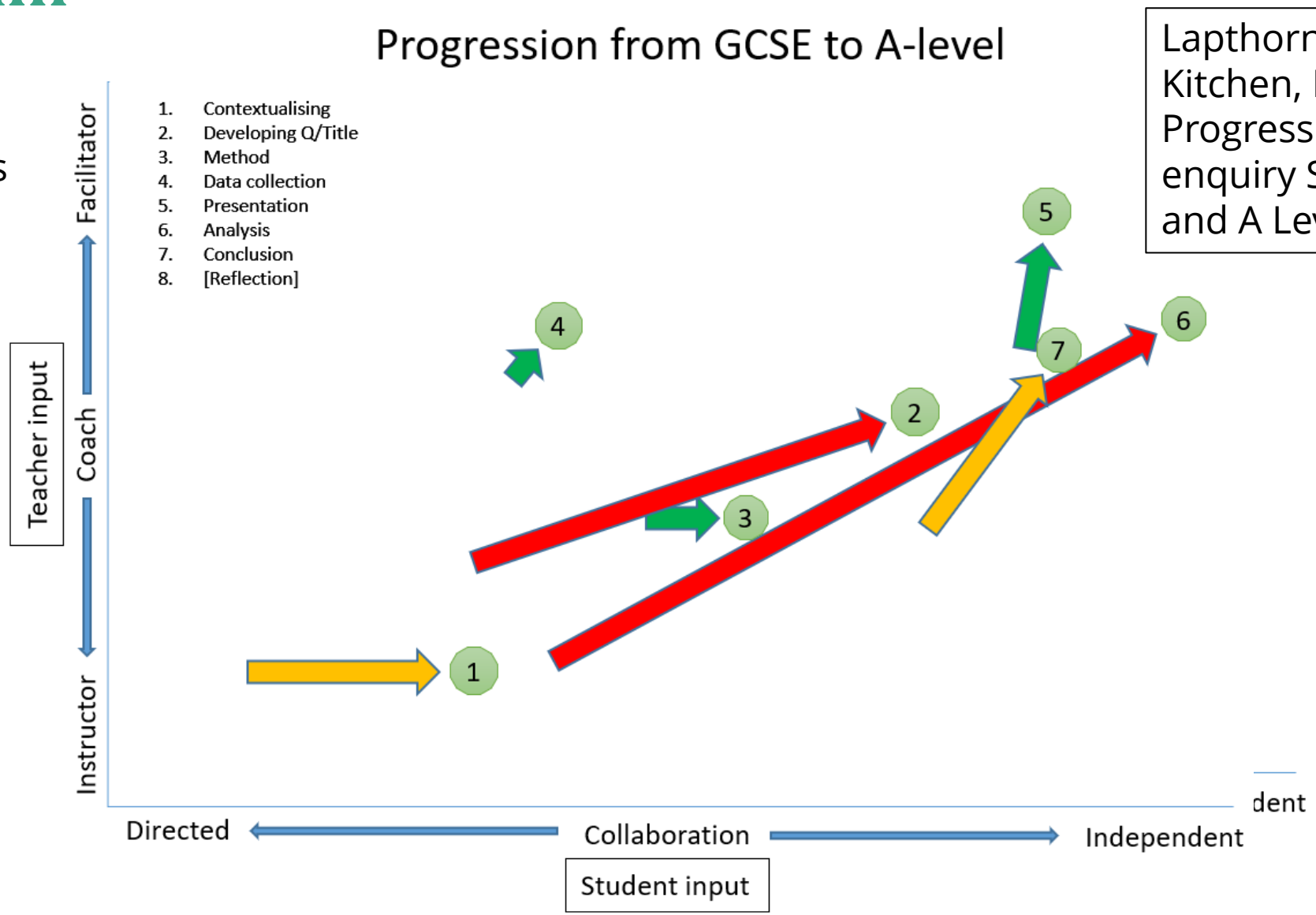
Empowering students to be decision makers at GCSE and beyond



Robyn Landy
Education Team Leader
Field Studies Council
Nettlecombe Court, Somerset

Fieldwork progression in the curriculum

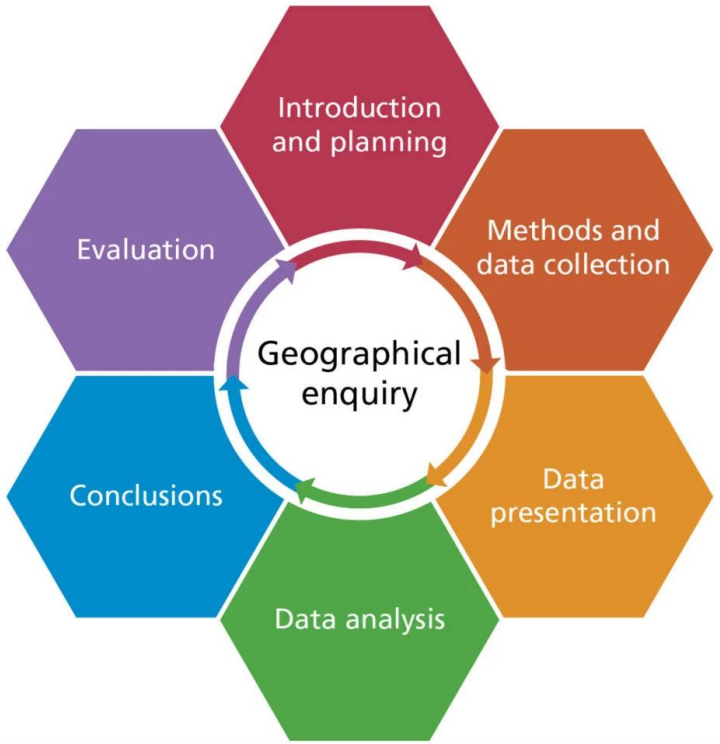
1. Contextualising
2. Developing Titles
3. Method
4. Data Collection
5. Presentation
6. Analysis
7. Conclusion
8. Refection



Lapthorn, N. and Kitchen, B. Progression of enquiry Stages GCSE and A Level

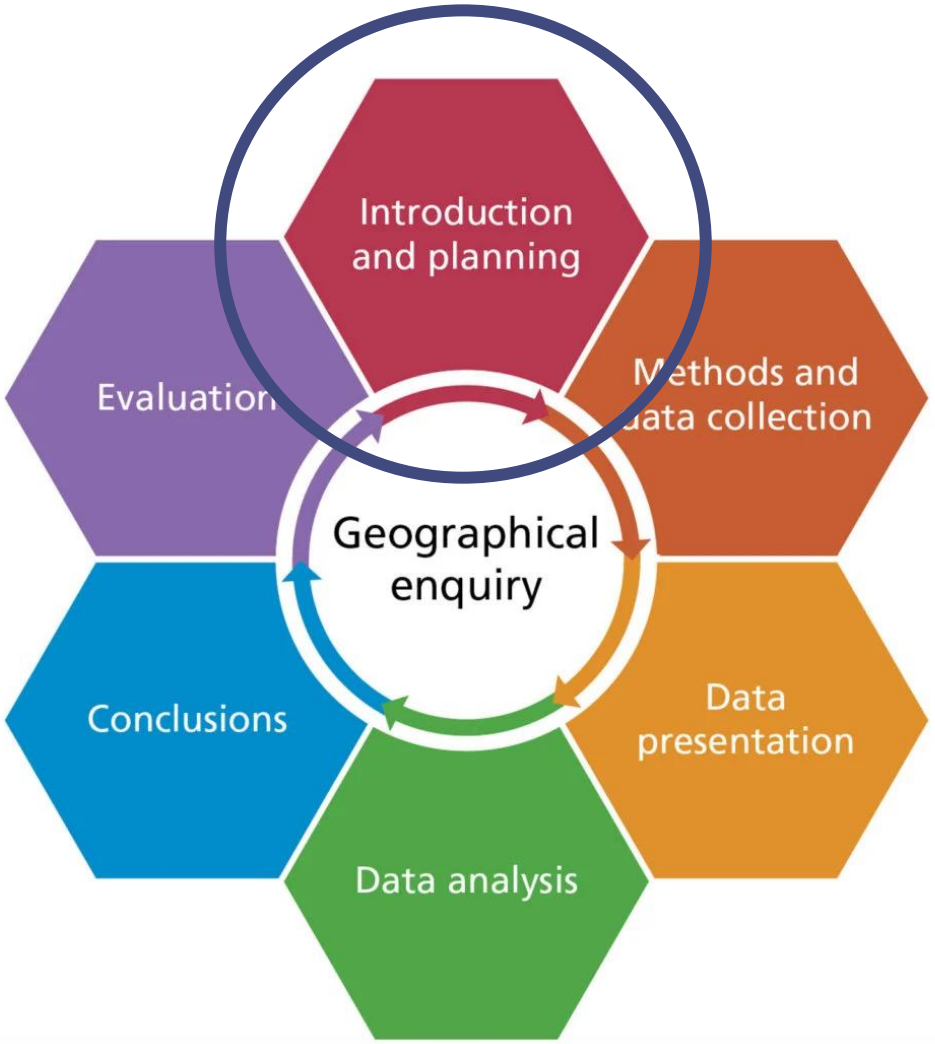
Geography Through Enquiry

- **Create a 'Need to Know':** Pupils are encouraged to be curious and speculate about an image or set of data. They pose questions, create a hypothesis and look for links to what they already know.
- **Using Data:** Pupils locate and/or collect the data they will need in order to investigate the topic further.
- **Making Sense:** Pupils analyse data in order to reach conclusions.
- **Reflecting on Learning:** Pupils consider what they now know and evaluate the process whilst considering weaknesses and conclusions.



Roberts, M. (2003) Learning Through Enquiry: Making Sense of Geography in the Key Stage 3 Classroom. The Geographical Association. Sheffield.

Introduction and planning



Identifying suitable questions

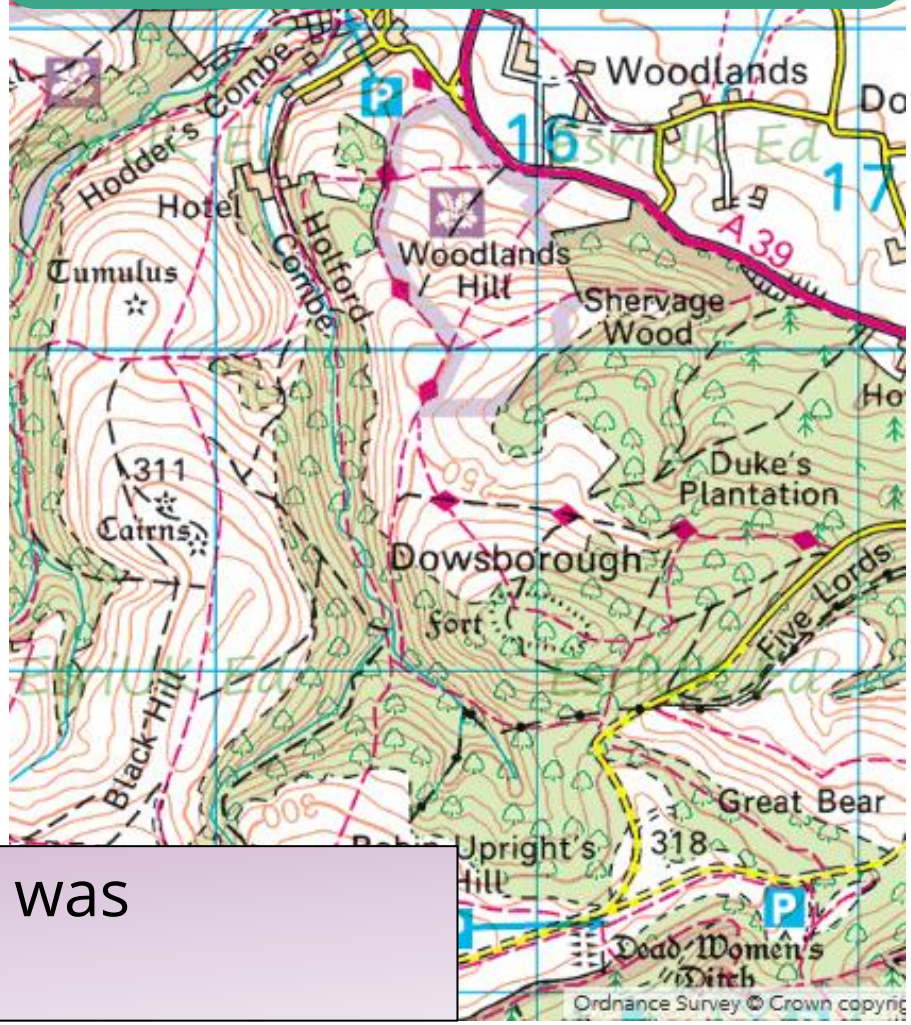
What we must avoid….(even though it's hard)

"Tomorrow we're going to River XX..make sure you have your title and hypotheses and the top of the worksheet"

What questions can you ask here?



What features could we investigate?



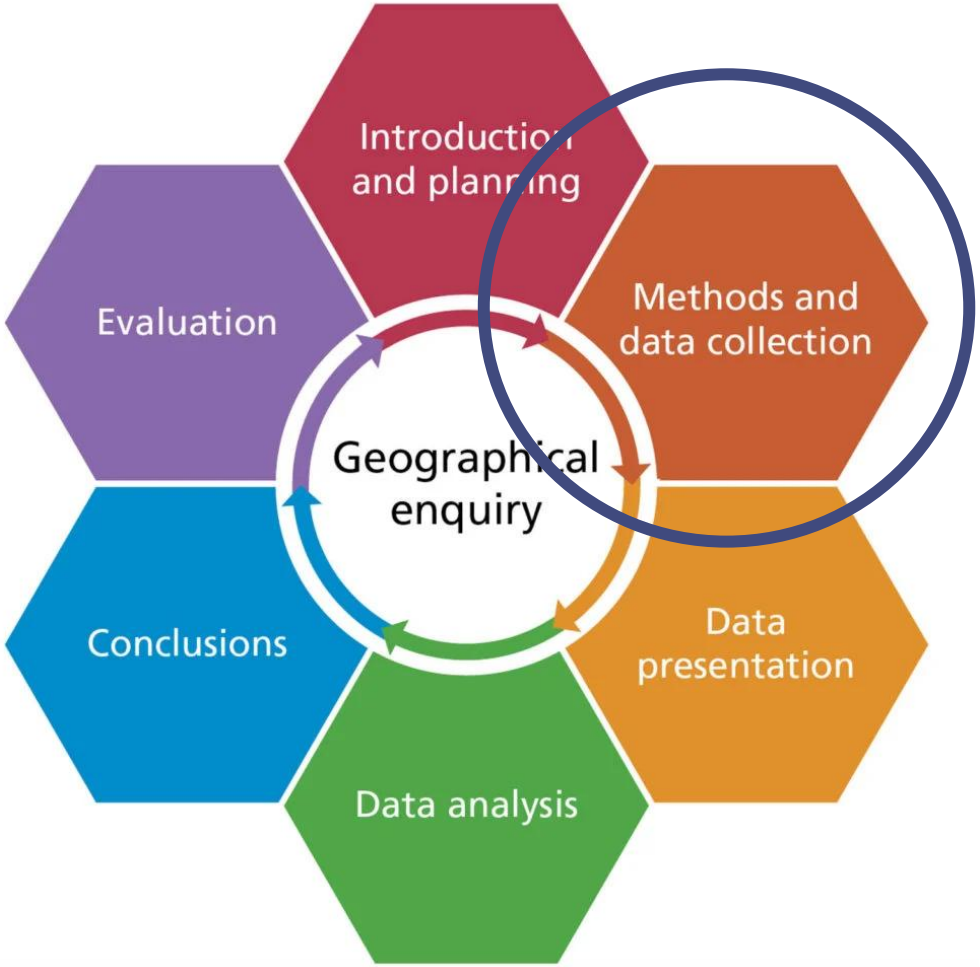
Explain why your key question for investigation was appropriate. (**2 marks**)

Using ArcGIS and StoryMaps to enhance fieldwork preparation

Field Studies Council



Methods and data collection



Student led method design













Scenario: You've planned fieldwork experience for GCSE students to your local river site. You've given each group a bucket of equipment and asked them to 'Design an investigation'



Discussion: What are the benefits to this? What are the issues?

Student led method design

Benefits	Barriers
• Students are decision makers in the enquiry process. • Students are encouraged to self-regulated their own learning for progression planning within curriculum (NEA)	• Differentiation is needed – scaffolds and support and stretch and challenge. • Time • Activity structure is

To what extent was your primary data collection successful? (**8 marks +3 SPAG**)

Adding structure to independence

Variable	Initial thoughts: What is your original method/options of equipment?	What went wrong? How did you improve/change it?	Final method and justification to ensure accuracy reliability and precision
Velocity	The cork will float in the water. This can be timed over a distance.	The cork got stuck in the vegetation. We decided to use the hydroprop and impellor	The impellor measures under the water so won't get trapped in vegetation or be affected by the wind. This means the reading will be more accurate.

Options for levels of independence

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Students are challenged to plan the data collection themselves and then test, evaluate and modify in the field.

Students work in groups to trial methods using a range of kit and make and justify decisions.

Groups are given a measurement to trial using a range of kit and then discuss justification as a class

Groups are given specific kit and asked to trial the best way to use it for a particular measurement

Groups are shown various techniques, then practice them in groups and identify strengths and weaknesses.

Groups are given specific kit and a method to trial and critique / improve.

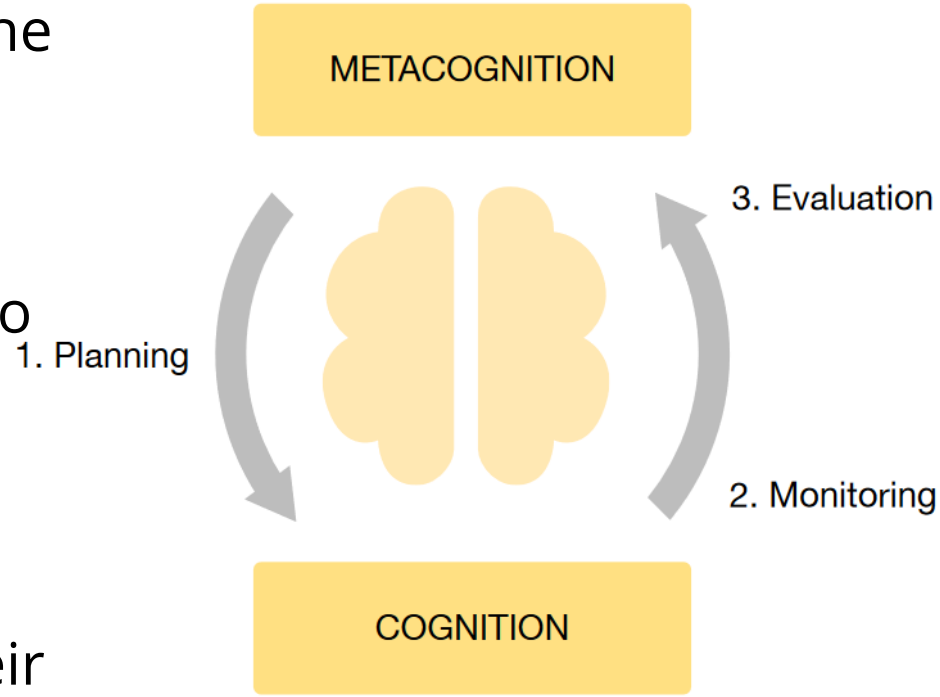
Groups are given specific kit and some guiding questions to answer e.g. how many groyne measurements do we need?

Class discusses measurements and takes part in the decision process prior to the visit.

Students are told what to measure, where and how. They then identify strengths and weaknesses of the methods.

Links to self-regulated learning and metacognition

- **Planning :** Encouraging pupils to think about the goal of their learning and to consider how they will approach the task.
- **Monitoring:** Emphasising the need for pupils to assess the progress they are making – this includes self-testing and self questioning activities.
- **Evaluating:** Appraising the effectiveness of their plan and its implementation



Education Endowment Foundation (2018) Metacognition and Self-Regulated Learning, Guidance Report.

Student led methodology

Discussion: How could you provide scaffold to students asked to design their own Environmental Quality Survey

Environmental Quality Assessment



Adding scaffold

Environmental Quality Assessment planning

Individually score the building and street in front of you. Do not discuss.

	Score 0-10
Vandalism	

	Score -5 to +5
Litter	

Do you have the same score as everyone else?

Max score in group:

Min score in group:

Is this a reliable method?

EQA Design:

1. Choose 6 environmental factors to look for around the Taunton

2. Decide on a scoring system:

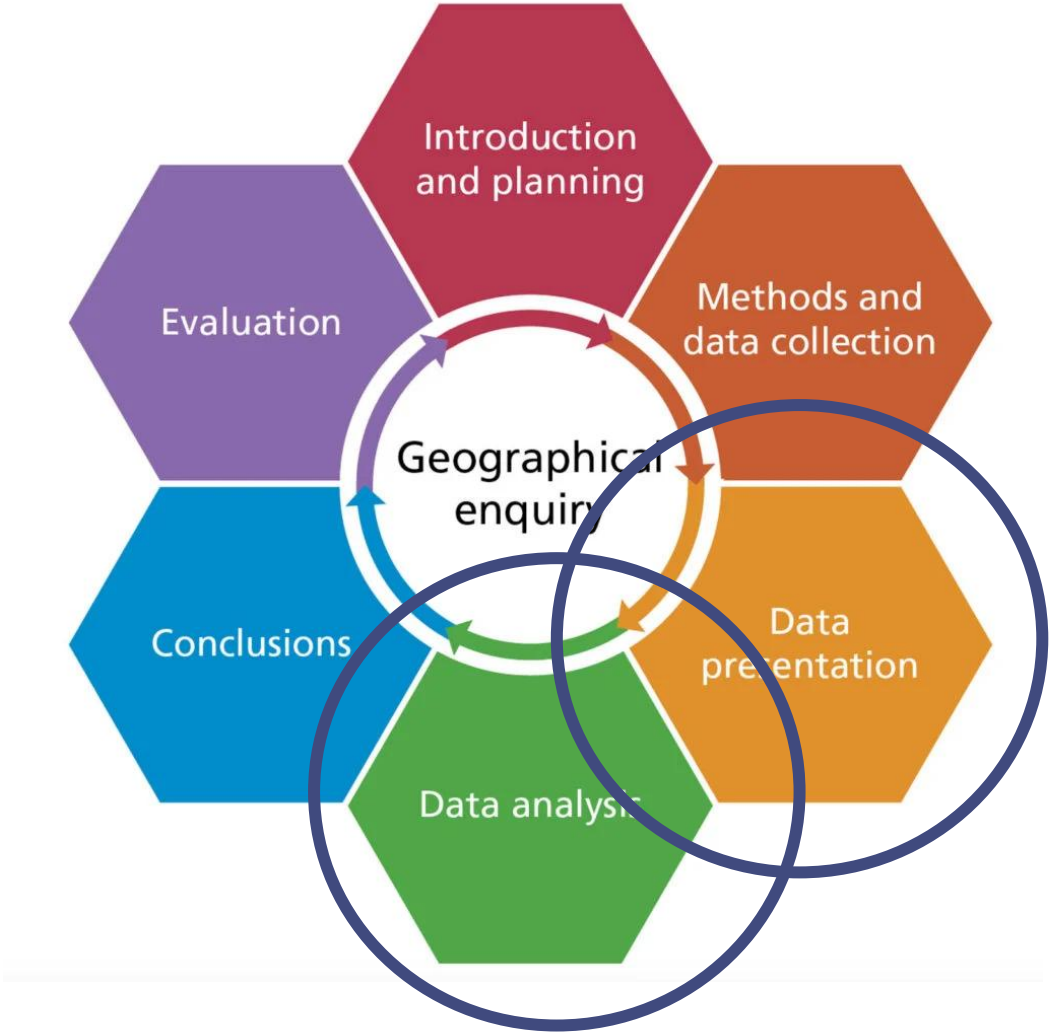
3. How will you ensure reliable results?

Adding scaffold

A Tourist Attraction	Somewhere Quiet	Some Graffiti
A Piece of Litter	A Narrow Alley	Somewhere Busy

An Item of 'Street Furniture'	Something Polluting	A Pretty Flower
A Structure that Looks Out Of Place	A Structure that Fits In	Somewhere to Sit Down

Data presentation and analysis

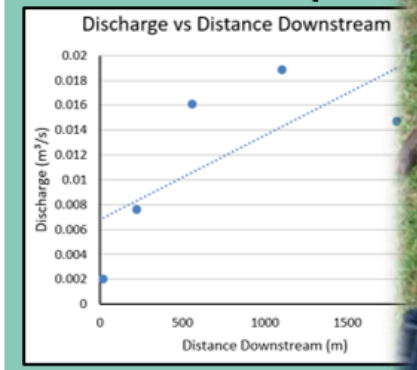


Context is key – presenting data in the field

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GCS

Scatter Graph

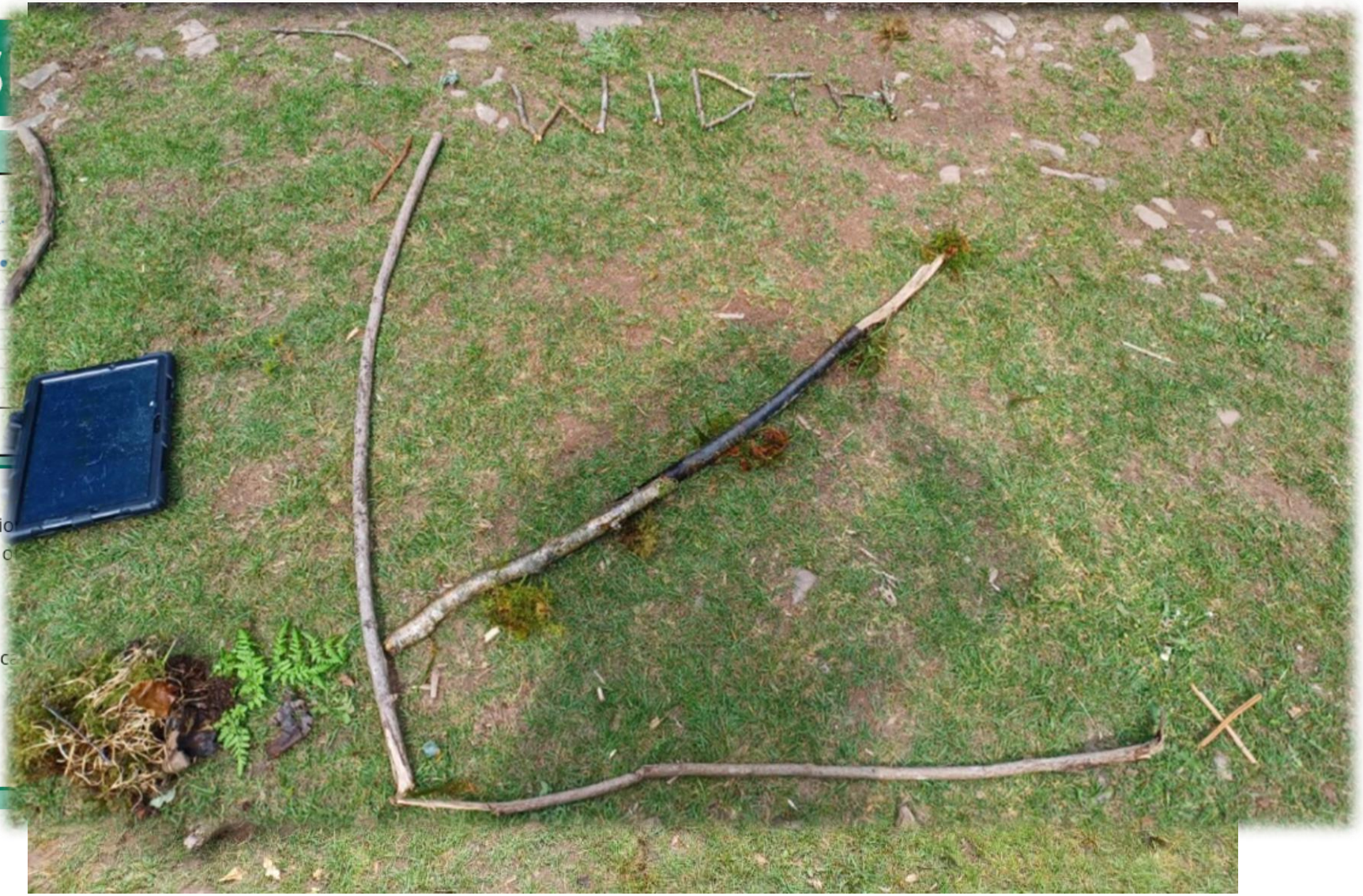


What do they display?

They show if there is a correlatio between groups of data. A line o best fit can be drawn.

Type of data?

Both variables must be numeric and continuous. Examples include average discharge, velocity, width, or depth downstream of a river.



What do your students want out of fieldwork?



Things I know about Minehead already:	Things I want to find out about Minehead:
Butlins!	Has it flooded recently?
I am looking forward to:	**I am worried about:**
Fish and Chips! Playing football on a beach	My friends are in the other geography class

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[KS3 trips]
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