding). Look at a map, and see where the Quantocks are in relation to the school / their homes / places they know. If possible have a large-scale wall map on the wall, and use display pins etc to show their homes etc Ask them to bring in any photos, brochures etc they may have about the area, and put on the display. 	<ul style="list-style-type: none"> Large-scale (1:25,000 or larger) map of the Quantocks for a wall display Pupil sheet 1: ‘My map of the Quantocks’, or similar Source sheets 1 and 2 (air photos of study area)
<p>I. AWARENESS RAISING</p> <ul style="list-style-type: none"> To find out why places are like they are (3d) How and why places change, and how they may change in the future (3e) To recognize how people can improve or damage the environment (5a). 	<p>Key question: “Are there any problems in the Quantocks?”</p> <ul style="list-style-type: none"> Invite someone from the Quantock Hills AONB Service, to come in and talk about the area What does AONB stands for / what are some of the issues? Mention ownership / traffic / development / economy. Question to children – are there any problems / is there a need for management / what might the problems be? Discussion, and general consensus might be that traffic might be a problem. 	<ul style="list-style-type: none"> Visitor from the AONB or use Information sheet 1 and 2 ‘About the Quantocks’ and ‘Quantock Issues’ or work from the Quantockycyclopedia on the QEd website.
<p>2. GENERATING AND FORMULATING QUESTIONS</p> <p>As above, and</p> <ul style="list-style-type: none"> To use appropriate fieldwork techniques eg questionnaires, field sketches (2b) 	<p>How can we find out if there’s a problem?</p> <ul style="list-style-type: none"> Introduce the idea of being geographical detectives. How are we going to find out? A) We could create a questionnaire - children decide what questions to ask / who to ask / how to ask questions. Children divide into groups, each to focus on different questions B) We could go and have a look. Where do we look / what signs of impact will we look for? / how shall we record what we find? / How will we get proof? Practice may be needed with field sketches / taking photos – practice in school Discuss issues of safety when out of school Teacher to write up the questionnaire and lists the tasks to do on the field visit. 	<ul style="list-style-type: none"> (see Example 6a) (see 6b: examples of questionnaires) (see 6d: sample task sheet)

TEACHING PLAN

Learning objectives	Possible learning activities	Resources
<p>3. COLLECTING AND RECORDING THE INFORMATION (1) As above</p>	<p>The children take the questionnaire out into the street and ask people. In groups, supervised.</p>	<ul style="list-style-type: none"> ● Copies of the questionnaire ● Extra staff / helpers to supervise
<p>3. ON SITE: COLLECTING & RECORDING THE INFORMATION (2) As above Particularly 5a ● To identify how places change, and how they may change in the future (3e)</p>	<p>The whole class visits Crowcombe Gate in groups, for an hour or so each to undertake the tasks they have planned, to collect evidence. (Takes all day)</p> <ul style="list-style-type: none"> ● Evidence of erosion ● Evidence of litter ● Effect on living things ● Trails – where people have been. <p>Methodology: photos / sketches / quadrant</p>	<ul style="list-style-type: none"> ● Task sheet (eg 6d) ● Minibus ● Extra staff / helpers for supervision <p>(See examples of photographs taken by children: 6e)</p>
<p>4. CONTINUED AT SCHOOL: PROCESS THE INFORMATION As above, and ● Use ICT to help in geographical investigations (2f)</p>	<p>(Same day as the above, tasks done when the groups are back in school) Collating the questionnaires Use tally charts and possibly graphs to display the information (See Appendix 10) Write a recount of the whole process Downloading the photos Putting together a group poster of the information collected</p>	<p>(See 6e for example of tally chart)</p>
<p>5. DRAWING CONCLUSIONS As above, and To recognise how and why people may seek to manage environments sustainably, and to identify opportunities for their own involvement (5b)</p>	<p>Key question: “So what have we found out?” Referring to the posters, have a class discussion. What is the situation? Does traffic affect the Quantocks? So what could be done about it? Discuss ideas (bollards / stones / posters (but they would be ripped down...)) / properly constructed car park)</p>	<p>See 6f for an account of the children’s discussion of the problem)</p>
<p>6. SHARING THE LEARNING As above</p>	<p>Key question: “How can we tell other people what we have found out?” Visitor to return, hear their views, and have a discussion. Put the posters on display in the library Could have a public meeting – parents / governors / local people. Presentation of their ideas and general discussion in the community</p>	

INFORMATION SHEET 1 - ABOUT THE QUANTOCKS

The Quantock Hills are a ridge that runs in a north west direction from Taunton in the South to the coast of the Bristol Channel in the north. They are approximately 12 miles (19km) in length and a few miles wide. They have varied geology with predominantly sandstone in the north and slates in the south. Due to the low lying land to the east and west they look more imposing than the average 300m elevation for the northern plateau. The highest point is Wills Neck at 384m.



INFORMATION SHEET 1 - CONTINUED

Habitats

The Quantock Hills have a number of important habitats:

Heaths:

These are open areas that are predominantly covered with heathers, gorse and grasses. The Quantock Hills has three different types of heather, Bell, Ling and Cross Leaved. Due to the increase of agricultural improvement of land the amount of heath left in the UK has decreased. Because of the ecological importance of this habitat the heathlands on the Quantock Hills are designated as a Site of Special Scientific Interest (SSSI).

Woodland:

The Quantocks has a number of different types of woodlands, there are upland oak woodlands that pepper the combes in the north of the hills, in the south are mixed ash-hazel woodlands and a recent addition are large blocks of coniferous woodland that were planted in the early 20th centuries.

Parkland:

There are many areas of historic parkland which contain a number of specimen trees including oak, ash, chestnut and beech.

Agricultural Fringe:

Much of the land surrounding the Quantock Hills is managed for agriculture. The predominant agricultural type is grazed pasture, mainly cattle with some arable in the southern area and on the coastal fringe.

Coastal fringe:

The fringe is interesting geologically, as exposed limestone from the late Triassic and early Jurassic Period (200,000 years ago) presents wonderful fossil beds.

Rare wildlife

There are many species of wildlife that are present in the Quantock Hills that are rare nationally.

Red Deer:

The largest wild mammal in the UK the Red Deer are present in the Quantock Hills as well as Exmoor. There are approximately 1,000 animals in the Quantock Hills and surrounding area.

Nightjar:

This summer visitor is a medium sized bird that lives in the heathland. They are very good at camouflage and it is very hard to spot them when they are resting on the ground. It is easier to hear them as they have a distinctive churring call during early summer.

An AONB since 1956

To protect the Quantock Hills from the increasing pressures of the modern world they were designated as an Area of Outstanding Natural Beauty (AONB) in 1956. This designation (along with the National Park designation) allows greater protection through the planning laws and allows a partnership to allocate resources for the protection and enhancement of the Quantock Hills.

Information provided by Iain Porter. Quantock Hills AONB Service.

INFORMATION SHEET 2 - QUANTOCK ISSUES

There are many pressures that have to be balanced if the Quantock Hills are to be kept as an Area of Outstanding Natural Beauty. Here are some of them.



Visitor Pressures:

Leading to disturbance to wildlife and other user groups. The Quantock Hills are close to a number of large settlements (Taunton, Bridgwater, Williton, Minehead). Over the past forty years the number of visitors attracted to the hills has increased to an estimated 400,000 day visits per year (1998).

Development Pressure:

Taunton and Bridgwater are regionally earmarked as growth towns. The increased development will affect the views out from the Quantock Hills and could reduce the landscape beauty of the Hills.

Transport Pressure:

Motor vehicle use has increased exponentially over the past 60 years. This use disturbs the tranquillity and causes erosion to the Quantock Hills. Use of cars, motorbikes and aircraft increases noise and air pollutants that will degrade the Quantock Hills.

Agricultural Pressure:

Pressures on agriculture could affect the landscape especially the fringes of the hills. Changes in farming practices and external influences (e.g. agricultural subsidy) could increase arable or intensify existing farming practices. This could have secondary effects, such as the current decline in wild birds on farmland.

Economic Pressure:

There are limited business opportunities within the Quantock Hills, the majority of which are in the service industries. A strong economy is essential for the local community but a strong economy based on service industries could lead to increased pressures in development, transport and visitor management.

Information provided by Iain Porter. Quantock Hills AONB Service.

AIR PHOTOS OF CROWCOMBE PARK GATE

CROWCOMBE PARK GATE 1946



CROWCOMBE PARK GATE 2000



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MY MAP OF THE QUANTOCKS

My map of the Quantocks

I like the Quantocks because...

I don't like....

People come to the Quantocks because....

These are some of the places I know in the Quantocks

EXAMPLES OF PUPILS' WORK

a. Questionnaire designed by the children

Hello, we are from Nether Stowey School. We are doing a project about the traffic on the Quantocks. Would you mind spending some of your time answering our questionnaire.

1. Are you? Male Female
2. Are you? Under 18
 18 - 27
 28 - 40
 41 - 55
 55 - 70
 71 +
3. Do you go up onto the Quantocks? Yes No
4. How often? Every day
 Once a week
 Once a month
 3- 6 months
5. How do you get up on the Quantocks? Walk
 Cycle
 Horse
 Car
 Other _____
6. Do you think there is to much traffic on the Quantocks? Yes No
7. Do you thin that traffic effects the animals? Yes No
8. Do you think erosion and pollution are effecting the Quantocks? Yes No
9. Do you go up to have a bike ride? Yes No

b. The results of the questionnaire

The Results of our questionnaires

we found the following results

- The majority of people we asked were female.
- Most people we asked were over 18 and a lot of them were retired.
- Over half of the people go up to the Quantocks regularly.
- Most of these people travel by car.
- Most people thought that the traffic on the Quantocks harms and upsets the animals.
- Most people thought the traffic on the Quantocks isn't noisy.
- Most people thought there is too much traffic on the Quantocks.

"We did a questionnaire in Nether Stowey to find out if people go up on the Quantocks, how often they go up, how they get there, and whether they thought the traffic is damaging the hills".

The Results of our Questionnaire

- . The majority of people we asked were elderly.
- . All of the people we asked go up onto the Quantocks.
- . Twenty of the people that we asked go up onto the Quantocks at least once a week.
- . Most of the people travel by car.
- . Over half of the people think that there is too much Traffic.
- . Just over half of the group we asked think that traffic effects animals.
- . Over a quarter of adults we asked don't have a bike ride on the Quantocks.

EXAMPLES OF PUPILS' WORK

c. "How do we know traffic is causing a problem?"

Notes from the pre-visit discussion with the children.

How do we know whether traffic is causing a problem?

We could go and have a look.

Where?

Where the ice cream man is

Where there are roads

Ramscombe?

Crowcombe?

Where people go

What signs of impact will we look for?

Tracks of cars / erosion

Litter

Trails of bikes, motorbikes

Horseshoe prints

Eaten vegetation

Lack of animals around

How will we get proof?

Of erosion?

Look for trails, take photos, draw sketches

Of litter?

Find it, collect it, photograph it, count it

Of trails?

Photograph it, sketch it, measure it (length and width)

Of horses? Count them, sketch them

Of living things? (plants and animals)

Record what is found in a quadrant / hoop

TASKS AT CROWCOMBE GATE

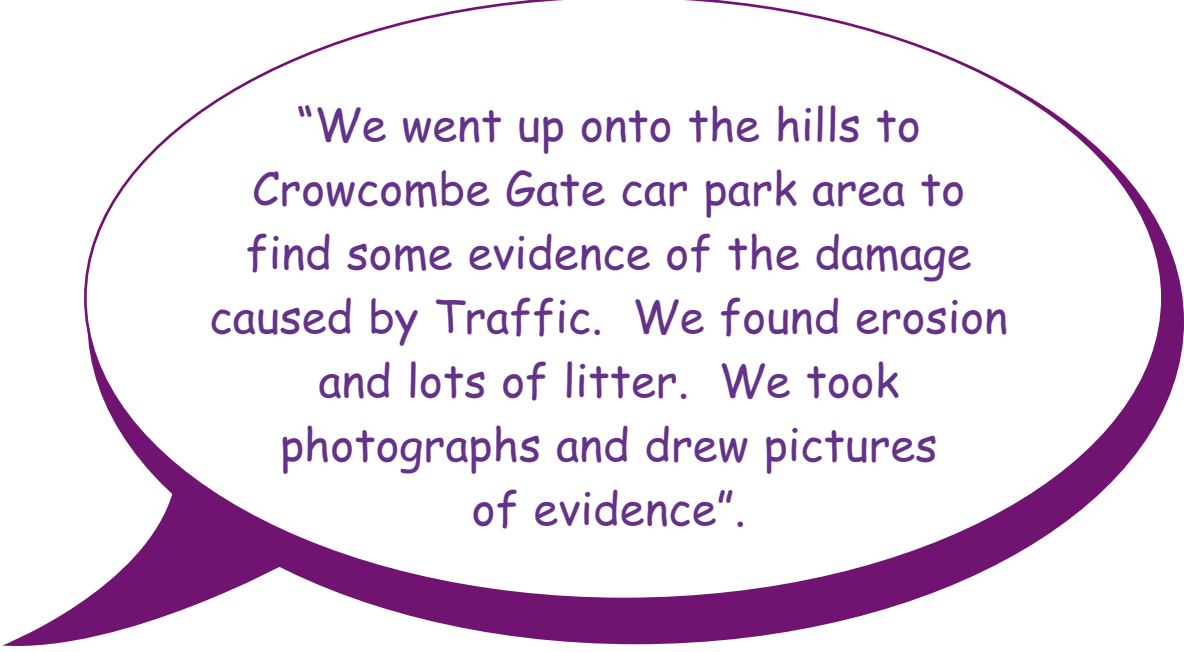
d. Tasks at Crowcombe Gate

Instruction which were given to groups.

When you get on the hills you look for EVIDENCE for the following and RECORD it.

1. Erosion - look for trails. Take a photograph and draw a sketch
2. Litter - look for any. Record how much you have found and try to locate on your map where you found it. Mark it on the map.
3. Living things - use your hoop and record what plants and animals you can find when you have placed it somewhere. Put it somewhere where traffic has been
4. Look out for trails of horses, bikes and motorbikes. Record where you have found them and perhaps take a photo/draw them.

REMEMBER TO WORK AS A TEAM, COLLECTING ALL THE EVIDENCE YOU WILL NEED TO PROVE HOW TRAFFIC AFFECTS THE QUANTOCKS



"We went up onto the hills to Crowcombe Gate car park area to find some evidence of the damage caused by Traffic. We found erosion and lots of litter. We took photographs and drew pictures of evidence".

EXAMPLES OF PUPILS' WORK

Evidence of erosion at Crowcombe Park Gate

I.



...showing the extent of the erosion caused by cars



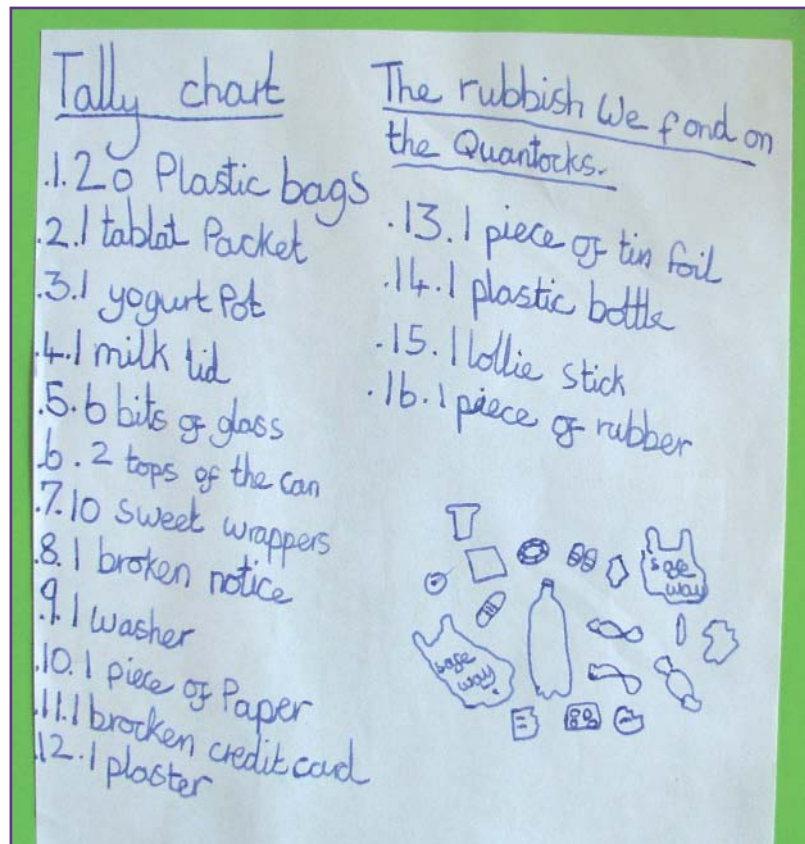
These two pictures were taken near the top of the hill, a long way from the car park.

EXAMPLES OF PUPILS' WORK

2. Evidence of litter at Crowcombe Park Gate



The results of the litter tally at the car park



3. Evidence of wildlife at Crowcombe Park Gate



EXAMPLES OF PUPILS' WORK

4. Evidence of horse, motorcycle erosion at Crowcombe Park Gate



A little gully here is forming at the side of the footpath because of erosion



These photos of tracks were taken right up on the hills - cars couldn't have made them - bikes, horse or people must have made them. Too many people are using the Quantocks.

- 5.** Sharing the Learning
The children's analysis of the problem

What is the problem?

400,000 people a year come to the Quantocks which causes a lot of traffic. Some of the problems are erosion, noise pollution. It scares animals and other things like insects, people go off road with motor bikes and the fumes can do damage to animals. Cars drive up the bank and destroy plants like the heather and the other plants around. The Quantocks are beautiful. If people keep going off road it will make all the plants die and the Quantocks will not be so beautiful any more.