



Pearson  
Edexcel

# A Guide to Conducting High Quality Fieldwork at GCSE



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In association with

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# Introduction

Fieldwork is an essential component of the GCSE Geography specifications. By sharing approaches this guide aims to unpick what high quality fieldwork looks like at GCSE. These approaches will be exemplified through resources, with student work and feedback from students, teachers and Field Studies Council (FSC) staff showcasing the impact of high quality fieldwork on learners. This guide is split into three sections, each focussing on approaches to promote high-quality fieldwork in different stages of the enquiry process:

**Stage 1** – Pre-fieldwork planning.

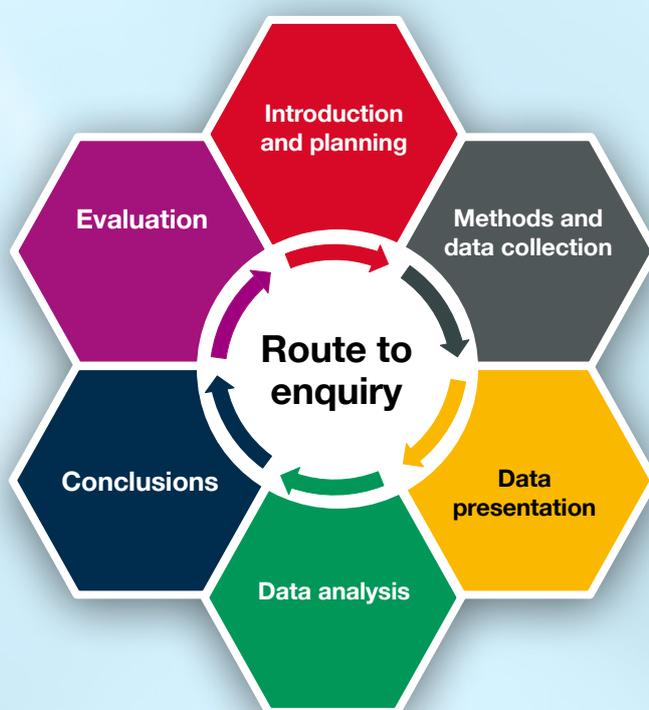
**Stage 2** – Primary fieldwork skills.

**Stage 3** – Presentation, analysis, conclusions and evaluation skills.

## The route to enquiry

Fieldwork should not be reduced just to the data collection process in the field, but rather high quality fieldwork considers all stages of the enquiry process. Teachers and students should be engaged with all stages of the enquiry process for each of their required fieldwork tasks. The FSC's route to enquiry (**Figure 1**) showcases the importance of each individual stage of the enquiry process in informing future enquiry stages and the entire enquiry process.

Students should be able to confidently recognise each stage of the enquiry process, and be able to explain how they link together for their two geographical enquiries at GCSE.



**Figure 1** – FSC's route to enquiry,  
FSC Geographical Investigations, FSC, 2016

[www.geography-fieldwork.org](http://www.geography-fieldwork.org)

“ Before the fieldwork, many of our students had only seen the upland area of a river in a textbook. Their geographical understanding of river processes and changes were limited to teacher explanations. Essentially the fieldwork brought their classroom learning to life. ”

**Teacher, Bluecoat Beechdale**

This engagement with all stages of the enquiry process is important in how fieldwork is assessed at GCSE. With students being assessed on at least two of the six enquiry stages in **Figure 2**, across both their investigations.

Stage in the enquiry process	Description
1	Understanding of the kinds of question capable of being investigated through fieldwork and an understanding of the geographical enquiry processes appropriate to investigate them.
2	Understanding of the range of techniques and methods used in fieldwork, including observation and different kinds of measurement.
3	Processing and presenting fieldwork data in various ways, including maps, GIS, graphs and diagrams (hand-drawn and computer-generated).
4	Analysing and explaining data collected in the field, using knowledge of relevant geographical case studies and theories.
5	Drawing evidenced conclusions and summaries from fieldwork transcripts and data.
6	Reflecting critically on fieldwork data, methods used, conclusions drawn and knowledge gained.

**Figure 2** – Stages of Enquiry, Pearson Edexcel GCSE (9-1) Geography A Specification, p. 31 and Geography B Specification, p. 29

## Stage 1 - Pre-fieldwork planning

Often pre-fieldwork planning is seen as a teacher task which is limited to logistics. Focussing solely on bookings, consent forms and arranging lesson cover. Whilst these pre-fieldwork tasks are essential, there are other considerations during pre-fieldwork planning to ensure a high-quality fieldwork experience for students.

### 1.1 Don't approach fieldwork as a bolt-on

Fieldwork should not be viewed as a tick-box exercise, but rather fieldwork should be seen as a way of supporting geographical learning of individual students. Pre-fieldwork planning is crucial to ensure these opportunities to move fieldwork beyond the enquiry question and the data collection methods are not missed. Fieldwork which is embedded and well-planned provides opportunities for students to see and experience the geography of the classroom.

One way to achieve this, is to plan tasks and activities that take place in the field which go beyond the enquiry itself. In **Figure 3**, teachers have included the activity of a fieldsketch and annotated photographs. This provides an opportunity for students to apply their geographical understanding to a real-world example. Whilst students are engaged in this landscape interpretation, teachers can connect individually with their learners, addressing misconceptions and delve deeper into challenging topic content.

Sediment is more varied in size here in comparison to Saundersfoot. This is due to the beach nourishment being used as a soft engineering technique in Amroth.



**Figure 3** – Annotated photograph, Amroth, Field Studies Council, November 2019

- 1 Groyne shows damage from previous storm events and disrepair.
- 2 Longshore Drift SW to NE
- 3 Build-up of sediment on east-side of groyne showing direction of longshore drift (south-west to north-east). Build-up of storm beach beneath seawall.
- 4 Stepped seawall which protects the seawall from undercutting, and potential failure.
- 5 Recurved seawall to reflect wave energy back out to sea. Section of this seawall failed in 2014 during storm events.

This annotated photograph by a student is used to support learning on coastal processes. By completing this activity the student has demonstrated understanding, been able to address a misconception and had the opportunity to extend their own learning through teacher led questioning.

<b>Demonstrated understanding</b>	How a recurve seawall operates as an effective coastal defence <i>“bounce wave back to dissipate energy of next wave.”</i>
<b>Address a misconception</b>	Rose diagrams showcasing wind direction were used to address a misconception in understanding of the direction of longshore drift operating in this area.
<b>Extend learning via questioning</b>	Why are different wave types more prevalent in different seasons and how does abrasion and attrition impact this coastline?

## 1.2 Students as decision makers

Decision making is an integral skill within this planning stage. Teachers should not be alone in making decisions about fieldwork. Whilst unlikely that at GCSE teachers will pass on control of “Where to go?” and “What to investigate”, at A level, students will need to justify these types of decisions themselves and so teachers should be including students at GCSE in the decision-making process to begin to develop these skills.

There are meaningful decisions that GCSE students could and should be empowered to make about their fieldwork in the planning stage of enquiry.

Providing opportunities for students to engage with a fieldwork location prior to the data collection, can be a useful way of empowering students to understand the decisions that have been made about a fieldwork enquiry. OS maps, photographs, videos and secondary data can all be used to aid student’s understanding of why a fieldwork location has been chosen, beyond the often common response “...our teacher took us there.”

The process of engaging students as decision makers is useful for the familiar fieldwork questions from their own fieldwork enquiries but is also useful in addressing Assessment Objective 4 (AO4).

AO4: Select, adapt and use a variety of skills and techniques to investigation questions and issues and communicate findings (25% of GCSE).

These decision making skills are crucial in enabling students to tackle the following style of exam questions:

- *Assess the suitability of the student’s choice of sites to investigate the relationship between coastal management and coastal processes. (8 marks, SAMs Edexcel B)*
- *Assess the suitability of the student’s choice of sites to investigate the impact of changing river discharge and drainage basin characteristics on flood risk. (8 marks, SAMs Edexcel B)*
- *Identify two pieces of evidence from grid squares 1632 and 1633 to show that this area is Bradford’s Central Business District (CBD). (2 marks, 2018 Edexcel A)*

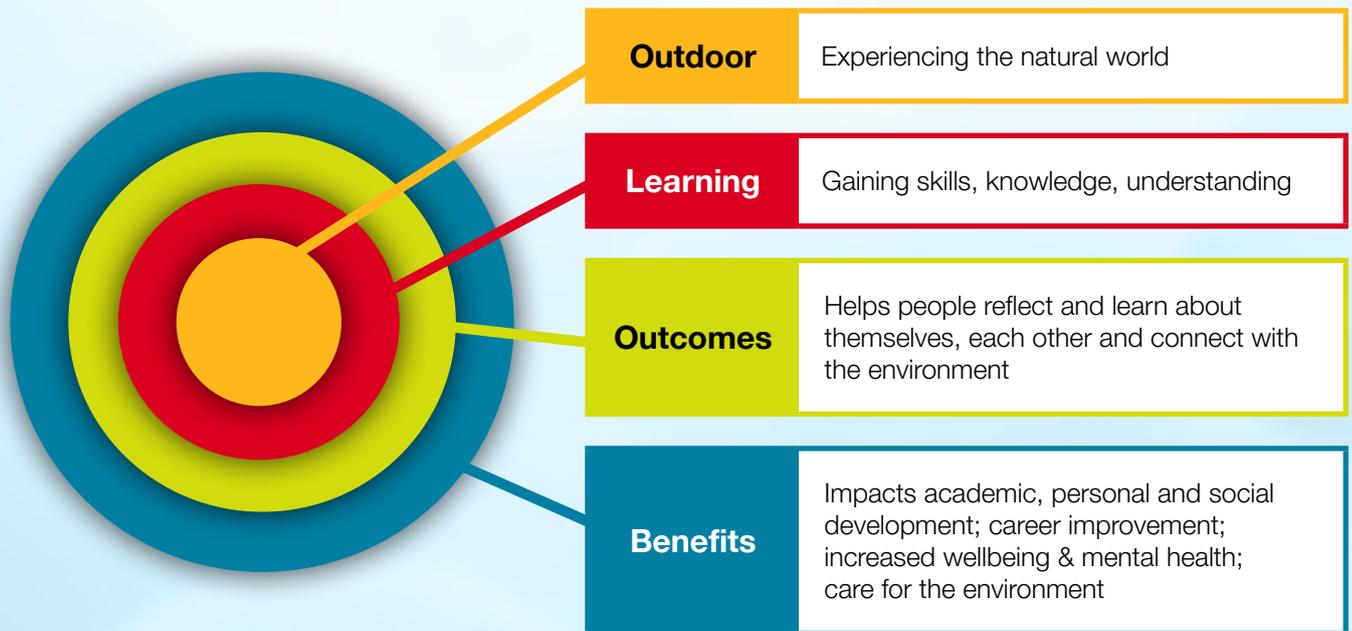
## 1.3 KS3 is important

Fieldwork provides opportunities for a range of outcomes for young people:

- Self-development.
- Relational development.
- Development of transferable skills.
- Broadens horizons.
- Managing risk.

Whilst these benefits of fieldwork and outdoor learning are well-documented. Fieldwork does present challenges to students. See **Figure 4**.





**Figure 4** – IOL Model of Outdoor Learning Impact, Institute of Outdoor Learning, 2019  
[www.outdoor-learning.org](http://www.outdoor-learning.org)

Fieldwork requires students to draw upon and demonstrate:

- Effective teamwork.
- Effective communication skills.
- Problem solving ability.
- Coping in new and different environments.

These can be challenging for 14-16 year olds and require significant support and development. Therefore, it is important to plan meaningful KS3 fieldwork experiences to ensure high quality fieldwork at GCSE.

GCSE fieldwork should not be a student's first experience of fieldwork. At KS3 short enquiry-based fieldwork tasks, perhaps that occur in or around the school-grounds, provide a useful opportunity to overcome the challenges and obstacles present in fieldwork. Students will then have multiple opportunities to develop the required skills in low-stakes environment.

*“ It was brilliant. It was very cold and wet up the mountain but I still enjoyed it. ”*

**KS3 Pupil, Hillside High**

*“ This was a totally new experience. Many of them had not spent a night away from family before and had certainly not been to an upland area. They loved every minute and their behaviour was excellent – not one squabble! ”*

**Teacher, Hillside High**

# Stage 2 - Primary fieldwork skills

## 2.1 Creating memorable moments

Again, just like in the pre-fieldwork planning, not letting logistics dominate is also an important consideration during the data collection stage of the fieldwork enquiry. Memorable moments should be embedded throughout the fieldwork, ensuring that the fieldwork itself is memorable for students. The power of the ‘awe and wonder’ in the field should not be underplayed. Awe and wonder moments broaden horizons, define character, develop relationships and help to create memories to which the fieldwork can be pinned upon.



**Figure 5** – Students from Woodhouse taking a break from Coastal Fieldwork, FSC Juniper Hall

“ *Seeing sheep, walking in the countryside, climbing hills, having picnics, all made this experience memorable for the pupils, more so than the geography!* ”

“ *It was the best week ever, I learnt so much and I have memories that will live in my mind forever.* ”

**Student and Teacher Quotes describing their memorable moments, FSC**

## 2.2 Students as decision makers

Traditionally fieldwork data collection has started with a kit demonstration in the field. This kit demonstration focussed on informing students how they would be using the kit to collect the data for the enquiry.

This traditional approach however, does little to prepare students with the justification and critical reflection skills that are needed for students to tackle the familiar and unfamiliar fieldwork exam questions when it comes to the assessment.

This ownership of the methodology within the fieldwork enquiry is crucial in equipping students with the necessary skills to tackle exam questions.

- *Explain one reason why the method used to measure the velocity of the river was appropriate to the task. (2 marks, Pearson Edexcel (9-1) Geography B, SAMs)*
- *Explain one advantage of a qualitative fieldwork method you used. (2 marks, Pearson Edexcel (9-1) Geography A, SAMs, June 2019)*

A high-quality fieldwork approach would encourage students to act as decision makers in the design and justification of a fieldwork methodology. One of way of achieving this is shown in **Figures 6** and **7**.



**Figure 6** – Alternative river kit demonstration, FSC Flatford Mill

Each fieldwork group is given a bucket containing a variety of fieldwork equipment that can be used for a fieldwork task.

### Edexcel A – Investigation of change in a river channel

- Tape measure
- Meter ruler
- Hydroprop and impellor
- Dog biscuit
- Stopwatch

Using a scaffold like the one shown in **Figure 7**, students are empowered to make decisions and justifications of their methodology.

Use this methodology to help obtain accurate data so you can work out the velocity of a river.

### Cross-sectional area

Methodology- how will you collect data?



What equipment will you use?	
How many measurements will you take?	
Where will you take the measurements? (Think about sampling strategy!)	
How will you make your measurements accurate?	
Justification - why are you doing it like that?	

\* Reminder: Sampling strategy = method of choosing where to take measurements or samples  
Commonly used sampling strategies in physical geography are systematic, stratified and random.

### Could you answer the exam question?

Explain one disadvantage of the sampling strategy you used when investigating views of people on quality of the urban environment.  
Name of sampling strategy...

**Pearson Edexcel Level 1/Level 2 GCSE (9-1) in Geography A, SAMs, Issue 1, November 2015, p. 127.**



**Figure 8** – Students making their own decisions on their rivers methodology, River Conwy, FSC Rhyd-y-creuau



“ Our tutor never told us what we had to do. She asked us what would be best and we tried out lots of different ideas before coming to the best conclusion. For example, we had to decide what sampling to use when we went to the village and what equipment to use in the river. ”

**Student, Bluecoat Beechdale School**

“ The fieldwork challenged students understanding of the enquiry process. Students were encouraged to become critical thinkers, which has had a positive impact on their geography understanding back in the classroom. ”

**Teacher, Bluecoat Beechdale School**



**Figure 9** – Alternative river kit demonstration, FSC Flatford Mill

At Site 2 the water had a faster flow which caused the measuring tape used to measure the river width to float away. This reduced the accuracy of measurements at this site.

As the width at Site 2 was still narrow enough, the use of a meter ruler along the surface of the water was a suitable alternative.

# Stage 3 - Presentation, analysis, conclusions and evaluation skills

## 3.1 Context is key

Often a disconnect is present between data collection and the subsequent presentation, analysis, conclusion and evaluation sections of geographical enquiry. This disconnect can be both spatial and temporal, with students only engaging with the latter stages of geographical enquiry weeks later, back in their classroom. Students should be encouraged to engage critically with their data in the fieldwork location providing the much-needed context to their understanding of the data collected and overall enquiry.

One way of doing this is through scaffolded handouts in the field which encourage the students to critically reflect on their methodology.

Evaluation of methodology	
What went well?	What didn't go well?



**Feeling stuck?**  
Think about what went well or badly in the following areas:

<b>Equipment error</b>	<ul style="list-style-type: none"> <li>• Was it the right equipment for the job?</li> <li>• Were there any errors with the equipment?</li> <li>• Was the way you used the equipment appropriate?</li> </ul>
<b>Sampling error</b>	<ul style="list-style-type: none"> <li>• Did you use the same sampling strategy for each piece of data?</li> <li>• Did you get enough measurements?</li> <li>• What was the spatial spread of data like?</li> </ul>
<b>Human error</b>	<ul style="list-style-type: none"> <li>• Were you able to read the scale accurately?</li> <li>• Did you use the piece of equipment the same each time?</li> </ul>

How could you have improved the method?

**Figure 10** – Scaffold to support students with this decision-making process, FSC Malham Tarn Field Centre

The scaffold in **Figure 10** is used out in the field throughout data collection, helping to ensure evaluation is both meaningful and applied. This is useful to support students to write developed answers to exam questions:

- Explain one disadvantage of the sampling strategy you used when investigating views of people on the quality of the environment. (4 marks Edexcel A, SAMs)
- Explain how you would improve your data collection methods to increase their accuracy. (4 marks Edexcel B, 2019)

Presenting fieldwork data in the field can be a useful starting point for students to begin analysing their data, using information about the sites they can see to help explain the data.

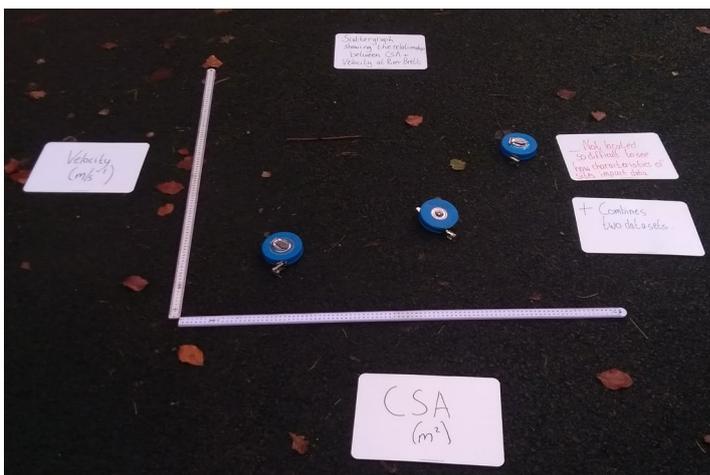


**Figure 11** – Scattergraph in the field, FSC Carding Mill Valley

Students were initially asked to select some data they had collected during fieldwork and a data presentation method to present this data.

Students here have used a scattergraph to present cross-sectional area and velocity data.

See **Figure 11**.



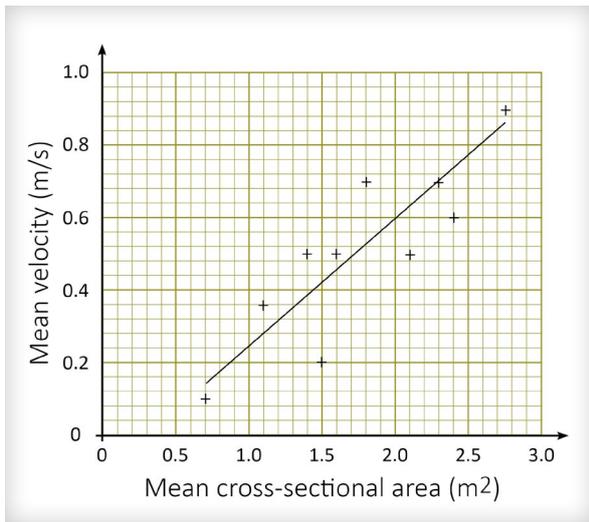
**Figure 12** – Evaluation of a presentation technique in the field, FSC Carding Mill Valley

Students were then asked to reflect on their data presentation method assessing advantages and disadvantages of the technique.

See **Figure 12**.

**Advantages of data presentation:** Line of best fit can be drawn from the 10 fieldwork sites, to show an overall relationship between CSA and Velocity on this river.

**Disadvantages of data presentation:** Shows a relationship between CSA and Velocity but does not show how these river characteristics change downstream on this river. As sites are not geo-located or labelled.



**Figure 13** – Scattergraph of field data

Back in the classroom students have selected to draw a scattergraph on mean data collated from the rest of the class. See **Figure 13**.

Students are more readily able to explain trends in data having begun this process in the field using site specific characteristics to help explain data.

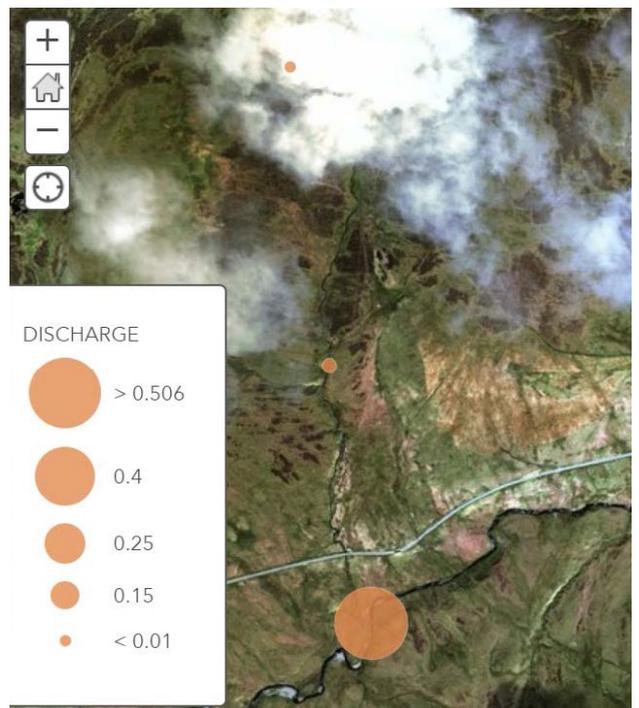


**Figure 14** – Settlement name: Slapton, Devon

Technology can also be used to help reduce this disconnect between data collection and the later stages of the enquiry process. Simple technology such as a Word Cloud app can be used to gather initial thoughts on fieldwork locations. See **Figure 14**.

Geographical Information Systems such as Collector app - ArcGIS can be used by students to present their data in the field. ArcGIS is freely available to schools in the United Kingdom.

Students are asked to reflect on the use of this geolocated proportional symbols as an effective presentation technique. See **Figure 15**.

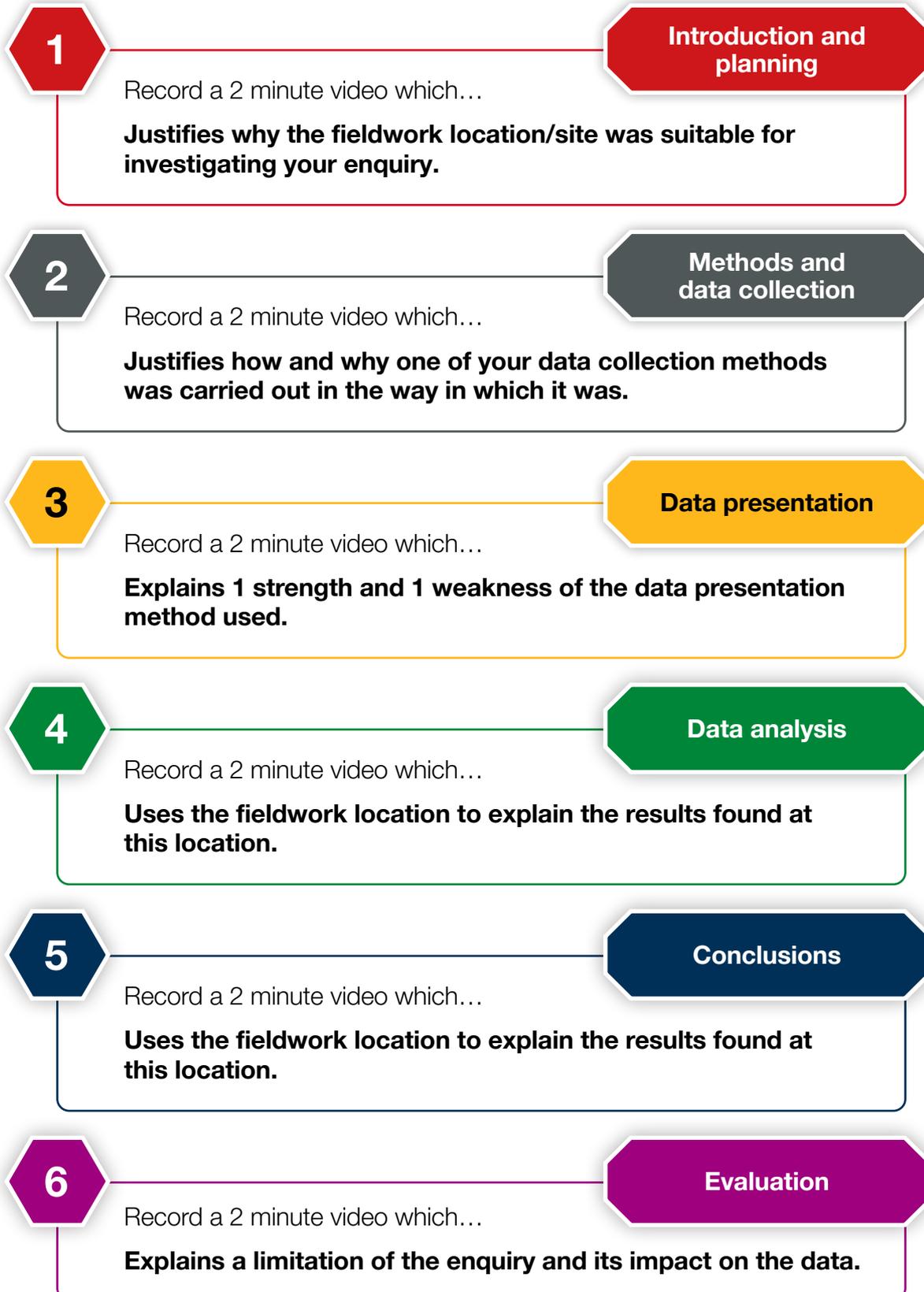


**Figure 15** – Discharge at three sites along the River Conwy, ArcGIS online, ESRI

One way of supporting students in providing context to the latter stages of geographical enquiry, is by asking them to create short videos in the field. Talk Aloud Cards can be used by students to create videos whilst in the field. The videos prove useful when reflecting on the different stages of the geographical enquiry and in revision.

## Talk Aloud Cards

Figure 16 – Talk Aloud cards



“It’s really valuable for the students to begin to evaluate the methods, discuss the site characteristics while at the site. Being able to start to analyse the data and draw conclusions while still in the field, through the use of tablets and software that starts to present there and then is also invaluable to work towards developing deeper student understanding and preparing them for the exam.”

FSC Tutor, Rhyd-y-creau

Fieldwork data can be messy with anomalies and individual site characteristics impacting upon the data. Context is important to support students in drawing conclusions from fieldwork data.

Hexagonal Linkages are one way of supporting students in drawing together lots of fieldwork data and evidence.

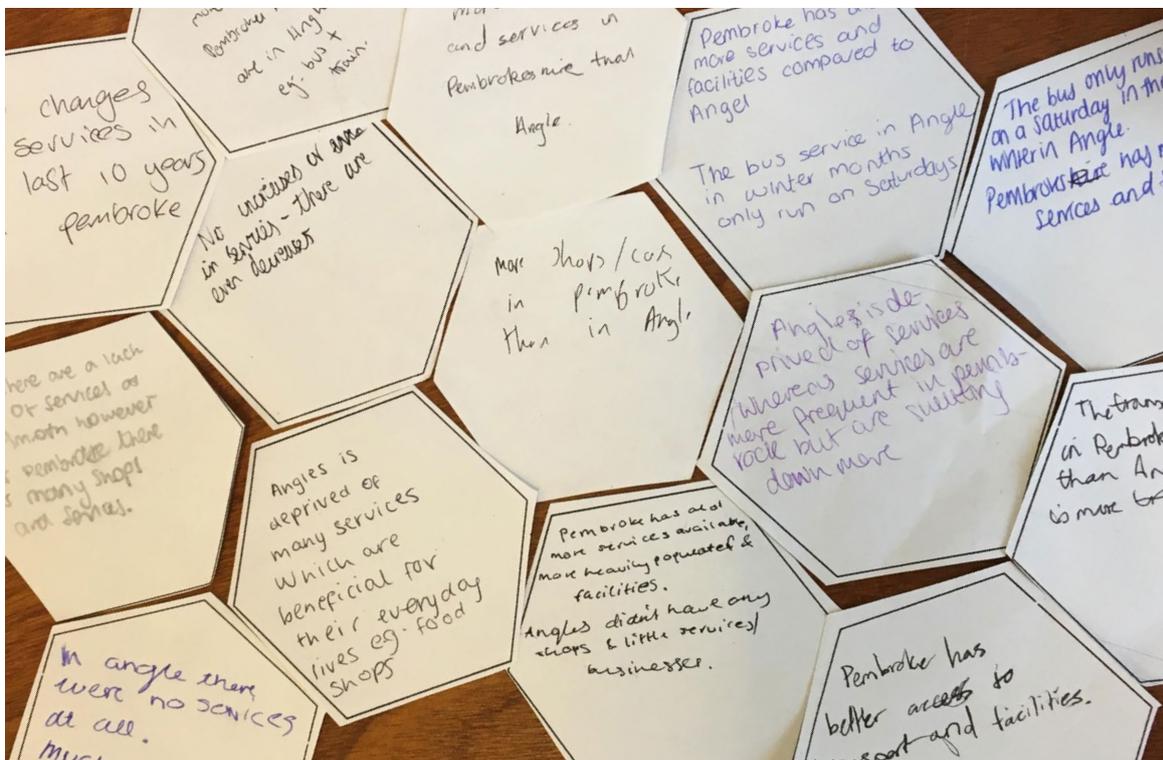


Figure 17 – Hexagonal Linkages, FSC

Students have used Hexagonal Linkages to help support them in drawing conclusions from their rural fieldwork investigation.

In the field students were each given a hexagon and asked to write an evidenced conclusion on it.

Back in the classroom students must take it in turns to place their hexagon down, as they place it down, they must be able to link it to a previous hexagon.

This activity helps students link together individual pieces of evidence and reach overall evidenced based conclusions.

## Hexagonal Linkage Example

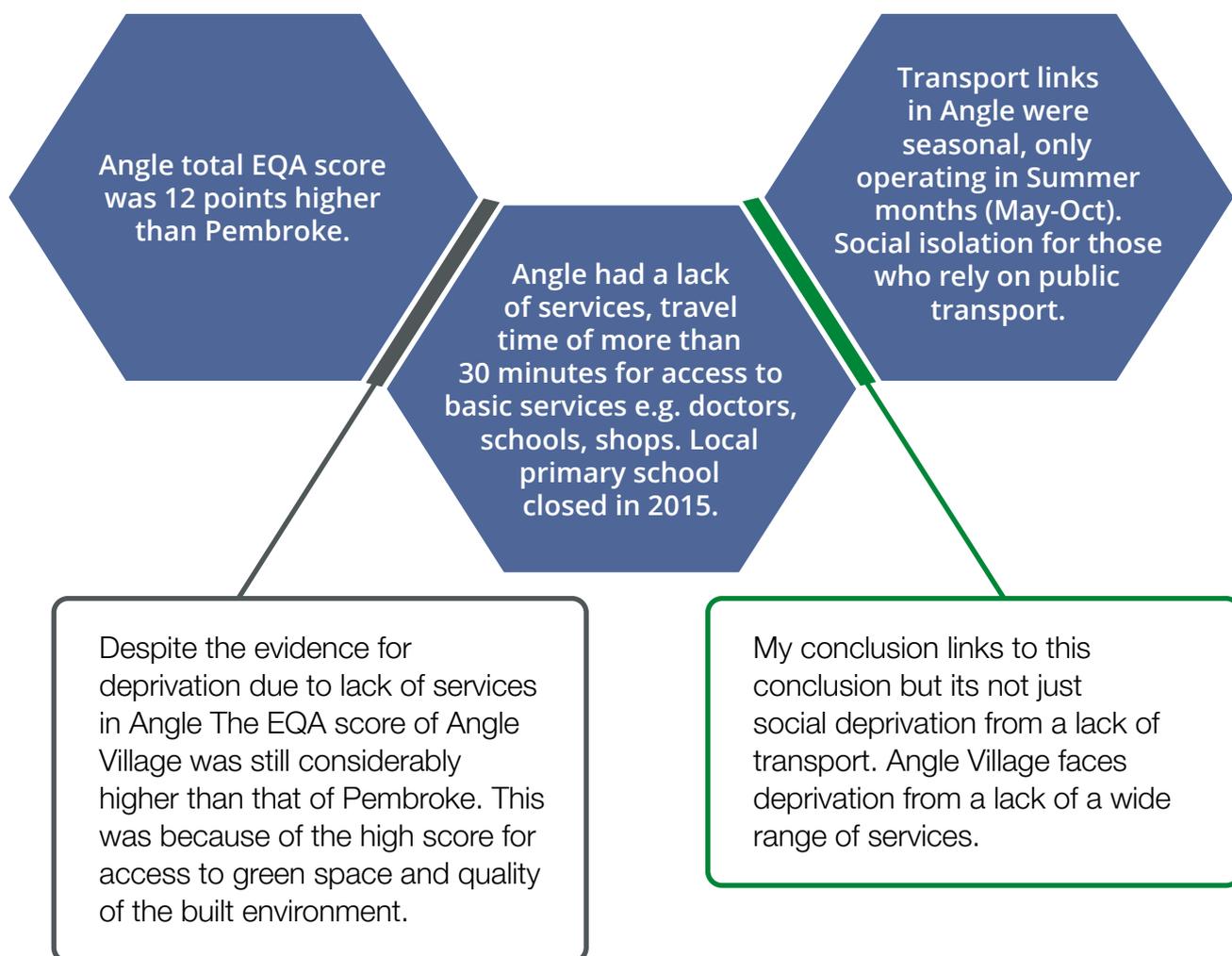
**Task:** Investigating how and why deprivation varies within rural areas in the UK:

**Qualitative data:** Questionnaire

**Quantitative data:** Environmental Quality Assessment (EQA) and Service Tally

**Secondary data:** Census Data (Welsh Index of Multiple Deprivation) and newspaper articles from local newspaper (Western Telegraph)

**Enquiry Question:** Investigating deprivation in Pembroke and Angle Village.



**Figure 18** – Example for Rural Fieldwork Task Edexcel B. Speech bubbles show what students share as they place and join up their statements to others.

# In Summary

High quality fieldwork goes beyond just supporting students to collect data in the field. This guide has provided a range of different approaches and strategies that can be adopted. A useful starting point for teachers can be to reflect on the following:

- **How does the fieldwork support learning?**
- **Where are the opportunities for students to be involved in the planning process?**
- **What does fieldwork progression and skill building look like in my school Years 7-11?**
- **Where can 'awe and wonder' be celebrated in my fieldwork?**
- **What are the ways that students are empowered as decision makers in the fieldwork?**
- **What opportunities exist to provide context to the later stages of fieldwork enquiry?**

## About the author

Janine Maddison has worked for the Field Studies Council (FSC) for the past 6 years. Janine has worked as a field tutor across FSC's 26 learning locations and currently works as an Education Projects Development Officer for the organisation.

FSC is an environmental education charity with a mission to create outstanding opportunities that inspire everyone to engage with and care for the environment. FSC is the leading provider of geography fieldwork, welcoming over 70,000 students on geography courses each year.



*“As part of my role I have the pleasure to support the wider geography community via training, conferences, webinars and publications. I particularly enjoy meeting and working with teachers, Awarding Organisations and Subject Associations to share innovative and best-practice approaches to fieldwork and fieldwork teaching. I recently had the opportunity to follow my passions and embark on a FSC publication which was endorsed by the Geographical Association on Creative Fieldwork.”*

**Janine Maddison**

For more information about conducting fieldwork at GCSE or A level please visit:

**Pearson Edexcel** [quals.pearson.com/fieldwork](https://www.quals.pearson.com/fieldwork)

**Field Studies Council**  
[field-studies-council.org](https://www.field-studies-council.org)