

## FIELDWORK IDEAS

Fieldwork forms an essential part of all AS and A2 specifications. It must form the basis of a piece of coursework. This unit of **Geofile** makes a number of suggestions about what could be included in many pieces of coursework, and then goes on to describe some successful ideas for fieldwork activities that have led to pieces of coursework scoring high marks.

### Choosing the topic

For many students, their fieldwork topic will be chosen in close consultation with teachers. The teachers may take the whole class to a particular area and then individuals have to select their own study within that area. Other groups will be provided with a file of issues in the local area. Usually this file will consist of cuttings from local newspapers, press releases and handouts from local councils, pressure groups and other organisations and so on. Students can then choose to do a piece of work based on ideas in this file.

However, the best pieces of work can often be those that arise from the particular interests and enthusiasms of the students themselves. But this only usually happens when students have thought carefully about possible topics over an extended period. They even start to build up their own files of possible issues for enquiry, considering possibilities for several months before they finally have to submit their title for approval.

Sometimes the student has a friend or family member who can provide ideas and insight, or even access to specialised sources of secondary data. Such information and insight can be invaluable, so long as the student stays in control of the material and does not allow the other person to dominate. Students must consult with their teachers to make sure that their work is targeted at the mark scheme and meets its primary purpose of scoring well towards the final grade.

Useful topics which have recently been the basis of successful fieldwork include:

- the location, development, catchment areas and impacts of farmers' markets

*Figure 1: Human or physical influences? WW2 tank traps on a Northumbrian beach protect sand dunes from erosion at high tide.*



- the location, development and use of cycle paths, and the possible conflicts between cyclists and motorists, pedestrians, dogs, and so on
- the location of collection points for recycling and the conflicts that these can cause in the neighbourhood
- the development of local authority recycling and reclamation schemes
- the social, economic and environmental effects of National Lottery funded arts and sports facilities
- the causes and consequences of recent flood events
- flood control schemes which have been developed since recent flood events
- new developments in coastal protection and management
- changes in the social, ethnic or age composition of an area as shown by the 2001 census
- the amount of building alteration that has taken place on a housing estate or street of housing in recent years, perhaps influenced by council house sales or by the activities of housing associations
- the spread of subdivided housing in inner suburban areas, perhaps influenced by increased numbers of students or single person households and so on.

### Choosing the title

The title must give a clear indication of what is going to be done in the work. Do not make it too vague or general.

Make sure that it can be clearly linked to a major theme of your geography specification. However local and small-scale the study, you must be able to link it to key geographical ideas. Make sure that your title and your route to enquiry are linked clearly to geographical ideas, and do not drift off to become sociology, or marine engineering, or town planning or any other related subject.

Having made sure that your title is geographical, you should also consider the following points:

- Your title should be reasonably open-ended. A title that begins: 'To what extent...', or 'How much...' allows the writer more scope to develop ideas than does a title that asks: 'Does X happen?', or 'Is Y true?'. The latter titles tend to lead to 'Yes' or 'No' answers, whereas the former allow open-ended discussion and development of ideas.
- It is easier to deal with something that is there already, rather than something that might be there in the future. If your title is entirely linked to what might happen, then your work can easily become vague and superficial.
- However, a clearly developed plan can be seen as something that exists. People may well have strong opinions about a plan for a new road or for a coastal protection scheme. You may be able to test what will happen if the plan is carried out.
- Make sure that your title and route

to enquiry let you collect data which will allow you to see spatial patterns and to make comparisons between different sets of data. There is little point in dealing with a major issue if your data are not suitable for geographical presentation and analysis. Few marks will be gained for data that are, in the end, mainly descriptive.

## Collecting data

There are many sources which provide information and ideas about how to collect data, including:

- Skinner et al., *A-Z Geography Coursework Handbook*, Hodder & Stoughton.
- Sue Warn, *Fieldwork Investigations*, Hodder Paperback.
- Gill Miller, *Fieldwork Ideas in Action*, Hodder & Stoughton.

One much neglected aspect of data collection is the pre-test. This involves trying out a data collection technique before the main collection process is started. This has two main benefits for A and AS geography students:

1. It should ensure that the data collection process runs smoothly and that the data collected is as useful and accurate as possible.
2. It should allow students to gain useful credit for showing understanding of the process of data collection.

For instance, if you are filling in a questionnaire, try it out with four or five people before you do your main data collection. It might show that:

- some of your questions are not clear to the respondents
- some questions produce ambiguous or irrelevant answers
- the answers that it produces will not be easy to process
- the questionnaire takes too long and respondents become impatient
- some questions annoy respondents, so they stop cooperating, and so on.

If you are measuring stream speed you may want to float something down the river as a timer. Some people use orange peel, some use rolled up aluminium foil, others use dog biscuits, and I am sure there are many other types of float. So perhaps you could try several different types and see what are the strengths and weaknesses of each and which works best.

If you are doing an environmental assessment, try it out on an area near your home before you go out and spend

Figure 2: Effective management? An artificially surfaced footpath has not prevented trampling and erosion nearby



precious time completing it in the field. Again you might find:

- some questions cannot be answered
- if you are using a scale to measure your responses you may need more precise guidance on what the different stages on the scale mean
- some questions overlap and can be discarded, and so on.

When you have carried out such a pre-test it is very important that you write up your results and explain why and how you refined your original data collection technique. In fact teachers in many centres urge their students to complete a table showing the strengths and weaknesses of all the techniques that they use for the collection, presentation and analysis of their data.

It was suggested above that students should collect data which will allow them to make comparisons between sets of information and/or to show spatial patterns in their study area. Useful techniques that can be used in questionnaires include:

- Asking 'How much do you know about....' and 'To what extent do you approve of....'. This allows clear analysis of the extent to which knowledge of a development eases people's concerns. It also allows students to suggest whether publicity and information about the development has been adequate.
- Following from the above, asking for answers on a sliding scale rather than asking for 'Yes/No' answers. The sliding scale allows more scope for interpretation.
- Asking 'How far do you live from a development....' and then 'How much do you approve/disapprove of the development....'. The two sets of data can then be mapped and

compared in a variety of ways. This naturally leads on to good, geographic analysis of patterns.

- Asking people for their postcodes. This is not as intrusive as asking people where they live, and it provides a set of data that is very easy to map. Dot maps, desire line or sphere of influence maps and so on can be drawn and, again, analysed in a very geographical way.

Enquiries in physical geography can be assisted by the large variety of simple and fairly inexpensive pieces of data collection apparatus that is now available. These include:

- noise meters – useful for monitoring how traffic noise decreases with distance from a road, etc.
- digital electronic thermometers – which can be used to measure temperature change around a building, or on a slope
- anemometers – which can be used to show how wind speed changes across a series of sand dunes
- flow meters – which can replace or supplement the orange peel and dog biscuits referred to above.

## Examples of enquiries

The three projects presented here are based on local issues in the North East of England, but their relevance to larger themes in geography makes them suited to AS/A2 study. Before each investigation begins it is vital to decide which methods will be employed to get the data needed, and then which techniques will be used to analyse that data. By linking the data/analysis to the key questions, the conclusions derived are more likely to

## Project 1: Data collection, analysis and outcomes

<b>Coastal Defences Survey</b>			
<b>Key Qu.</b>	<b>TECHNIQUE – PRIMARY</b>	<b>ANALYSIS</b>	<b>POSSIBLE OUTCOMES</b>
1	Land use survey	Land use map	Position of defences related to land use
1	Photos & sketches	Annotation – comment on visual impact of defences	Assess problems of sediment build up and removal
2	Questionnaire- residents/visitors	Opinion vs. distance from sea wall &/or frequency of visit	Resident vs. visitor perception of effectiveness
1,2	Interviews – council/businesses	Reasons for/cost of developments	Current management vs. previous and future plans
2,3	Beach transects (3 across bay). Profiles (shore to wall/cliff) & sediment calibre/type in exposed, defended and undefended sections	Beach profiles & 3 profile overlays to calculate volume change. Spearman's Rank – beach angle vs. distance from shore. Located compound bar/pie graphs of sediment calibre above profiles.	Sediment build-up behind breakwater, sand removal and scouring beneath sea wall. Angle of beach and sediment calibre change with distance from shore.
2,3	Wave measurement (calm and stormy day)	Timing of breakers, angle of incidence/ direction of prevailing winds	Comparing angle of wave crests with sediment build up
2,3	Longshore drift (at 3 locations – painted pebbles)	Graph of pebble movement over time	Comparing pebble movement with sediment build up
<b>SECONDARY</b>			
1	Maps –detailed old & new Local library archive & www.ordsvy.gov.uk www.multimap.com	Overlay of old and new maps to indicate erosion rates	Newer defences are a response to long standing erosion problem
1	Aerial photos - Multimap.com	Annotation of defence location and sediment distribution	Defences work in conjunction, the most endangered areas have greatest protection
1,2,3	County Structure Plan	Council policy compared to reality	Defences are an ongoing cost and sustainable solutions are increasingly preferred

## Project 2: Data collection, analysis and outcomes

<b>Derwent Way (DN) Cycle Path Survey</b>			
<b>Key Qu.</b>	<b>TECHNIQUE – PRIMARY</b>	<b>ANALYSIS</b>	<b>POSSIBLE OUTCOMES</b>
1	Land use survey	Land use map	Position of DW related to other land uses-link to access.
1	Photos & sketches	Annotation – comment on problems.	Highlight erosion, ruts, vegetation trampling
2,3	Questionnaire- Cyclists, Walkers	Opinion vs. distance from DW &/or frequency of use. Suggestions for better management. Sphere of influence map.	Resident vs. visitor perception of usage. Different patterns of usage by various groups.
1,2	Interviews – council (Highways Dept)	Reasons for/cost of developments	Current management vs. previous and future plans
2,3	Transects across eroded sections -	Cross sectional areas of eroded path – calculate volume of lost material	Cycles initiate ruts on softer verges and steeper sections which surface wash exacerbates
2,3	Vegetation transect, Quadrats	Calculations of % plant cover, species abundance diagrams	Comparing %vegetation and species abundance of eroded and control area.
2,3	Cycle & Pedestrian counts (Busy & quiet)	Flow charts – overlay busy and quiet flows	Comparing volume of cycle traffic at key points linked to erosion
<b>SECONDARY</b>			
1	Maps – detailed old & current. Local library archive & www.ordsvy.gov.uk	Overlay of facilities/ information signs, access points. Land use map	Is erosion worst at busy access points, need for more information evident?
1,2,3	Urban Structure Plan www.gateshead.gov.uk/leisserv/derwent.htm www.sustrans.org.uk	Council policy and aims of Sustrans compared to reality.	Derive new management suggestions from existing problems.

Project 3: Data collection, analysis and outcomes

Farmers' Market Survey			
Key Qu.	TECHNIQUE – PRIMARY	ANALYSIS	POSSIBLE OUTCOMES
1	Land use survey	Land use map – car park locations, shop functions	Position of market related to other land uses- link to access
1	Photos & sketches	Annotation – comment on problems/ visual impact	Does market detract from appearance of area?
2,3	Questionnaire- Shoppers Stall holders Existing businesses	Opinion vs. distance from FM &/or frequency of use. Suggestions for better management. Sphere of influence map.	Business vs. visitor perception of usage. Different patterns of usage by various groups using.
1,2	Perception study – shoppers elsewhere in town have to locate FM site on a base map	Plot location points on master copy & colour code (locals vs. visitors etc)	Is FM properly promoted/managed?
2,3	Litter survey (during & after)	Litter isoline map Chi <sup>2</sup> litter distribution	Litter levels affected by market. How effective are clean up procedures.
2,3	Parking & occupancy (Market day & non market day)	Proportional located pie charts	Comparing % occupancy on a market/non-market day. Is provision adequate?
2,3	Traffic & Pedestrian counts (Market day & non market day)	Flow charts – overlay market and non-market day flows	If volume of additional visitors is detectable, are provisions adequate?
2,3	Noise survey	Noise isoline map	Noise levels affected by market
SECONDARY			
1	Base maps & plans, Local archive	Extent of market and access points	Comment on how adequate access to market is
1,2,3	Press trawl Guardian unlimited etc <a href="http://www.nfu.co.uk/info/farmshop.asp">www.nfu.co.uk/info/farmshop.asp</a>	Venn diagram comparison of characteristics of other farmers' markets with Newcastle's market	Suggest improvements based on examples of other markets

address the initial hypothesis. Any ideas for improved management can be presented as an alternative plan that the public can compare with the current scheme.

**Project 1**

**How do coastal defences affect sediment distribution at Newbiggin Bay, Northumberland?**

Newbiggin Bay lies between two sandstone headlands and has a range of sea defences including sea walls, rip-rap and a breakwater. This title gives the investigator scope to compare beach topography on a protected coast with an unprotected section or a coastal model. It avoids a simplistic 'closed question' approach. The area under analysis is small enough to be manageable. It is relatively easy to relate to wider issues, such as the effectiveness of coastal defences. As around 10% of British coastline is already defended and sea walls can cost over £2 million/km, the relevance of the project is easily demonstrated.

**Key Questions**

1. Why did Newbiggin need coastal defences?

2. What has been the impact of the defences on beach sediment?
3. How could the defences be better managed?

**Project 2**

**What is the impact of increasing cycle use on the Derwent Valley cycle way (Blaydon section)?**

This section of the Derwent Way (a former mineral railway) leads southwards from near Blaydon in Tyne & Wear towards Consett, County Durham and is part of the C2C cycle path. This investigation limits itself to a 2 to 3 mile stretch that is used a great deal by walkers, cyclists and some horse riders. It is topical as Sustrans are actively extending the network of cycleways and the government's transport policy suggests more people should cycle whenever possible for reasons of improved health and reduced traffic congestion.

**Key Questions**

1. Where is the Derwent Way and why was it created?
2. What has been the impact of the cyclists on the Derwent Way?

3. How could the route be better managed?

**Project 3**

**What is the impact of the Farmers' Market in Newcastle upon Tyne?**

Farmers' markets are a growing phenomenon bringing farm produce directly to urban areas. They reflect recent changes in retailing but also have a potential impact on the quality of the urban environment.

**Key Questions**

1. Where is the Newcastle farmers' market located and when is it held?
2. What are the impacts of the market on the local environment?
3. Is the current location appropriate or would another site be more suitable?