Geo Factsheet

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Getting Started on the NEA

Introduction

Planning and then undertaking your own individual investigation is a good opportunity to confirm and test geographical assumptions, established theories and models. However, a personal independent investigation can also present challenge. Largely it's all down to getting the idea, title and proposal form sorted out well in advance of any data collection procedures.

The Factsheet will look at the first stage of the enquiry process – developing an A Level Geography idea, tile and then proposal form.

Table 1 provides a summary of the criteria often used by different Awarding Bodies to show the components of the first stage of the enquiry process.

Table 1 Stage 1 of the individual enquiry

Purpose, identification of a suitable question/ aim/hypothesis and developing a focus	• Identify appropriate field research questions/ aims/hypotheses, based on knowledge and understanding of relevant aspects of physical and/ or human geography. • Research the relevant literature sources linked to possible fieldwork opportunities presented by the environment, considering their practicality and relationship to compulsory and optional content. • Understand the nature of the current literature research relevant to the focus. This should be clearly and appropriately referenced within the written report.

Developing the idea

Successful investigations inevitability end-up considering geographical ideas which are linked to changes which occur over space and/or time. Therefore, investigations should carefully consider the following:

(1) Does the focus work for you, i.e. is it something that you are interested in and plays to your own individual strengths and talents?

(2) Is the work geographical and linked in a meaningful way to some area of content within the specification?

(3) Is the investigation and planned work manageable in terms of scale, time, equipment, location and transport? Most importantly, is it achievable given the available resources?

(4) Does your title enable you to go in search of information and data which enables you to reach conclusions, recognising that there might be more than one answer?

(5) Will there be sufficient high quality supporting published data and information available so that you can also include a theoretical underpinning of your fieldwork?

(6) Does the work provide links to other geographical topics and issues so that it can be framed within a "bigger geographical picture"?

If you are someone who has a strong mathematical interest then you *might* prefer a more quantitative fieldwork focus, whereas if your strengths are more artistic you *might* prefer a more qualitative focus. Of course, this is a very general rule of thumb, but it may help you to narrow the focus in the initial planning stages. Go with something you will be good at!

Table 2 Think about your strengths and weaknesses in order to develop a focus or area of study

More scientific and mathematical strengths... QUANTITATIVE?
Counting and measuring? Testing scientific theory? Using equipment? Observing / monitoring physical processes? Designing own quantitative recording sheets? 
More creative and artistic talents... QUALITATIVE?
Interviews? Photographs? Sketches? Questionnaires? Visual scales? Ethnographical observation? Designing own qualitative recording sheets? 

Research and literature review

Having developed a geographical idea, the next stage would most likely be to conduct a literature research (although you may actually be doing this alongside thinking about your idea). The purpose of this is to get additional background information which may be used in a variety of ways:

- To help set the context, e.g. locational details (geology map, large scale OS maps, etc.)
- To explore parallel examples and places
- To get the most up-to-date thinking about a topic or subject
- To explore local opinions and to see how these fit in with national thinking on an issue
- To explore geographical models and theories that may be relevant to the idea of focus

In many respects, the background information kick-starts the process of "searching for answers" before you have stepped out and started to collect any primary or first-hand fieldwork data. The significance of literature research should not be underestimated. A search of the literature means finding out about the current academic or published information around a topic. In reality, this can include a wide range of search sources, going from quite complex to increasingly more accessible – see **Table 3**.

Table 3 Examples of sources for an independent investigation ranked from more technical / academic to most accessible

Type	Source Comments	Possible degree of bias
Academic papers	University authors, researchers. Peer-reviewed and assessed. Generally technical and sometimes impenetrable in terms of understanding.	**Likely to be least biased**
Technical Documents	Central government, NGOs etc. High degree of credibility within a particular industry – so can be very good sources.	
Textbooks (including undergraduate)	Big publishers, written by a team of authors and edited. Can be selective in the information and arguments presented.	**Mixed**
Magazines, newspaper and published leaflets	Wide variety in here, some very good, others more questionable. Often up-to-date.	
Social media and personal communication	Twitter, Facebook, personal Blogs and any "unregulated" information on the internet. Need to be careful with some of these.	**Likely to be more biased**

Research literature often enables "scene setting" and so includes a general discourse of the geographical issue or topic that you are studying. In other words, this is the opportunity to say how the most up-to-date literature (from your research) gives a context and background to the focus.

Keep an accurate record of the sources and use a referencing such as "Harvard" when citing (presenting) in the individual investigation. This is a style of referencing, primarily used academic writing, to reference information sources. Each reference should contain in a sequenced order: (1) Name of the author(s), (2) Year published, (3) Title, (4) Publisher, and (5) Pages used. This approach is modified for example if you are using a newspaper or internet source.

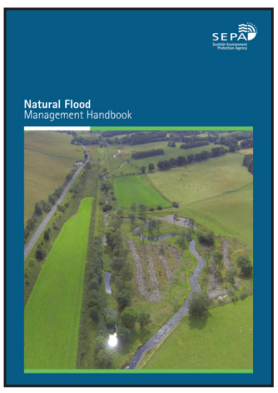
- Last name, First initial. (Year published). Article title. *Newspaper*, [online] pages. Available at: url [Accessed Day Mo. Year].
- Last name, First initial (Year published). Page title. [online] Website name. Available at: URL [Accessed Day Mo. Year].

It would also be sensible to evaluate any research information based on a number of identifiers. Typically, these might include: age of material, information about the author, where scoured etc, as well as check whether the research is agreed by other authors. Below is useful checklist that would help in that process of evaluation and filtering of the initial research sources.

- Identify the pros and cons of different sources. Would you be happy to get information from them?
- Consider how reliable you believe each to be. Which are the most credible / reliable and why?
- Rank each in terms of their credibility and detail.
- Which sources would you use and why?
- Are there any that you think should not be used? Why?

Remember that the literature research helps to develop both a purpose and context. **Figure 1a** is an example of a technical document from Keep Britain Tidy that shows both the methodology and outcomes from a large-scale local environmental quality survey. This would give some key ideas and insights for anyone wanting to develop a smaller-scale enquiry along a similar theme. **Figure 1b** is another technical document from the Scottish Environment Protection Agency. Again, a very useful starting point for any investigation that is considering local flood risk and catchment management. Often these technical documents are also very up-to-date (or are published annually), which adds to their usefulness.

Figure 1a & 1b Examples of specialist technical documents



http://keepbritaintidy.org/Documents/Files/LEQSE%202015/KBT%20LEQSE%20Report%202015%20web.pdf

https://www.sepa.org.uk/media/163560/sepa-natural-flood-management-handbook1.pdf

Using maps as a source of information and research

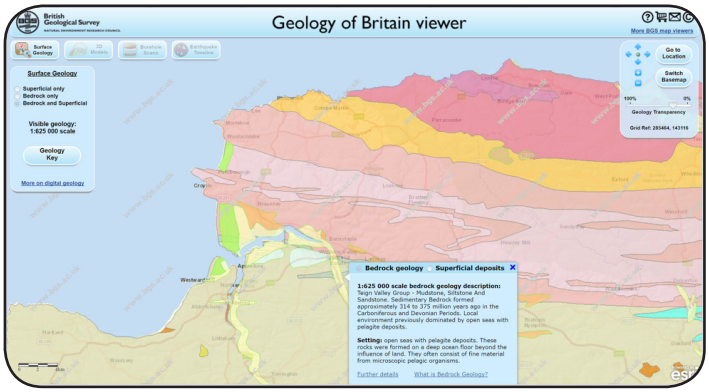
The literature research may also be important in helping to determine an appropriate geographical scale, since a successful independent investigation outcome depends partly on the choice of the *right* geographical scale for the investigation. For instance, an investigation into a town's flood risk unlikely to produce significant results if conducted in just once small part of the catchment without examining the wider context. Many natural systems show considerable variability within a small area, so a larger aerial / spatial sample would be required in order to reduce that element of variability.

That means that maps in their variety of forms are going to be an important component of background research. Some are obviously included as within blogs and forums, as well as technical documents. Others are available online and have their own dedicated websites (see **Figure 2** and **Table 4**).

Table 4 Examples of dedicated and specialist online maps that can be used for research as part of the independent investigation

Example source map	Description
CDRC Maps	Maps of IMD / deprivation and a host of other geodemographic data at a local scale. https://maps.cdrc.ac.uk/
BGS Geology	Online geology map that can be accessed for free. There is also a useful 3D version. http://mapapps.bgs.ac.uk/geologyofbritain3d/index.html
Travel Time Maps	A useful time travel-time map that creates a GIS buffer that can be used to draw travel time from a chosen spot. https://app.traveltimeplatform.com/#/search
National library of Scotland historic maps	Visit the website to access the historic maps and modern maps side by side. Not just Scotland! http://maps.nls.uk/geo/explore/side-by-side/#
ArcGIS Online	Visit the website to access the historic maps and modern maps side by side. Not just Scotland! http://maps.nls.uk/geo/explore/side-by-side/#
Real time air quality	Select a location and city and get access to live air quality maps and downloadable data. http://aqicn.org/city/united-kingdom/london-bloomsbury/

Figure 2 An example of an online geology map which could serve as important background information for many physical topics – especially useful for coastal fieldwork!



http://mapapps.bgs.ac.uk/geologyofbritain/home.html

Establishing a title, focus, question and hypotheses

Your Independent Investigation title needs to be clear and concise – what is it you want to investigate, where and why? Your title could be very specific and narrow in focus (as long as there is sufficient data to enable a valid conclusion). Or a little broader, perhaps with focussed sub-questions to break the title down.

Questions and hypotheses generally fall into two main types: (1) those that focus on spatial or areal or temporal *differences* and, (2) those that focus on *relationships* between variables. Whatever is chosen as a focus for the individual investigation, there should be a geographical and / or spatial element as well as linkage to the specification. Table 4 shows the difference between an aim, question and hypothesis.

Table 5 Differences in aims, questions and hypotheses

	Aim A statement of what that project / investigation is setting out to achieve. It must be geographically sound and achievable.	**Question** A question that is asked (in a question format), which often links with the overall title and can be used as a way of sub-dividing the title.	**Hypothesis** A statement where correctness can be tested objectively using scientific methodology. Null and alternative hypotheses are normally used in connection with statistical tests (e.g. Chi-squared).
Coastal Example	Investigating the different beach users that use resort and rural beaches, X and Y.	How and why do cliff and beach profiles vary along a stretch of coastline between points X and Y?	The shingle beach x has a steeper gradient at the western end compared to the eastern end.
Urban Example	Investigating the different usage patterns of men and women on a stretch of the high-street in area X.	To what extent are golf courses an environmental or economic asset in rural area X?	Location X has a more favourable identify than that location Y, according to visitor perception.
Caution!	Sometimes aims might be too simplistic or (like the hypothesis) too obvious of self-evident. However, generally aims are going to be manageable and succinct.	Questions can be too big and too complex. Try to think about narrowing. Sub-dividing into multiple key Qs can lead to added complexity and a lack of focus if not correctly targeted.	Can lead to a narrow and self-evident focus. Sometimes the test is unnecessary when the data clearly shows a difference or relationship.

It is an individual decision how many questions or hypotheses might be appropriate; it is possible to use a "mix and match approach", i.e. a single over-arching aim and then a series of 2-3 sub-questions for example.

At the outset, it is essential to establish that the focus for the fieldwork and research is feasible. Some hypotheses may be impossible to test due to practical problems of measurement (e.g. rates of erosion or mass movement on river banks or coastal cliffs), inaccessibility (e.g. research locations on private property) or lack of a secondary data and information which can be freely accessed. For example, some historic river and catchment data from the National Rivers Flow Archive (NRFA) cannot be easily accessed without special permission. Also, some research publications may be difficult to get hold of without going to a larger university library (although many publications can be accessed with a one-off free online). Projects that involve change over time and baseline data should be treated with caution.

Figure 3 An example proposal form - annotations below

Candidate name	**Candidate number**	**Examination series**
Centre name		**Centre number**
Investigation title **1**	**How the title links to specification content** **2**	
Planned investigation hypothesis or question/sub-questions **3**		
Investigation focus – indication of how the enquiry will enable the candidate to address their investigation title and explore their theme in relation to the chosen geographical area. **4**		
Planned methodology – indication of qualitative and/or quantitative techniques including primary and, if relevant, secondary data collection techniques, indication of the planned sampling strategy or strategies **5**		**Individual/group data collection (delete as appropriate)**
Teacher's approval and comments		
Teacher's signature	**Date**	

Completing a successful proposal form

Each Awarding Body has its own procedure and guidance for the completion of a proposal form. This form represents an important planning document: something that you can demonstrate that you have used to think about the different aspects of the route to enquiry. Often feedback about the planning of the form will be given by a school / college supervisor, the Awarding Body itself or a combination of both. Under the rules of the Individual Investigation, you will receive limited advice, so it's your job to try and think for yourself how your initial ideas can be modified, reworked and improved.

Figure 3 shows an example proposal form with annotations explaining the purpose of the main sections. There is no "perfect" way to approach the completion of these forms, but it is likely that your initial ideas for your title will be refined as you do more reading, research and understand more about your chosen topic area. A good researcher is one who adapts their research to new ideas and information. Even at university, researchers change focus many times before they actually go into the field to collect data. As such it may be a good idea to keep a copy of the form in an electronic and editable format so that revisions can be easily made.

Your teacher will review and approve your form, indicating that the focus, title and planned methodology is suitable. The information you provide in your proposal form should demonstrate how your investigation is capable of "working" to enable you to analyse your data and reach conclusions within a manageable time frame.

Conclusion

Completing a successful Independent Investigation is not something that can be completed without proper planning. It is worth putting effort into the early stages, especially the background research, to have a quality outcome later. Also important is the idea of manageability – is the question and focus achievable or have you set yourself problems later on, such as the investigation being unanswerable?

1 The title can be reworked and revisited. Don't feel that this has to be completed first, it may emerge a little later.

2 Here you need to offer evidence that the focus for your work has a solid and real link to some content within the specification. Use numbers and page references to show the linkage (e.g. 3B.3 page 19).

3 Make the decision as to whether you will be using aims, questions, etc. Make sure that these are manageable and achievable. Sometimes students create an aim or question which is too big and too difficult. Be careful with words like "success" as often you will need to get hold of baseline data in order to make a judgement.

4 The focus section gives you an opportunity to provide brief details about the theoretical background and the location / spatial area in which the investigation will take place in. It might be a good idea to justify why a particular site and area has been chosen.

5 In this part of the form you should try and outline both design and methodology. Design includes consideration of the how and the where, i.e. sampling strategy and the methodology is the choice of technique that you will use (e.g. interview, measuring noise, quality score, etc.) This part is of the form is especially important to get right since you will want to try and get a fair and representative sample as well as one which can be analysed. Look at the mark scheme to see you how can get to the highest bands.

The proposal form should be seen as a way of managing changes and adaptations within the project. Again, it will be important to revise and review this throughout the various stages within the route to enquiry. For futher research: exam board websites provide excellent information on their respective NEAs. Also look out for the Geography Assocation's book on carrying out the NEA.

Acknowledgements: *This* ***Geography Factsheet*** *was researched and written by* ***David Holmes*** *and published in* ***January 2018*** *by* ***Curriculum Press****. David works as a Geography consultant and author, and is a former Geography teacher. He has a particular interest in technology and fieldwork. He can be contacted on david@david-holmes-geography.co.uk.* ***ISSN 1351-5136***