

IN THIS CHAPTER YOU WILL FIND KEY IDEAS ON
CITIZENSHIP • ENQUIRIES • ENVIRONMENT • FIELDWORK • ISSUES •
MISCONCEPTIONS • NATIONAL CURRICULUM

Environmental geography

What is our knowledge worth if we know nothing about the world that sustains us, nothing about natural systems and climate, nothing about other people and cultures? This question by Jonathan Porritt, the environmental campaigner (see Foreword), appears on the first page of the geography national curriculum (DfEE/QCA, 1999). It draws attention to the fundamental importance of an environmental perspective in the modern world. Whether we admit it or not, we live in times of unprecedented change. For the first time ever people have the power to change the course of nature. Nobody can accurately predict the impact of our actions on the future of the Earth. What we know for certain is that we are having a major impact on the atmosphere, land and oceans and are affecting the balance of life on a planetary scale. It will fall to future generations to grapple with the problems that we are only dimly recognising today.

This chapter offers practical help on how environmental geography may be addressed within the context of good geography teaching. It lays emphasis on practical approaches and offers a number of case studies as templates for teachers to adapt to their own circumstances/issues/localities, including one of an eco-school. Environmental geography provides many exciting opportunities for engaging pupils' curiosity and interest in the world about them. However, to capitalise on this potential the national curriculum and Foundation Stage requirements should be regarded more as starting points than as ends in themselves. The following considerations should underpin work in environmental geography for all ages:

1. Fieldwork is fundamental to all geographical education and involving pupils in activities outside the classroom is especially relevant to the effective delivery of environmental geography.
2. Environmental geography is an extremely useful vehicle for appreciating other people's attitudes and values and for encouraging pupils to express their own opinions, develop tolerance of alternative opinions and their own ability to analyse and reconsider their own stance on a particular issue.
3. Unique opportunities are offered within environmental geography to cover issues in the context of other countries, thereby raising pupils' awareness of other cultures and values.
4. Environmental geography also offers a means by which the current citizenship and creativity agendas may be effectively addressed within a geographical context, thereby raising the profile of geography (see Chapters 2 and 21).

What is environmental geography?

Environmental geography specifically examines the interactions between people and their environments, studying both how people adapt to, and how they alter, specific environments. Studying environmental geography involves using geographical skills, knowledge and understanding to explore issues affecting the quality of life on Earth. It also involves considering attitudes, values and opinions and thereby provides an ideal opportunity for pupils of all ages and abilities to contribute to real issues that are of concern to them.



The flavour of environmental geography can be seen from the level descriptions for geography:

- At level one pupils 'express their views on features of the environment of a locality'
- At level two pupils 'recognise how people affect the environment'
- At level three pupils 'recognise how people seek to improve and sustain environments'
- At level four pupils 'explain their own views and the views that other people hold about an environmental change' (DfEE/QCA, 1999, p. 31).

Environmental geography should also be seen as one of the components of education for sustainable development. Since its inception the geography national curriculum has recognised the strong links between environmental education and environmental geography. In the Foundation Stage young children may be introduced to environmental geography in a number of ways, e.g. via play activities. Examples of this approach may be found in *The Early Years Handbook* (De Bóo, 2004)

There is clear potential for using environmental education topics as a vehicle for delivering all national curriculum subjects and particular aspects of literacy and numeracy. However, it is essential that teachers devise clear schemes identifying the geography within any environmental education taught, otherwise, it is all too easy to lose the focus and drift into other subject areas. Teachers (and indeed pupils) must be clear in their own minds where the geography appears in any activity they undertake.

Delivering environmental geography

Some general principles

One way of studying environmental geography is to start with the pupils' own environment and expand out to the wider world. All pupils need to study their local area, both as part of the Foundation Stage and key stages 1 and 2. The study of more distant environments as demanded in key stage 2 does not preclude their inclusion earlier in the curriculum.

The local environment is a primary resource and has the unique quality that pupils can interact with it. It has the advantages of being:

- free
- accessible
- familiar

Local people are usually willing to be involved in pupils' activities. Indeed, developing links with local residents is an important and often overlooked aspect of developing environmental awareness, in addition to being a significant way in which geography can contribute to the citizenship agenda.

Working in the local area, pupils can collect their own information on a particular environmental issue through questionnaires, tape recordings, surveys, field sketches, photographs and other recording techniques. This has the advantage of developing both their enquiry skills and additional transferable skills such as those relating to ICT. When they study issues in more distant localities pupils will, of necessity, need to use secondary sources such as CD-Roms, atlases, photographs, newspapers, magazines, links with other schools and the internet. There are many ways in which the information may be utilised, for example:

Which of these features do you have?

Ideally you need at least one from each category for local area work for children aged 5-11. A starter vocabulary is also essential for local area work.

Water features

Stream, pond or lake, river, estuary, coastal area

Landscape features

Hills, valleys, cliffs, mountains (showing evidence of erosion or deposition by water, wind or ice), woods, moorland

Physical features

Slopes, soil, rocks

Climate work sites

For weather surveys, micro-climate work (usually school grounds)

Local issues

Bypass, road-widening scheme, out-of-town shopping development, new housing estate, new reservoir, rubbish tip site, local improvement scheme

Sites showing the origins of settlement

Crossing point of a river, a route centre, a defensive site, site where water became available, old core of modern settlement, evidence of growth, development, decline

Buildings

House, cottage, rows of houses, housing estates, groups, rows of buildings with different functions

Transport

Safe place for traffic survey, bus station, bypass, airport, railway station

Industry

Farm, business, small manufacturing unit, warehouse, factory

Shops

Single shop, parade of shops, supermarket, hypermarket, shopping mall/centre

Leisure facilities

Library, museum, park, swimming pool, leisure centre, golf course

Settlements

House, hamlet, village, town, city (including suburbs)

Services

Fire, police, ambulance, hospital, doctor, dentist, refuse collection, recycling plant, post office

Figure 1 | Local features to study at key stages 1 and 2. Source: NCC, 1993.

- the creation of databases to manipulate quantitative data
- discussions based upon qualitative data with general trends identified
- analysis of visual material

Studying an environmental issue using information and data collected by the pupils themselves enables them to understand the issue better, how it affects both people and the environment, and how different people may hold different views from their own.

The enquiry process provides the most appropriate and most effective ways of delivering geography. This is recognised in the curriculum guidance for the Foundation Stage and in the geography national curriculum which contains sections on geographical enquiry and

skills at all key stages. The strength of this methodology is that it can effectively deliver almost any aspect of geography, including environmental geography (Figure 1).

Environmental geography is not just about collecting data and information on an issue, it is also about getting pupils to communicate their ideas on that issue. This may be achieved through such activities as:

- the production of a newspaper
- role play within the class or for wider audiences, e.g. there is an opportunity here for a special assembly or a presentation at a parents' evening
- interviews with people involved in particular environmental issues
- drawings, photographs and other art work to produce exciting wall displays, which offers the opportunity to use ICT
- the production of a simulated television programme
- the creation of a web page/site
- using stories – the pupils could either be introduced to an issue via stories such as *Oi! Get off my Train* (Burningham, 1994) and *Peter's Place* (Grindley, 2001), or encouraged to write one of their own.

Possible issues/topics for younger pupils

There are innumerable opportunities for teaching environmental geography throughout the



school. The suggestions given below could be adapted and developed for all age groups but are most suitable for the Foundation Stage and key stage one.

Looking after our school

Pupils could be actively encouraged to express opinions about what they feel is attractive and unattractive about their school and its grounds. Through writing and drawings they can devise plans for improvement. This theme could be part of an eco-schools development (see pp. 282).

Setting up a school council provides the ideal forum for pupils to share ideas of this kind, to plan their campaigns, and to give impetus to projects which involve pupils in making changes to their environment – a real lesson in citizenship.

Caring for animals

You could begin by asking pupils to consider what their pets require to survive. This might lead to a farm study/visit where pupils formulate their own opinions on the way farm animals are kept. Clearly this study might then involve more distant places, with pupils studying endangered wildlife habitats and species.

Looking after our water

Pupils could consider the various ways we use water and the absolute necessity for clean drinking water. This, of course, would naturally lead to a consideration of water supplies in other countries, encouraging children to empathise with those in distant lands and different cultures. Other activities for environmental geography include:

- Using stories to introduce or develop a theme, e.g. *The World that Jack Built* (Brown, 1991) and *Dinosaurs and all that Rubbish* (Foreman, 1972). The *Barnaby Bear* series (Jackson 2000-03; Lewis, 2001-03) from the Geographical Association also offers countless opportunities for very young children to explore environmental issues by following the adventures of this likeable bear
- Using poetry, e.g. *When Dad Cuts Down the Chestnut Tree* (Ayres, 1990)
- Creating a themed trail in a rural area (see the Ebchester School example on page 282)
- Creating a themed trail in an urban area
- Making a play area which pupils build themselves using resources such as bark chippings. (This has been successfully introduced into a South Tyneside school to avoid mud being brought into the school buildings.)
- Designing a butterfly garden with the help of older pupils
- Making nesting boxes for birds and siting them in appropriate areas
- Making attractive fences and boundaries. (A school fence bordering the Tyneside Metro was transformed by a series of murals, with help from the Passenger Transport Authority and the Groundwork Trust.)
- Improving the inside of the school with, for example, plants, signs, sculptures, paintings designed and produced by the pupils
- Transforming the playground by introducing street furniture (Tyneside Groundwork Trust has developed several playgrounds in this way. Schools have found that this simple approach has reduced bullying in the playground.)

The above ideas may be regarded as mini-projects and may provide a sound basis for further development in key stage 2.

Possible issues/topics for older pupils

The key stage 2 programme of study for geography requires pupils to learn about two localities and three themes. One of these themes has an environmental focus, with the precise requirements that pupils will study:

- 'an environmental issue, caused by change in the environment (for example, increasing traffic congestion, hedgerow loss, drought),
- attempts to manage the environment sustainability (for example, by improving public transport, creating new nature reserves, reducing water use)' (QCA/DfEE, 1999, p. 114).

Using stories to introduce and consolidate studies in environmental geography should continue at key stage 2. The *Storylink* packs (Dryden and Hare, 2000; 2001) provide an exciting range of ideas and approaches to integrating fiction with locality studies that could be adapted to suit different needs. Sometimes we forget that older children enjoy stories too!

The local area will often provide some excellent issues that pupils can investigate first-hand. Chambers (1995) describes a number of projects that explore children's environmental perceptions and it is always valuable to find out what children think about the place where they live. Some specific topics/ideas which could be developed and which involve a contrasting locality are suggested below, followed by two in-depth case studies. These ideas should not be regarded as being exclusively for key stage 2 – they can be readily modified for all age ranges.

Tourism

There are many examples of how tourism has had both a positive and a negative impact on the environment and these can be used to raise a variety of geographical issues. For example: *Intense visitor pressure on National Parks and mountain environments* – People who visit such areas often contribute to the destruction of the very thing they have come to experience, i.e. unspoilt landscape, peace and tranquillity.

Pressures of tourism – This is well exemplified by, e.g. southern Spain, where small coastal fishing villages have been inundated by numerous foreign visitors who stay in the large tower-block apartments built to accommodate them. Torremolinos is an excellent example.

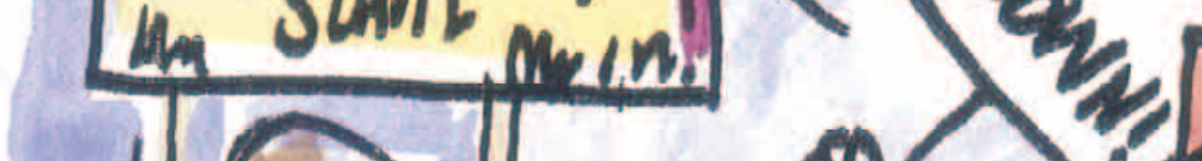
By-pass construction – In 1996 the Newbury by-pass highlighted the contentious nature of this issue and the opposing views of various factions in the locality. There are many examples of where local road building schemes have raised opposing feelings.

Rivers/coasts – The abuse of our rivers and coastal waters through misuse can, unfortunately, be all too readily studied, e.g. oil spills such as the disaster off the coast of north-west France in 2002, agricultural waste, sewage waste and chemical discharges.

Green belt land – Building on green belt land is a dilemma facing most urban areas and one that impinges directly on rural areas.

Quarrying – Depending on the school's locality, resources and access to sites, quarrying can be the focus of geography topics set in a variety of place contexts, for example:

- an open-cast coal mine within a predominantly agricultural landscape (see page 280);
- limestone quarrying within the Peak District National Park;
- chalk quarrying in southern England;
- precious-metal mining in an Equatorial rainforest, such as the Amazonian rainforest in Brazil;
- iron-ore mining in Scandinavia.



Trees in our world

Trees provide a familiar but extremely useful focus for an exciting and wide-ranging environmental geography topic. Teachers could approach this in a number of ways but some possible aims could be:

- raising awareness of the value of trees to the environment, e.g. for landscaping, the production of oxygen and as a source of alternative medicines;
- allowing pupils to express and develop their own opinions on forest-related issues, e.g. coniferous monoculture, rainforest decimation;
- appreciating that there are different attitudes relating to the value of trees.

You might start the work with a local study. This could involve:

- mapping the school campus and/or local area to show where trees already exist, thereby raising pupils' awareness of trees and their local area;
- a visit to either a local park or woodland and/or, through a 'local expert', enabling pupils to identify suitable varieties of tree for their school, thereby increasing their knowledge and enabling them to make informed decisions;
- identifying, through discussion, the opportunities for enhancement of the environment by tree planting, thereby offering pupils an opportunity to express their opinions and ideas.

Armed with this knowledge and the opinions of a variety of people consulted by the pupils, the project could be advanced using questions such as:

Focus question

Do we want trees?

Why do we want them?

What trees will we plant?

Which trees will grow in our environment?

How do we look after them?

How do we get the trees we want?

Who will plant them?

How will we plant them?

Where will we plant them?

Who will look after them?

How do we pay for them?

Teaching/learning outcomes

Enables the children to consider the value of trees

Offers the opportunity to express likes and dislikes

Enables them to use their knowledge or highlights the need to find out

This links to a consideration of weather and climate and so to other aspects of geography

Enables pupils to become conversant with how trees survive

Issues of availability and scarcity

Possible involvement of the local community

Practical considerations of facilitating a change in the environment

An excellent opportunity for pupils to produce alternative plans for the location and to present these so that a final decision can be made

Aspects of responsibility

Considerations of costs and value

If these questions were to be formulated into a scheme to plant more trees in the school grounds, in order to achieve their aim pupils would need to develop their own ideas for raising the money, perhaps by writing letters to appropriate organisations seeking sponsorship, and organising money-raising events such as jumble sales, sponsored walks, 'swimathons' and quizzes. This could involve them in a series of community activities which would forge, develop and, it is hoped, sustain the community/school links. These activities could culminate in a high-profile event where a local dignitary takes part in the tree planting ceremony. The links between these activities and the citizenship agenda are very obvious, yet this project has clear geographical elements.

This tree project can be developed further to bring in studies of distant and contrasting localities. For example:

- the destruction of rainforests – a case study of the Amazon or the Indonesian forests would be particularly useful here
- the creation of a coniferous forest monoculture – as in the creation of coniferous forests in parts of Scotland.

Such an approach would require reference to secondary source material to resource the activities. This can be obtained from various organisations (for some suggestions see the list at the end of this chapter), many of whom have 'tailor-made' materials for just such a topic. Using such materials, pupils might be encouraged to ask and find answers to questions such as:

Focus question

What and where are the rainforests?
 What is happening to them?
 Is this a problem? For whom?
 How can we influence what is happening there?
 What is it like to live here?

Teaching/learning outcomes

Raising awareness of geographic location
 Understanding of the issues
 Empathising with the local people
 This raises major issues of empowerment.
 This would encourage pupils to empathise with a different culture



Once again, conducting this study within the context of a distant locality is best achieved by using an enquiry approach. Traditional tales such as *The People Who Hugged the Trees* (Rose, 1991) could also be used to amplify the work.

Photo | Anna Gunby.

Case study: open-cast mining in Northumberland

Open-cast coal mining in Northumberland is a fascinating topic, highlighting many issues relating to environmental change in a UK locality. A template for making a study of this issue is outlined below. You could apply the same approach to a study of mining in a distant locality, such as the African goldfields or the Brazilian rainforest.

Possible aims:

- raising awareness of the impact of open-cast coal mining on the environment;
- allowing pupils to express and develop their own opinions on a contentious issue;
- appreciating that there are different attitudes relating to open-cast mining in a rural area;
- development of a variety of geographical skills and techniques.

You could focus the study with the following enquiry questions:

Focus question

What types of coal mining are there?
 Why is open-cast coal mining being carried out specifically in Northumberland?
 What does an open cast coal mine look like?
 How many jobs does the industry provide and what do these jobs entail?
 Is the quality of the environment more important than the provision of jobs for local people?
 To what extent do people living around the area of coal extraction benefit or suffer from this activity and in what ways?
 To what extent do the owners of the mine ensure minimum impact in the locality?
 What representation have the local people made about the effects of this industry, and to whom?
 How is the landscape reinstated after mining?
 Is the reinstated landscape better than the original?
 Has the land use changed?

Teaching/learning outcomes

Increasing pupils' knowledge
 Raises awareness of specific local conditions

 Offers the opportunity for investigation/visit
 Puts the study into a wider context

 Asks pupils to consider the impact of closing the industry
 Empathising with different groups

 Understanding how environmental impact may be addressed
 Recognition of the role of local decision making/politics
 Understanding of techniques of reclamation
 Asking pupils to express views
 Enables the impact of change to be assessed

Suggested activities to develop the work include:

- Whole-class discussions on the nature of coal and how it may be extracted. These discussions may be reinforced through pupils' own research on coal using books, CD-Roms and information from coal companies.
- The use of map skills involving the use of acetate overlays to delineate the mining area and to show the extent and nature of the development. Pupils can then draw their own conclusions about land use before mining took place and develop their own opinions as to the impact the mining has had on this landscape. They can also identify the dwellings and settlements in the immediate vicinity of the coal mines and can imagine what it would be like to live in that locality.

- A site visit. Before the site visit, pupils could work in groups to develop questions that they might choose to ask their guide. During the visit they could take photographs, make field sketches and make tape recordings (e.g. of their interviews or the noise of lorries).
- Part of the visit may also include a period of time spent in one of the settlements close to the mine. Pupils could collect a variety of additional information that might include, for example, interviews with local inhabitants, observations on the visual and aural impact of the mine, a dust survey (using dust plates) and a traffic count. The use of environmental recording devices could enhance this study and address ICT requirements.
- If a site visit is not possible, secondary sources such as photographs and videos could be used.

Follow-up activities might include:

- Making a display of photographs, maps, newspaper cuttings, field sketches and graphs of the results of the surveys. Pupils can use these as a resource and as a focus for the classroom activities.
- Having a class discussion on what pupils have discovered about people's attitudes towards open-cast mining.
- Creative writing activities in which pupils express their opinions and attitudes about what they have seen and interacted with. This could take the form of the front page of a newspaper and involve the use of a desk-top publishing package.
- Designing and mapping a landscape that would enhance the environment after the mine has closed. Pupils may choose to transform the hole into either a water park with wildlife habitats or a lake for recreational purposes; they may wish to return the area to an agricultural land use or develop a country park with woodland walks/mountain bike tracks with all the attendant facilities.
- A role play exercise centred on a proposal to start an open-cast coal mine in a new area, close to the school. The cast of characters in this scenario could include:

– a local MP	– an unemployed parent of three children
– a town planner	– an eight- or nine-year-old child
– a conservation group representative	– the mine owner
– members of the parish council	– the haulage contractor
– a village shopkeeper	– a farmer

This role play could take the form of a studio discussion for a television programme. It might be possible for a person from the local planning department to chair the meeting and draw together the threads of the debate. Such a person would be able to provide pupils with a considered decision as to whether or not the open-cast coal mine should go ahead. If you video the role play you could use it to stimulate discussion concerning the issues raised by open-cast mining.

Photo | I.A. Recordings photographic archive.





Photo | Tina Horler.

Rainforests – These provide a topical, though perhaps overused, context within which pupils can learn about our inability to sustain natural biomes. Mining and quarrying of minerals and metals in such an environment raise issues of sustainability and conflict. This opens up a wealth of views about the development of these distinctive regions.

As well as covering the environmental theme in the geography national curriculum, any work that you do on the environment will involve working at a range of scales, which is one of the other curriculum requirements. If you select your case studies carefully you may also be able to focus on a locality in a less developed country, thereby linking skills, places and themes in the way that was originally intended by the team that devised the curriculum.

The whole-school approach: a case study of an eco-school

Environmental geography can be taught using topics, themes and issues approaches but some of the most effective and integrated learning can be developed by taking a whole-school approach. Ebchester Church of England Primary School in County Durham provides an excellent example of how environmental geography may be delivered in holistic fashion. The head teacher, Richard Coombes, realised that the school environment, in particular the woodland, the stream and a substantial open grassed area, offered rich learning opportunities.



His enthusiasm encouraged parents, unemployed local people, local businesses and the pupils to co-operate as a cohesive body. Over a period of twelve years adults and children have worked together to conserve and develop wildlife habitats in the school grounds. This has provided an exciting, ongoing learning experience for all those involved, forging strong links within the community which continue to flourish and develop.

At the start each class was given an area to develop. It was their task to ensure the continued progress of the project, which they did through discussion and making drawings and plans. They also identified improvements that would enhance their area in the long term. This initial planning stage then led to decisions about what was wanted and final plans were produced. The plans provided the basis for pupils to communicate their ideas to those people who could help bring them to fruition, e.g. parents, local businesses, volunteers and experts. (Note that communication of this kind can involve the use of ICT in a variety of forms, e.g. PowerPoint presentations.) So far the projects undertaken at the school have included the following:

- woodland area
- weather station
- pond

Photo | Paula Richardson.



Figure 2 | Trails devised by pupils at Ebchester CE Primary School.

- amphitheatre
- sandpit area
- butterfly garden
- herb garden
- structured play area
- wild flower meadow
- memorial garden
- compost area

- organic vegetable garden (produce from which is prepared in the school dining room)

Each year new projects and initiatives are discussed and developed. One recent development has been the construction of an outdoor amphitheatre in which school productions can be staged. The theatre occupies what was formerly a piece of waste ground which presented a potential hazard to pupils playing near it due to its steepness. Now it offers a facility that is highly valued and utilised.

Making trails

Different areas of the school grounds, such as the butterfly garden and woodland area have been linked together by the creation of all-weather paths made from renewable materials. This has improved access to and between the areas throughout the year. The trails (e.g. a bird trail and a tree trail) and the various site developments were all planned by the pupils who used their own knowledge and imagination to draw the plans, with the help of local experts (see Figure 2).

Attracting visitors

Initially, the project was quite parochial but as the plans came to fruition Ebchester School began to involve other schools which resulted in considerable valuable and enjoyable interaction. Some pupils were appointed as wardens to escort visitors around the site and were given a warden's badge. This gave pupils:

- the opportunity to communicate information
- confidence
- the chance to express themselves

Worksheets were also developed by the pupils themselves for use by visitors from other schools (Figure 3). In devising the sheets the pupils used a great range of geographical skills including learning geographical terms, making maps and plans and using symbols and keys. One of the other benefits is that they developed a better sense of their own geographical situation which helped them when they studied contrasting localities.

Today, Ebchester School has a curriculum which, for the most part, can be covered within the boundaries of the pupils' own environment and, as a consequence, enables all subjects within the national curriculum to be addressed in a practical and meaningful way. In addition to subject learning, the work has enhanced pupils' self-esteem. As the head teacher puts it, 'All of the children benefit from their interactions with children from visiting schools and take great pride in sharing their school with others.'

FIND THREE COLOURS

What To Do

- 1) Take a little bit of the three colours you want.
- 2) Stick them on the three bits of sticky tape.
- 3) Tell me where you found them.

4) Draw the whole object.

1	2	3
		

CREATURES

Go down to the woodland and see what insects are down there. Draw the insects that you have seen.

Pick out which one you like the best.

Next, draw which one you picked out.

Cut out the pictures of the insects.

Put them on a piece of paper.

Write down the names of the insects.

Figure 3 | Worksheet for visitors, produced by pupils at Ebchester CE Primary School.

In a project like this, involving the lower school at an early stage can ensure the continuity of all the activities. The secret of success at Ebchester has been the fact that this is a long-term, ongoing developmental process, which changes in emphasis from year to year because of variations in, for example:

- the pupils' interests and enthusiasm
- availability of resources
- expert help
- parental input
- curriculum developments
- contemporary environmental issues

The pupils have been central to the decision-making process and learnt a great deal from the interaction with adults and from planning the developments. This is an excellent example of the value of empowering pupils by giving them ownership of a project. This ownership also seems to stay with the pupils as the incidence of vandalism at the school is virtually zero and the older pupils who

have moved on to secondary school still see the school as 'theirs'.

Ebchester School has now attained Eco-school status. This scheme promotes environmental education awareness in a way that links to many curriculum aspects including citizenship, personal, social and health education (PSHE) and, particularly significant for geography, sustainable development. Richard Coombes feels that gaining this status is recognition of the school's long-standing record of environmental work. The experiences at Ebchester School show how delivering environmental geography may be done in an imaginative and stimulating manner. It is possible to adapt this approach to your school situation and offer your pupils benefits that amply justify the time and effort involved.

Teaching environmental geography – some considerations

The very nature of environmental geography means that many of the topics, such as open-cast mining or the development of nuclear power, are likely to be contentious. Feelings about these issues can run very high and they need to be handled sensitively. Teachers therefore have a critical part to play in providing role models and it is essential that you are seen to be impartial and even-handed in dealing with the issue. It is also important that issues which create concern in young children, such as the possible extinction of animal species, are treated with particular care and that pupils are offered a final positive perspective.

Misconceptions

As in any subject, pupils are likely to suffer from a considerable number of misconceptions. In geography, these are especially significant when it comes to environmental issues as they may arise from, or lead to, prejudices. This was clearly illustrated by Palmer (1998) who was able to show that while children may be able to recognise and name unfamiliar creatures and landscapes this does not necessarily mean they understand their context or existence. Children's confusion about environmental issues can be considered as a mix of, among other things, factual errors, confusion over cause and effect and sweeping generalisations that suggest



Photo | John Halocha.

anything which is environmentally damaging contributes to every environmental problem.

The recent controversy over the fish stocks in the North Sea is a case in point and a neat way of introducing a European dimension. The issue revolves around the different perceptions of the viability and sustainability of the fish stock with the fishermen arguing for their right to fish in order to preserve their livelihood and way of life, while scientists argue that without severe limitation on catch size the future of the industry is in jeopardy. This is a complex issue and before it can be fully explored in the classroom some of the following initial misconceptions need to be addressed, for example:

1. Fish start and end their lives in a supermarket.
2. Commercial fishing is done with a rod and line.
3. Fish fingers are the fingers of fish.
4. That there will always be fish to eat (i.e. children take for granted the availability of a food supply).

The study of the North Sea fishing controversy offers pupils a real issue in which two opposing viewpoints are argued with both passion and evidence. The teacher's role in this study would be to facilitate the exploration of these opposing views and enable pupils to come to an understanding of the issue from which they could draw their own conclusions. The use of video clips, the internet and links with pupils in fishing ports are all ways in which this may be achieved.

A very positive and exciting way of overcoming misconceptions which may arise from (mis)interpretation of secondary sources, particularly when dealing with an issue in a distant place, would be to link up with a school in that country or locality. This can be achieved via the Windows on the World website (see useful contacts at end of chapter) which offers a means of 'pairing' schools. The exchange of on-the-spot information, opinions and perceptions would enrich pupils' learning in both participating schools and would make a considerable contribution to addressing the One World issue.

It is also very constructive to consider how other countries include environmental geography in their curriculum. In France, for example, environmental education is an important part of geography, science and civic education (citizenship) and there is a strong global perspective. This is perhaps something which needs to be further developed in the UK. One of the other central concepts is the idea of *patrimoine* or heritage. This addresses not only the protection of the natural environment, e.g. sustainability, but also the protection of relics of the past and the protection of the cultures of a group, a region or country. Older pupils in France are also taught about the role of the United Nations but, as in the UK, when studies of litter, waste, recycling and sorting are undertaken, the pupil tends to be the starting point.



Conclusion

There is a wide range of resources available to enhance the teaching of environmental geography. To begin with, the local surroundings offers rich possibilities for fieldwork. Secondary sources include teaching packs and colourful and inviting information books. Many texts, however, focus on environmental education as opposed to environmental geography. It is therefore all too easy to be drawn into environmental education without fully appreciating the wealth of geographical opportunities that also lie along this route.

When it comes to finding out about issues, newspaper cuttings, local news footage, planning applications, information from pressure groups such as Greenpeace, and photographs collected over a period of time are all extremely valuable. The internet is another source to consider, especially if you can identify a few suitable sites in advance of lessons. One option is to get pupils to identify the issue they want to study for themselves and to organise appropriate resources. Flexibility and responsiveness on the part of the teacher is essential. It is important to remember that pupils need the opportunity to explore their own feelings, values and thoughts on environmental issues and to do so within a clear geographical framework. The best outcome of good teaching in environmental geography is perhaps that the pupils are able to feel that they can make a difference, no matter how small.

References and further reading

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Useful contacts

- Centre for Alternative Technology, Llwyngwern Quarry, Machynlleth, Mid-Wales SY20 8DN.
Community Education Development Centre website: www.cedc.org.uk
- Council for Environmental Education, School of Education, University of Reading, London Road, Reading RG1 5QA.
- Council for the Protection of Rural England, Warwick House, 25 Buckingham Palace Road, London SW1 0PP.
- Countryside Council for Wales, Maes-y-Ffynnon, Penrhosgarnedd, Bangor, Gwynedd LL57 2DW.
Eco-Schools website: <http://www.eco-schools.org.uk>
- English Heritage Education Service, 23 Savile Row, London W1S 2ET.
- English Nature, Environmental Education Section, Northminster House, Peterborough PE1 1UA.
- Friends of the Earth, 26-28 Underwood Street, London N1 7TQ.
- Geographical Association, 160 Solly Street, Sheffield S1 4BF.
- The Green Teacher Co-operative Ltd, Swn Y Mor, Pen Yr Angor, Aberystwyth SY23 1BJ. Tel: 01970 626478.
E-mail: djr28@tutor.open.ac.uk.
- Learning Through Landscapes, 3rd Floor, Southside Offices, The Law Courts, Winchester SO23 9DL.
- National Association for Environmental Education, Walsall Campus, University of Wolverhampton, Gorway, Walsall WS1 3BD.
- Oxfam Education, 274 Banbury Road, Oxford OX2 7DZ.
- Scottish Natural Heritage, 12 Hope Terrace, Edinburgh EH9 2AS.
- Shell Better Britain Campaign, Red House, Hill Lane, Great Barr, Birmingham B43 6LZ.

Possible sources of sponsorship for grounds improvement

- Groundwork Trust, 85/87 Cornwell Street, Birmingham B3 3BY.
- The Tidy Britain Group, The Pier, Wigan, Lancashire WN3 4EX.
- The Tree Council, 71 Newcomen Street, London SE1 1YT.
- Watch Trust for Environmental Education, The Green, Witham Park, Lincoln LN5 7JR.
- The Wildlife Trusts, Central Office, 47-51 Great Suffolk Street, London SE1 0BS.
- WWF UK, Panda House, Weyside Park, Goldaming, Surrey GU7 1XR.

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