

# Learning outside the classroom: what can be done in lesson time?

Zoe Wood and Jennifer Walker show how they are trying to enable all year groups to experience fieldwork. They have been developing activities in which data can be collected out of school during lesson time. This short-burst fieldwork is enhanced by good preparation and worthwhile follow-up work in the classroom.

Fieldwork is an integral part of the geography curriculum in schools. Its position is being eroded, however, by increasingly constrained curriculum time, growing concerns regarding health and safety issues and limited funding support for teachers and students. In reaction to such issues our department has been developing fieldwork opportunities that can be conducted within lesson time. We are part of a semi-rural comprehensive school that teaches geography in mixed ability groups up to key stage 4. We have found that developing lesson-based fieldwork has facilitated greater awareness of the local area and improved fieldwork and data analysis

techniques, without disrupting the whole school curriculum and with minimal financial outlay. A further advantage to conducting fieldwork in lesson time is that the expectations for students can be emphasised in preceding lessons and if these expectations were not met it is easy for students to be excluded from the activity.

## Practical points to consider

### Staffing

If groups are going out of the school grounds then two members of staff are needed per group. This has implications for cover so wherever possible we use staff from within the department. This relies on teachers being willing to give up their non-contact time but as a department we feel the opportunities given to the students are worth it.

### Health and safety

With all trips out of the classroom health and safety need consideration. For all trips out of the school grounds permission slips and medical forms are required from parents and risk assessments are filled in. All risk assessments are discussed with the students before the fieldwork. As students get older we give them the opportunity to develop their own risk assessments as this will be a skill many of them will need in the world of work.

This article outlines a number of examples of key stage 3 and 4 fieldwork lessons that develop skills such as cartographic techniques and data handling using ICT as well as the practical application of geographical theories and models. The examples used the school grounds and local area.

Example 1: Developing map skills  
Age group: Year 7

## Background to lesson

Students have covered various map skills including map symbols, distance, direction, contours, four and six figure grid references.

## Preparation before the fieldwork

Students studied a laminated map of the local area and using grid references located the start of the walk.

## What we did for the fieldwork

At the start of the lesson students completed a risk assessment and discussed the measures that needed to be taken to limit risk whilst on the walk. Clipboards were prepared with laminated maps, photographs and worksheets. Students worked in pairs to complete activities although the whole class completed the route together, and questions were discussed in plenary sessions during and after the walk. The activities included answering questions on the names of streets, types of woodland, and attractions seen along the route, as well as locating photographs, noting distance and grid reference (Figure 1). Field sketches were drawn and students calculated the overall distance covered on the walk once they had returned to the classroom.

## What we did after the fieldwork

Students applied their understanding of physical and human geography to produce a colour-coded spider diagram of the various features they had seen on



# CAN YOU SHOW US YOUR MAP SKILLS?

Names:

### Photo task

Remember to look out for the scenes shown in the four photos. When you think you see them write down the grid reference and direction below:

Photo	Grid reference	Direction
1		
2		
3		
4		

During the walk you will need to use your map skills and observational skills to answer these questions. We will stop at each point to allow you to answer the questions.

- Which direction do we walk once we leave the school?  
\_\_\_\_\_
- What is the name of the residential road we walk along in a northerly direction?  
\_\_\_\_\_
- What is the name of the school on our right?  
\_\_\_\_\_
- What symbol is used on your map to show this?
- Once we are on the footpath, how many houses do we pass on our left?  
\_\_\_\_\_
- Are there the same number marked on your map?  
\_\_\_\_\_
- What sort of trees are there in the woods on our right – deciduous, coniferous or a mixture?  
\_\_\_\_\_
- Draw the symbol for the trees in this space.
- At the junction of the footpaths, which direction do we walk in?  
\_\_\_\_\_
- Using your map, estimate how far we will walk between now and Bradley Farm.  
\_\_\_\_\_

- If we look northeast from Bradley Farm what tourist attraction can we see?  
\_\_\_\_\_
- What is the grid reference for this tourist attraction?  
\_\_\_\_\_
- Draw the symbol for it here.
- We will now be walking east along the bridleway. Will we be going up or downhill?
- How do you know from your map?  
\_\_\_\_\_
- From the top of the hill how many kms is it back to school?  
\_\_\_\_\_
- If we walk at 4km an hour how long should it take us? Make sure you time us to see if we walk quick enough.  
\_\_\_\_\_
- What time did we get back to school? Were we walking at 4km per hour?  
\_\_\_\_\_
- How far have we walked in total?  
\_\_\_\_\_
- Which map skills did you find the easiest to use?  
\_\_\_\_\_

Figure 1: Students completed the sheets to show how their map skills were used during the fieldwork.

the walk. Students then completed a tourist leaflet on the features of the local area, designing their own route using the OS map provided.

**Example 2: Developing a Public Information System for the local town**

Age group: Year 8

### Background to lesson

ICT is taught across a range of subjects within the school. This links specifically to ICT unit 8.1 (DfES, 2002).

### Preparation before the fieldwork

As a class the different uses of Public Information Systems were discussed. In groups students considered what a system would include if used in the local town. Students then researched the historical background of the local area as this would form one of the sections to their Public Information System. Skills such as questionnaire design were also covered as students made their own questionnaire using Excel.

### What we did for the fieldwork

At the start of the lesson students completed a risk assessment and discussed the measures that needed to be taken to limit risk while in the urban environment. Clip boards were prepared before the lesson with data collection sheets and maps of the different sites in the town. Students were divided in to groups of four and given a site at which to collect information on the land use, environmental quality, pedestrian and traffic counts. Students interviewed members of the public on the quality of facilities in the central business district. They also scored each site on the amenities provided for different sectors of the population.

### What we did after the fieldwork

Students collated the information from each of the visited sites. They then produced a Public Information System, using PowerPoint, which included information on the CBD of the town. This included presenting slides on the land use of Dorking based upon GOAD maps, annotated graphs for environmental quality surveys and questionnaire results as well as a section on analysis which outlined how the urban area catered for local people. An example is available to download at [www.geography.org.uk/journals](http://www.geography.org.uk/journals).

**Example 3: Evaluating the quality of the environment of the school site**

Age group: Year 8



### Background to the lesson

This formed part of Geography Awareness Week last year and also linked with the school's aim of becoming an Ecoschool for which an environmental audit must be undertaken.

### Preparation before the fieldwork

Students were introduced to the concept of sustainability and looked into ways of making a more sustainable school. They then identified three questions they would like to investigate in the following lesson, e.g. do we leave lights on around the school? Do we recycle? Do we turn computers off when they are not in use?

### What we did for the fieldwork

Following a discussion on data collection techniques, the students planned how they were going to collect their data. Most opted for a tally count in the different buildings of the school. Once they had drawn up their data collection tables the students went out around the school armed with a clipboard and digital camera to collect data. The teaching staff had been warned that students would be wandering around the school site!

### What we did after the fieldwork

In their groups the students prepared a presentation using annotated photos and graphs which showed their findings and made suggestions for solutions to the problems they had identified. The presentations, many of which included a PowerPoint as well, were then recorded and the best presentation from each class submitted to the senior management team. An overall winner was then decided and prizes

given in assembly. This audit has now led to an Eco-school committee being established to look into implementing some of the solutions.

**Example 4: Investigating weathering around the school site**

Age group: Year 11

### Background

As part of the 'Physical processes and landforms' unit (OCR Bristol Project) students are required to learn about the three types of weathering – mechanical, chemical and biological. In previous lessons students had learnt a range of keywords and this fieldwork was designed to help trigger these new terms in an exam situation.

### Preparation before the fieldwork

Before the lesson the teacher identified three examples of weathering around the school.

### What we did for the fieldwork

Students were reminded of the skill of field sketching and discussed the rules to drawing a good field sketch. Students were then taken to each of the sites and encouraged to draw and annotate a field sketch describing and explaining what they could see. They were then given 15 minutes to find another example of weathering around the school which they had to sketch and annotate without teacher input.

### What we did after the fieldwork

On returning to the classroom, students marked each other's field sketches giving marks for quality and geographical content.

Example 5: Calculating the sphere of influence of Dorking

Age group: Year 11

## Background

This fieldwork was designed to allow students to create their own investigation following on from their coursework experiences and gain a better understanding of the factors influencing a town's sphere of influence as part of the 'Population and Settlement' topic.

## Preparation before the fieldtrip

Students designed a data collection table in small groups. Students were encouraged to think of different ways of working out the sphere of influence, for example asking people and checking car tax discs, and different methods of sampling. Students had to write up their proposed investigation and submit it to the teacher.

## What we did for the fieldwork

The students were taken into the local town (a 15 minute walk) and told to meet back at a given point 15 minutes before the end of the lesson. Rules were

established about expectations and behaviour. In their groups students carried out their investigations.

## What we did after the fieldwork

Students used their results to construct a sphere of influence for Dorking by presenting their results as proportional arrows on a base map and then drawing the boundary of the sphere of influence. They then analysed the map to explain the shape of their results. The more able students then went on to study Reilly's Break Point theory (see Waugh, 1995; Bowen, 2000). They produced an overlay of the theoretical sphere of influence of Dorking and compared it to their results.

## Going further

We are constantly looking for more opportunities to take our students out of the classroom. Three of the ideas under consideration at the moment are infiltration experiments using drain pipes with year 7s, a visit to a possible site for a wind farm with year 9s and a trip to a local farm to evaluate current Environmental Stewardship schemes with year 10s.

We are also purchasing some GIS software and are looking at integrating this into fieldwork so that students can present their results electronically and by using overlays draw comparisons between data more easily. This software could be easily used within the urban geography fieldwork both at year 11 with the sphere of influence and at year 8 with Public Information Systems. ■

## References

- Bowen, A. and Pallister, J. (2000) *AS Level Geography*, Oxford: Heinemann Education.
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