

A Level Geography (2016)

Independent Investigation

Non-Examination Assessment (NEA)

**Guide to developing titles and
completing the proposal form**



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Letter from the Geographical Association and Royal Geographical Society (with IBG)

The Independent Investigation – its value and place in geography

The Geographical Association and the Royal Geographical Society (with IBG) jointly support a strengthening of the contribution of geography fieldwork and the Non-Examined Assessment (NEA), the vehicle through which it is assessed within A Level geography.

The NEA, which has been developed by the Department for Education, is worth 20% of students' final grade and is underpinned by the idea of independence. However, what does it mean for A Level geographers to investigate independently, and why is this so important to their studies?

What does independence mean?

Independence is having the motivation, knowledge, skills and capacity to carry out geographical enquiry without a reliance on teachers, parents or other students, while also recognising that there may be a need, at times, to draw on appropriate advice and guidance. For A Level Geography students to investigate independently, they need to be able to pose geographical questions that are worth investigating. They then need to pursue their questions as part of their own appropriate sequence of enquiry. This should draw on their own and others' data, and wider reading, so that a student can research, analyse, summarise and contextualise their findings, while taking into account the specific circumstances of their investigation.

An independent investigation provides scope for students to follow their geographical interests. It also allows them to demonstrate how they have engaged in fieldwork and brought their own thinking, analysis and conclusions to the data that has been collected. However, independence doesn't necessarily mean isolation; depending on the context or location, and taking into account practical considerations such as access and field safety, the data might equally be collected individually or as part of a group.

Why the Independent Investigation is so important to the study of geography

The Independent Investigation is a unique opportunity for geography students, requiring their application of geographical knowledge and understanding to the context of a real-world location. Through this they will develop their skills in careful observation and both primary and secondary data collection. Their experience of

the 'messy' world beyond the textbook challenges them to appreciate and make sense of geographical complexity and to 'think like a geographer'.

Of course, students do not become independent the moment they begin A Level studies. The Independent Investigation is therefore an important opportunity for students to demonstrate the critical, creative and synoptic thinking they have acquired throughout their geographical education. This assumes they have engaged regularly in meaningful geographical enquiry and fieldwork, and been given the opportunity to pose their own questions, collect both primary and secondary data, and reflect on their learning. In this way, the Independent Investigation also provides an opportunity for teachers to support and further develop these skills. Careful thinking and planning should therefore be given to the teacher's role, recognising that coaching and facilitation can be as effective as direct teaching, modelling or instruction.

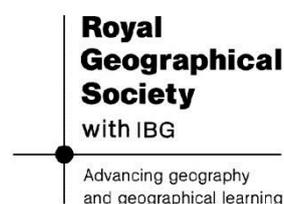
Fieldwork offers the chance to examine how physical and human processes and human-environment interactions are changing our world. Through their A Level course students will have the opportunity to work as part of fieldwork teams and to conduct their own Independent Investigation. They will learn to frame geographical questions, collect, analyse and review data, and apply their theoretical understanding to the complexity of the real world.

The Independent Investigation provides a valuable experience for students of the nature of geographical enquiry and knowledge, how data can be collected and used, and the application of geographical skills, all of which help to create a more geographically literate society. For those applying to study geography at university, it also provides a tangible experience of their own geographical endeavour which could be discussed within their UCAS personal statement.

This is a new opportunity for *all* A Level geographers to demonstrate their geographical interests and abilities in a way which will help better prepare them for transition into undergraduate study, and positively develop their academic and social skills.

Geographical Association

Royal Geographical Society (with IBG)



Student guide to developing Independent Investigation titles

The A Level Independent Investigation is an opportunity for you to study an aspect of geography in more depth and conduct your own research and data collection. One of the most challenging activities when starting your investigation is to come up with a title; a good title makes it clear to the reader what the research topic is and the type of investigation you will be doing.

As well as the following information the exam boards (AQA, Eduqas, OCR and Pearson Edexcel) have also produced a helpful series of Frequently Asked Questions (FAQs) about the Independent Investigation, which we suggest you read alongside this guide. You can download the FAQs from your exam board's website.

Assuming you have already chosen a particular topic that you are keen to investigate further, you will need to narrow this down through your investigation title. A good title has both a geographic and location context:

- **Geographic context** – what topic, theme or issue in the specification are you keen to investigate further? Whatever you choose to investigate, your title must have a link to a topic(s) within the specification.
- **Location context** – where is the investigation, fieldwork and data collection going to take place?

The title of your Independent Investigation needs to be concise and descriptive, and can be in the form of a statement, question or hypothesis e.g.:

- To what extent are groynes the most effective coastal management strategy in Sheringham?
- Sexuality influences perception of place in Bristol.

You should develop one (or more if appropriate) statement, question or hypothesis that can be tested. This may form your actual investigation title or your sub-question/s or sub-hypotheses.

In addition Above all else your title needs to be something that you can actually address through the data you will collect and secondary sources you will also draw on.

Sub questions/hypotheses

It is not just your title that is important; you may also have sub-questions – potentially two to four of them – and these will guide your research and provide a framework. Your sub-questions enable you to break your title down and look at aspects of it in more depth. It is advisable that your sub-questions follow a logical sequence. Each sub-question/hypothesis should be an answerable question or testable hypothesis that is clear and well-defined so that you can do the research needed within an appropriate time frame.

Top tips – thinking more about your title

Is your title relevant?

- Is it relevant to an academic debate or intellectual interest?
- Is it a topical issue from the news or personal experience and what makes this issue geographical?
- Does your investigation lend itself to meaningful data collection, analysis and evaluation?
- 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?

Is your title manageable?

- It must be within your ability to tackle your question in terms of scope and scale. Can you collect all the data you need from your primary data collection techniques and/or the secondary sources in your methodology?
- Where and how are you going to collect data for your investigation? Is this accessible? Practical? Safe?
- What are the timescales you have to complete your investigation?

Does your title meet the requirements of the assessment?

- Your title must have a link to a topic(s) within the specification. *
- Can you access all parts of the mark scheme by using your title? *
- Does your title enable you to collect and use sufficient data, e.g. primary or secondary, qualitative and / or quantitative?

** Don't forget you can look these up on the exam board websites and talk to your teacher about this.*

Is it of interest to you?

- If your question is of interest to you, this will help you remain motivated and engaged with your investigation.
- Is your question clear and straightforward? What looks like a simple question could allow the complexity to develop once the investigation, research and fieldwork begin.

Final thoughts

Your Independent Investigation title needs to be clear and concise – what is it you want to investigate, where and why? Your title can be very specific and narrow in focus or a little broader with focussed sub-questions to break the title down.

There is no definitive way to approach this but remember your initial ideas for your title will be refined as you do some reading and become more 'expert' in your chosen topic area. Your title will evolve and change and, as you complete your Independent Investigation Proposal Form, you can plan your investigation and think through your ideas. Your teacher will finally sign your form indicating that your title and investigation is fit for purpose.

The information you provide in your proposal form should demonstrate how your investigation is capable of being tested or answered to enable you to analyse your data and reach substantiated conclusions within an appropriate time frame. The mark scheme can be used in the early stages of your planning so that you know how to plan an investigation that will enable you to reach your potential. Your teacher will take you through the mark scheme to make sure that you understand the stages of the investigation and this will support you in putting your Investigation Proposal Form together.

Glossary

- *Title* – This frames your investigation and can be in the form of a question or statement.
- *Hypothesis* – A statement which is a prediction and can therefore be tested (through data collection, analysis and evaluations)
- *Sub-question* – This is a question which addresses an aspect of the title and helps to break it down for the purpose of research and data collection.

Good luck with your investigation.

The independent investigation proposal form – guidance for teachers and students

The Awarding Organisations (AOs) have jointly written 12 exemplar Independent Investigation Proposal Forms to support and guide both teachers and their students. These exemplars are not aligned to any AO and so they can be used by all teachers and students; however, to show how the titles link to the specification, there are precise references to individual AO specifications.

The main purpose of these 12 exemplars is to:

- explore a range of investigation styles
- outline different types of teacher guidance (general and specific)
- show examples of good practice (both the student and the teacher).

These exemplar proposal forms were not written to be 'perfect'; the Awarding Organisations wanted them to represent what students could potentially produce and show the range of support and guidance a teacher may give to their students to ensure they effectively plan their investigation. The exemplars do not provide a list of titles for students to choose from.

The layout of the exemplars is as follows:

- A completed student Independent Investigation Proposal Form.
- The white 'speech bubbles' surrounding the completed proposal demonstrate teacher guidance to the student.
- Underlined red text in the teacher guidance 'speech bubbles' indicates where the Awarding Organisations feel the teacher is giving specific guidance (which is not permitted).
- The blue boxes are Awarding Organisation guidance to the teacher, highlighting areas of good practice, things to consider and an indication of specific guidance (not permitted by the teacher).

Important to note for risk assessments and ethical considerations

While specific guidance is generally not permitted by the teacher, the exception to this is with regard to risk assessments and ethical considerations. It is imperative that teachers ensure all students are able to conduct their investigations in a safe and appropriate manner; therefore, a suitable risk assessment and any ethical considerations must be accounted for prior to the student embarking on fieldwork. Teachers are able to provide students with any relevant detail as part of the risk assessment. To deal with ethical considerations, teachers should provide students with any relevant detail to protect themselves, the environments they are working in, whether it is appropriate to collect and hold certain types of data (e.g. peoples' personal details) or take samples (e.g. flora or fauna), their participants and anyone else involved in the data collection.

Exemplar Independent Investigation Proposal Form – No.1

AO comment (Title): It is considered malpractice to suggest a title for a student. Students should develop their own titles, with the teacher only offering generic guidance, which enables the student to maintain independence throughout the investigation. The teacher could ask more pointed questions, e.g. "what do you hope to achieve by mapping and analysing these glacial features? It might be clearer if you phrase it as an overall aim or question rather than simply saying what you are doing...".

I would suggest creating a title that better reflects the nature of your study as it is not absolutely clear what you are setting out to achieve, such as; 'To what extent does geomorphological evidence prove the provenance of Glacial Extent in the Newlands Valley'. This however would need further breakdown within the hypothesis and sub questions, which were not well exemplified.

Unfortunately, what looks good and achievable on paper may be too much in reality. The formation and orientation of the corries you have described will take some time to complete by a single individual and would be best split into teams of two.

The measurements of moraines and orientations should be straightforward but sediment analysis can only be done on exposed sites because digging in these areas would require an auger (which is not permitted and would not produce the desired results in any case).

The analysis of data needs more explanation in terms of sampling strategies; How do you plan to undertake sediment analysis for instance? Try to look into the techniques and skills we have learnt in class/previous field-trips and decide which would best match, remember what you are trying to prove and what outcomes you wish to achieve.

Candidate name	Candidate number	Examination Series	
Centre name		Centre number	
Investigation title <i>Mapping and analysis of features in the Newlands Valley, Lake District with concentration on the Cirques under the summit of Robinson.</i>		How the title links to specification content <i>The formation of landforms due to ice sheet scouring and the influence of differential geology. The assemblage of landforms can be used to reconstruct former ice extent and provenance.</i>	
Planned investigation hypothesis or question/sub-questions <i>That all cirques in the valley were created in a North Easterly facing direction. That the glacial features within the valley of Newlands (constrained by Grasmoor and Dale Head) can be mapped and analysed to show the glacial extent of the glacier.</i>			
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. <i>It is my aim to find significant features within the valley including moraines, U shaped valleys, truncated spurs and roches moutonnées. These will along with sediment analysis help to show the direction of flow of the glacier and may even go to prove provenance.</i>			
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. <i>Use of OS maps and drift geology maps to indicate direction of movement and sediment types. Mapping of cirques via the use of pacing (length and breadth). Height and angle of the back walls via maps, GPS and Clinometers Orientation via maps and compass. Research through secondary data from work undertaken by Manchester University and Manchester Geography Society.</i>		Individual: <input type="checkbox"/>	Group data collection: <input checked="" type="checkbox"/>
Teacher's approval and comments <i>There is a great deal here which warrants investigation and you have certainly entered into the spirit of the investigation. However, I still have a number of questions that need resolving before you undertake the fieldwork. It is important that you consider the time constraints we will have on the field-trip, as well as your access to the required equipment and the extra people required to collect all the data.</i>		Approved: <input type="checkbox"/>	Not approved: <input checked="" type="checkbox"/>
Teacher signature		Date	

AO comment (Title): The student has chosen a very broad title to investigate, which creates challenges in terms of data collection and adhering to the recommended word count. The teacher has missed an opportunity to offer further guidance. The student's title is self-limiting as it doesn't include a statement, question or hypothesis that is open to evaluation. The teacher inappropriately suggests a clearer title, but they are right to suggest a more limited investigation that is more achievable in the time available, and one that is more open to evaluation.

Although you have indicated that you will be concentrating on the cirques in your investigation title, you have also mentioned several other features such as moraines, U shaped valleys, truncated spurs and roches moutonnées...

Can you be clearer about why you are aiming to find these additional features? Your methodology seems to focus on the cirques so I'm not entirely sure how you are aiming to find these features.

AO comment (Methodology): The teacher has rightly questioned the student's planned data analysis and gives the student the opportunity to work out the right approach. The teacher has however given specific guidance on splitting the data collection into two teams of students and using a specific piece of equipment. This guidance does not allow the student to find a solution to the data collection issues independently. The teacher has missed an opportunity to question the breadth of the student's methodology, which might improve the student's ability to successfully collect the required data in the time available.

AO comment (Other): It is important that students don't become too reliant on collecting data in large groups in case there aren't enough students choosing investigations on a similar topic. Students will need to be reminded of the stages of the investigation where collaborative and independent work are permitted.

Exemplar Independent Investigation Proposal Form – No.2

Candidate name		Candidate number		Examination series	
Centre name				Centre number	
Investigation title <i>Factors affecting variation in infiltration rates in the drainage basin of the River Taw in Devon.</i>		How the title links to specification content <i>Water and carbon cycles: 3.1.1.2 The Water cycle. The study is linked to “flows and transfers at hill slope and drainage basin scales”. It will focus on infiltration flows although other related flows and stores such as precipitation, interception and soil water will be considered.</i>			
Planned investigation hypothesis or question /sub-questions <i>Hypothesis: “Infiltration rates in the River Taw drainage basin are affected by several interacting factors-soil type, slope angle and position and preceding weather”. Sub-hypotheses: 1. The higher the percentage of clay in the soil the lower the infiltration rate; 2. Steep slopes and upper slopes have higher infiltration capacity than gentle slopes and lower slopes; 3. A change in weather conditions affects rates of infiltration.</i>					
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. <i>The area selected for field study is part of the drainage basin of the River Taw, between Little Torrington and Merton. The enquiry will consider three factors which influence infiltration rates in an upland river basin. By selecting hillslopes with the same geology and similar vegetation it should be possible to focus on the factors of slope, soil type and preceding weather. By carrying out 4 different transects, equally spaced within the drainage basin, from valley floor to summit, there should be a representative sample of the drainage basin.</i>					
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. <i>A slope will be chosen which leads down to a river. The slope selected will have uniform geology and vegetation. Four transects will be completed with equidistant sites, 50 metres apart. The base and summit of the slopes will be included. Sampling strategy: systematic line sampling, working in a group with 3 other students.</i>				Individual: <input type="checkbox"/> Group data collection: <input checked="" type="checkbox"/>	
Primary data collection (at each site): <ul style="list-style-type: none"> • Measure angle of slope using a clinometer. • Take a sample of topsoil to test soil texture and moisture levels. Place in a polythene bag with a sealed top. • Before inserting the infiltration ring, undertake a soil moisture test at each site to check whether there is a correlation between percentage moisture and infiltration rates. • Use a trowel to cut a circle in the ground, and insert a home-made infiltration ring or infiltrometer. Hammer in to a depth of 10 cm. Ensure the tube is vertical. Disturb the soil and vegetation as little as possible. • Using a jug, pour in water, up to the top of the tube and record how many millimetres the water has fallen after one minute. Fill up the tube and record the drop in the 2nd minute etc. Record infiltration rates for at least 10 minutes. • Record the position on the slope, mark on a map and record site details (vegetation type, land use, slope variation etc). Identify any site factors that may lead to anomalies. 					
Secondary data collection: <ul style="list-style-type: none"> • Research information about the rocks and other sediments in the drainage basin eg British Geological Survey's site Geology of Britain. • Obtain weather data for two weeks before starting the fieldwork using the Met Office archive. 					
Teacher's approval and comments <i>Your theme for investigation is approved although you are advised to review the number of variables to be considered. Think more carefully about whether the data you collect is suitable for testing each sub-hypothesis. Please ensure that you check access arrangements and consider potential risks as part of a risk assessment.</i>				Approved: <input checked="" type="checkbox"/> Not approved: <input type="checkbox"/>	
Teacher's signature				Date	

Your investigation title is appropriate.

Are all these sub-hypotheses capable of being tested? Is it possible to isolate the effects of each factor? You should review the number of variables to be studied, considering which variables will provide the most valid data.

The methods of data collection are appropriate. The equipment needed is easily available and your sampling strategy is suitable. Be realistic about how much data you can collect in the time available. Is the sample size appropriate?

How will you ensure that your data collection methods will work? Bear in mind the potential problems of access mentioned earlier. You will also need to consider the practicalities of collecting large volumes of water from the river at different sites.

You should complete a risk assessment to help ensure that your data collection is undertaken safely.

Your proposed investigation is firmly based on the specification content. You have made these links clear in your own words as well as giving the specification reference.

You need to be more specific about the area chosen for study, making sure that the transect routes are accessible. Most of the land is private so you may be limited to footpaths, unless you get permission from farmers to use their land.

You've stated that you're planning to collect data as part of a group. This is a good idea but please remember that you must fully take part in the primary data collection. This is important so that you can access the mark scheme when discussing the implementation of your chosen methodologies in your written report.

AO comment (General): The teacher has provided appropriate general guidance throughout. Teachers should advise students on health and safety considerations, the use of equipment and potential ethical concerns.

Exemplar Independent Investigation Proposal Form – No.3



AO comment (Title & Hypothesis): This investigation has an interesting people-environment focus, but unfortunately the teacher has missed an opportunity to give important advice about the title and investigation hypothesis. The student may collect a lot of data but without a specific point and the hypothesis or question section doesn't offer any further refinement. It would be better if the teacher guided the student to reflect on the Planned investigation hypothesis or question section and devise a title, hypothesis or question that is testable or answerable and therefore open to evaluation. This is important to reaching the higher levels of the mark scheme.

This is an interesting but ambitious title. It's important you maintain your focus on the hydrological cycle and the costs and benefits of micro-HEP. Your research and access to secondary data will be an important part of the investigation so you need to be confident that what you plan to collect is readily available.

AO Comment (Focus): The student has chosen a theme that is closely linked to the specification content, making relevant connections between two key ideas.

I suggest you tie down your two investigation hypothesis better and consider the implications for the environment in more detail.

So I understand that you're hoping to do this over 2 days of the field-trip, and can see that you have thought about it somewhat, though I am still concerned about investigating the Blencathra site in the time available. How will you ensure that you can collect your primary data in the time available at Blencathra?

Why did you choose these sites since the Lake District National Park has over 50 sites, and also what would your 'short field investigation' include'?

I have reservations about your field investigation which needs more thought and planning. However as long as you do not lose focus on the ideas I do not see this as a major hurdle.

Unfortunately I can only make sure what you are doing applies to the specification and that the aims are achievable, which I feel they are as long as the timescales are considered and you have sufficient data from all three sites, as well as past data for comparison and to aid your analysis.

Candidate name	Candidate number	Examination Series
Centre name		Centre number
Investigation title <i>The development of Micro-HEP stations in the Lake District National Park and the impacts on rivers and the community</i>	How the title links to specification content <i>I'm looking to investigate how human factors affect the hydrological cycle (Key Idea 5.3, p.42), which helps me assess the costs and benefits of an alternative to fossil fuel (Key Idea 6.6, p.48).</i>	
Planned investigation hypothesis or question/sub-questions <i>The development of Micro-HEP schemes is helping to develop areas of Lake District and reduce carbon emissions for the Park. Micro-HEP schemes are a viable option for renewable energy within the upland areas.</i>		
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. <i>That Micro-HEP stations have few potential impacts on river regimes and systems in upland areas and do not impact upon events such as flooding: Firstly they help reduce the use of fossil fuels, unsightly wind turbines and other more intrusive forms of energy, although they still have costs and benefits that need to be explored. The use of HEP allows isolated communities and people develop economically and rely less on alternative forms of power generation including diesel engines and gas canisters.</i>		
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. <i>Mapping HEP stations on an OS map of the lake district National park. Visit several sites to include: Church Beck Coniston, River Liza Ennerdale and Glenderaterra Beck Threlkeld. Photographic evidence of changes. Interview local people about changes, as well as the Lake District National Park on policy and river data. Short field investigation on impacts to river.</i>	Individual: <input type="checkbox"/>	Group data collection: <input checked="" type="checkbox"/>
Teacher's approval and comments <i>Excellent ideas here and the cross-topic nature of your study offers a truly interesting insight into the benefits of HEP in locations that have issues associated with rural isolation or access. I do have concerns about the scope of the study and the sheer scale of your methodology – you should consider carefully whether this is achievable in the time available?</i>	Approved: <input checked="" type="checkbox"/>	Not approved: <input type="checkbox"/>
Teacher signature	Date	

AO comment (Methodology): The teacher is right to ask the student for more information about their planned methodology and by phrasing the feedback as questions they are enabling the student to independently respond and decide the best course of action. There may be a concern that the student intends to collect mainly secondary data. The short field investigation is somewhat ambiguous and needs greater clarity. The teacher correctly asks for more information about the practicalities of carrying out the programme of data collection within the time available and queries whether the scope of the study is too broad and unrealistic.

AO comment (Title): The teacher does well to query inconsistencies and the need for greater independence from the student. Importantly the teacher does not provide the answers. It is important that students are encouraged to think of investigations that go beyond their previous fieldwork experiences. Unfortunately, the teacher has missed an opportunity to offer further guidance on the title and planned hypothesis/questions. The student's title is self-limiting as it doesn't include a statement, question or hypothesis that is open to evaluation.

This title is very similar to what we did when we did our practice together in the town just before the summer holidays. Is there a way you can both add a little more individuality to it and a slightly tighter title?

AO comment (Focus): The teacher has provided general guidance that enables the student to pinpoint relevant spec content. However, the student should outline how the title links to the spec content in their own words, rather than simply detailing an area of the specification. The guidance on 'perceptions' is sound advice, which encourages the candidate to reflect on their sub-questions and methodology.

It's going to be critical to establish a clear definition and meaning of "good". You will need to do research to that effect. I'm curious as to why you have used the word "good" here for your focus whilst in the report you've read they refer to "happiness"?

I think that you have a sufficient range of primary data collection techniques here, as long as they are well executed...
 If you are doing interviews, do you want to ask people along roads? Interviews are difficult so you will need to read about creating an interview schedule, for example. Read some back issues of Geography Review.
 The smileometer sounds great. But how does it work? Is it qualitative or quantitative? How might you present this information, and what are the possible analysis opportunities?

Candidate name	Candidate number	Examination Series
Centre name		Centre number
Investigation title <i>People's perceptions of Shrewsbury</i>	How the title links to specification content <i>Paper 2, Diverse Places.</i>	
Planned investigation hypothesis or question/sub-questions <i>(1) Is Shrewsbury a good place to live? (2) How are there differences in perceptions between local people and visitors?</i>		
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. <i>A report has named Shrewsbury as the 8th Happiest Place in the UK. I will use this as a basis for my research and look up how happy is worked out. I might also look to see if secondary data, e.g. Census and IMD shows spatial differences in happiness. I will think about published data and try to find it if it has any limitations. Part of Diverse Places is lived experience of place, so I will focus research in this area to help me understand the geographical background to the issue.</i>		
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. <i>Questionnaires, interviews and a smileometer. Stratified transect in different parts of the town, along roads. Secondary data will be selected information from the census (2011) and I will use GIS to present this.</i>		Individual: <input checked="" type="checkbox"/> Group data collection: <input checked="" type="checkbox"/>
Teacher's approval and comments <i>You have devised an innovative methodology and have clearly considered the research you need to undertake... but at the moment you should consider whether your title and research questions fit closely enough with your investigation focus and methodology. "People's perceptions of Shrewsbury" is a fairly all-encompassing title; what precisely are you investigating?</i>		Approved: <input type="checkbox"/> Not approved: <input checked="" type="checkbox"/>
Teacher signature		Date

If you look at the specification, then I think you are looking at Enquiry Question 2 (p.37). I think there are some ideas in here that will help you narrow the focus and perhaps form a tighter link to the work that we have studied in class. This would be good, since you already have some supporting notes and resources linked to this bit of the course that are useful background reading.

Just make sure this is manageable, and that the research / secondary data and information is really used to give context and to inform the investigation, rather than to act as a 'focus'. In some instances it can be a distraction.

AO comment (Methodology): The teacher inappropriately asks a specific question about the data collection sites, which could be interpreted as a leading question and the teacher goes on to name a specific journal for the student to explore their data collection techniques. The suggestions in red are specific guidance that should be disclosed on the marking form as this level of support could constitute malpractice. The teacher is right to question how the smileometer technique might work, and the student should be encouraged to give further detail about the purpose of the interviews, sampling and types of questions to be asked.

The census data is going to be very important. Remember how we talked about using Output areas as design frameworks when we looked at our urban fieldwork? Using ArcGIS Online will allow you to get that data visually, but can you also use the software to perform any statistical analysis?
 Look again at the mark-scheme for this area of the investigation. You should think about creating the opportunities for high quality analysis.

AO comment (Methodology): The teacher acts as 'facilitator' by providing generic guidance about manageability. But specific guidance is provided about using 'Output areas' for the student's own investigation, undermining the student's independence. In addition naming a specific GIS software to present data and then asking whether that software could perform statistical analysis is not permissible.

Exemplar Independent Investigation Proposal Form – No.5



AO Comment (Title and hypothesis): The student has chosen a suitable title that is well linked to the specification but the teacher is encouraging the student to think about elaborating on the links between the atmosphere and human activity. Strong background research will enable the student to explore this link in full. It is important to encourage students to undertake secondary research independently.

You have chosen a suitable geographical area for your study and your title is well focused. There is plenty of opportunity for primary data collection but remember that it is important to give your investigation context – particularly as we have not covered the concept of microclimates in class. We have plenty of journals, books and magazines in the department so that you can source any relevant material.

This title is well linked to the specification but can you explain clearly how you might develop this theme of impacts of human activity? You will need to do some further reading on this. Could you relate these ideas to current theory in any way?

You will need to show exactly what you understand by microclimate and the factors that might impact upon how it might change with distance from the CBD. You should research this thoroughly.

Think carefully about the necessary data you will need to collect to make informed judgements about the changes that are recorded as you move further from the CBD.

Do you have experience of using your measuring equipment? Is this important? You note that you plan to collect all this data individually. Have you considered any potential benefits or pitfalls of undertaking the data collection as a group?

Is it important to give full consideration to your sampling strategies. You note that you will collect data along a transect. **Could you use multiple transects to collect your data?** How do you intend to sample along the transect? You will need to explain this thinking in detail as part of your finished investigation.

Candidate name:		Candidate number		Examination Series	
Centre name				Centre number	
Investigation title: Does the distance from the CBD have an impact on the microclimate of Scarborough?			How the title links to specification content: This looks at section 3.5.6 Impacts of human activities on the atmosphere at local and regional scales.		
Planned investigation hypothesis or question/sub-questions: There are three sub hypotheses; (1) The temperature will decrease the further from the CBD you travel. (2) The further from the CBD the higher the wind speed. (3) The humidity will decrease the further from the CBD you travel.					
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. I want to see if human activity influences the microclimate on different areas of Scarborough. As I live in the town centre it is feasible for me to collect the data in this area. I will move from the CBD outwards towards the coast along a 1km long transect and take various measurements to see how the microclimate changes and see if built up areas or the coastal areas have the greater impact on the figures recorded.					
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. I will collect data along a transect line from the CBD towards the coast, collecting data on wind direction and wind speed (hand held anemometer and compass), humidity (digital hygrometer), temperature (digital thermometer) and cloud cover (estimate). This data will all be collected on an individual basis.				Individual: <input checked="" type="checkbox"/>	
				Group data collection: <input type="checkbox"/>	
Teacher's approval and comments Although your title is suitable and well-linked to the specification, this proposal requires further work so that you may consider any sources of secondary research that could support your study. You will also need to plan a pilot study to iron out any potential problems with your data collection strategy.				Approved: <input type="checkbox"/>	
				Not approved: <input checked="" type="checkbox"/>	
Teacher signature				Date	

AO Comment (Focus): The teacher is also encouraging the student to think in greater depth about some elements that have been identified e.g. clear definitions of 'built up' and 'coastal areas' during the study. Advising the candidate to consider the meteorological conditions is giving very specific guidance on how to improve the reliability of the data collected. Any advice should be general e.g. 'Can you think of any factors that might impact the reliability of your data and your conclusions?'

Consideration needs to be given to how you will define built-up and coastal areas. Can you think of ways in which these could be defined effectively?

Will you need to consider the meteorological conditions under which you collect your data e.g. winter high pressure and how these conditions could impact your data collection and conclusions?

AO Comment (Methodology): The teacher guides the student to think about the viability of undertaking complex data collection and recording on an individual basis. It is permissible for students to work together to collect primary data as long as all secondary data collection, presentation and analysis is completed independently. The teacher provides some good general guidance on the importance of considering a sampling strategy very carefully. However, advice on using multiple transects is too specific. Any such comments would need to be taken into consideration at the marking stage and would need to be disclosed on the marking sheet submitted with the moderated sample.

Are you aware of any other data sources that could be used to compliment/support your findings? Think back through all the different data sources we have discussed in class. Is there any historical data available to support your theory?

Remember that it is also good practice to complete a risk assessment, particularly if you are going to be collecting data alone in a busy town centre. Try and research the kinds of issues that could be included on this risk assessment.

AO Comment (Teacher approval): The teacher is giving important advice on secondary research that will provide the context for the investigation. However, the instruction to complete a pilot study is too specific and is leading the student to re-think the methodology. Advice previously given on considering group work is more general and therefore permissible.

Exemplar Independent Investigation Proposal Form – No.6



AO comment (Title): The teacher has confirmed that the investigation is linked to the specification and that the enquiry is feasible. The question which prompts the student to research comparisons between the two areas before starting the investigation is useful. However, by providing an example, the teacher is giving specific guidance which directs the student to look at the relative sizes of population.

The scale of your enquiry is suitable and you should be able to collect both primary and secondary data for the two places you have identified.

The two places chosen for study are very different. Have you considered researching comparisons between them in more detail before you start, for instance the relative sizes of population?

Your investigation proposal is based on the specification content in Changing places. However, you should also outline how your title links to the specification in your own words as well as detailing the area of the specification.

The methods of data collection are generally realistic and relevant to the investigation title. The mix of primary and secondary sources is commendable, and although much of the information is qualitative data there are opportunities for quantitative approaches.

However, some of the proposed techniques are repetitive, in particular the subjective surveys of landscape evaluation, shopping, building condition crime etc. You may wish to consider combining some of the indices.

You state that some extended interviews will take place. How will these be organised? How many?

Have you considered how you will use the data collected in the extended interviews? You may wish to refer to the notes you made when we learned about the opportunities and limitations of qualitative techniques.

What sampling strategies will you use - random, opportunistic, systematic, stratified?

You should consider if your proposed methodology will allow you to effectively compare the results from your different surveys. How will you ensure that your samples are representative?

Have you ensured that the secondary sources identified in your investigation focus are reflected in your planned methodology?

Investigation title

To what extent does quality of life vary between the inner city area of Davenport and the outer suburban area of Chaddlewood in Plymouth?

How the title links to specification content

Changing places: 3.2.2.2.1 - Relationships and connections.

Planned investigation hypothesis or question /sub-questions

There are significant differences in the quality of life between the inner city area of Devonport and the outer suburban area of Chaddlewood in Plymouth.

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.

The study will look at how quality of life is different in an inner city place compared with an outer suburban place in Plymouth. The boundaries of the two places will be defined according to Census output areas so that secondary data can be easily compared with primary field data. Quality of life will include several criteria to reflect housing standards and the environmental conditions in which people live. Aspects of quality of life to be considered will include: built environment, access to service provision, crime and safety, traffic noise and safety, social belonging and community cohesion. These aspects will be different for different groups of people.

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.

Primary data collection: (The same methods will be carried out in the two places.)

- Landscape evaluation based on subjective observation. The EQS will have indices or bi-polar scores combined with photos of the worst/best images. 15 evaluation surveys will be completed in each place.*
- Physical condition of buildings/index of decay. 10 surveys will be completed for each place.*
- Shopping survey. This will look at shopping quality and street appearance.*
- Crime perception questionnaires – aimed at residents. 20 questionnaires will be completed selecting a full range of ages.*
- Other questionnaires will collect data about different aspects of quality of life or from different groups. Some extended interviews will also be carried out.*
- Services surveys: eg libraries, post-offices, pubs, doctors surgeries etc.*
- Transport index: frequency, length and cost of public transport.*

Secondary data:

- Neighbourhood Statistics for house prices and population pyramids for the 2 areas by postcode.*
- Services Index: using Google Earth estimate distances to major supermarkets, schools, free cash points, computers etc.*

Individual:

Group data collection:

Approved:

Not approved:

Teacher's approval and comments

Your investigation title is approved. However, further planning is needed before you proceed. You should reflect on whether your data collection is manageable and how you will make sure that all the data is relevant and not repetitive. How can you ensure that some of your methods are workable? Again, you might wish to review what we learned about the opportunities and limitations of qualitative techniques.

AO comment (Links): Appropriate general guidance has been given to prompt the student to briefly describe the links between the investigation and the specification.

Your initial plan appears to be considering a large number of variables. Remember that the scale of study should be manageable. Deprivation and quality of life can be measured in many ways, so you could be more selective in the choice of criteria.

AO comment (Focus): The teacher has provided general guidance to prompt the student to consider the manageability of their investigation. Reference to both levels of deprivation and quality of life is not considered specific guidance in this instance as these have been already been identified by the student as the focus of the study. The teacher is not undermining the student's independence here.

You've explained that you would like to collect data with another student for safety reasons. This is a good idea and I can suggest a suitable partner who has a similar investigation focus

Please remember that you cannot continue to collaborate once your primary data collection is complete.

AO comment (Methodology): The teacher prompts the student to consider how the number of techniques could be reduced to ensure manageability. However, the teacher should have avoided directing the student to specific techniques.

The teacher helpfully suggests that the student should fully consider sampling strategies but again provides specific guidance by pointing the student to the different strategies available. Instead, the teacher could have referenced work undertaken in the classroom to encourage further thinking. For example: 'What sampling strategies will you use? You could refer to the work completed in class about the usefulness of different sampling strategies.'

Generic guidance is given to prompt the student to think of flaws in their proposed data collection and to consider the omission of Census data, the use of which, is specified in the investigation focus. The teacher has also provided appropriate guidance regarding group data collection.

You will not need to amend your proposal form as I have approved your investigation title and focus. However, you should give further consideration to your methodology before you begin your enquiry.

AO comment (Approval): The written approval comments are appropriate. The teacher has also accurately informed the student that he/she does not need to amend their proposal form as their title and focus have been approved.

Exemplar Independent Investigation Proposal Form – No.7



Your title is clear and relevant to specification content. In your focus, you have provided a clear rationale for the area chosen for study. The location is ideal as an example of sand dune succession and should exemplify the characteristics identified.

The methods of data collection are quite ambitious and are likely to produce a large amount of information. Will all the primary data collected link to the focus of your study? **For instance the microclimate data is not really relevant.** Your secondary information will be useful in supporting your primary data.

You appear to be uncertain about some methods. Do you intend to complete them all?

You haven't included any information about sampling in your proposal. Have you considered what type of sampling might be appropriate for each method? Do you have a clear idea how much data you will need to collect for each method? **How will you ensure that there is adequate coverage of the dune system?**

AO comment (Title & Focus): The teacher has confirmed that the title is linked to the specification and that the location chosen for study is suitable.		AO comment (Links): The teacher might have prompted the student to briefly describe the links between the investigation and the specification content. Listing the specification reference and the specification content statement is not sufficient.		AO comment (Hypothesis): The advice here is fine to start with but then becomes too specific. The teacher could give more general advice such as 'Which of your sub-hypotheses are less relevant to the study?'	
Investigation title To what extent do changes in vegetation across Newborough Warren show evidence of primary plant succession?		How the title links to specification content This investigation relates to <u>3.1.6.2 Ecosystems and processes</u> . Concepts of succession: seral stages, climatic climax, sub-climax and plagioclimax. It can also be linked to <u>3.1.6.4 Ecosystems in the British Isles over time</u> . The effects of human activity on succession – illustrated by one plagioclimax. There are connections with <u>3.1.1.3 The carbon cycle</u> Flows and transfers at plant, sere and continental scales.			
Planned investigation hypothesis or question /sub-questions I will investigate succession across several parts of a sand dune area to test the following ideas or sub-hypotheses: 1. The further inland from the sea, the greater the variety and size of plant species. 2. Changes in vegetation are associated with the height and topography of the dunes. 3. Changes in vegetation inland are related to increased soil depth and organic matter. 4 Human activity will affect the natural process of vegetation change, interrupting the succession.					
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. Area selected for field study: Newborough Warren, part of a national nature Reserve in Anglesey, North Wales. The area is deliberately chosen because Newborough has extensive sand dune ridges. My investigation will allow me to investigate the succession of plants as it will show species diversity and coverage. On the older dune ridges, over 200 metres inland, I expect the soils to become more developed and support shrubs and even trees. However the area is visited by thousands of tourists every year which may affect it. It is partly covered with planted coniferous forest, and many parts have been extensively grazed by livestock.					
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. <u>Primary data collection:</u> Primary data collection will be based largely on completing cross sections inland from the coast, using a tape measure, clinometer and ranging poles. I will record percentage vegetation cover and species using a quadrat, and height of plants using a point frame. I may collect soil samples, measuring the pH and organic levels. I will also record wind speed and soil temperatures. I might do some field sketches and draw annotated sketch maps. I will do an EQS at each site to record human activity including noise, litter, trampling, vandalism and footpath erosion. <u>Secondary data:</u> Secondary information will include use of OS and soil maps, vegetation identification books and textbook models of psammoseres. The cross sections will be group activities; all other data collection will be individual.				Individual: <input type="checkbox"/> Group data collection: <input checked="" type="checkbox"/>	
Teacher's approval and comments Although your title is approved and has a secure geographical context, you are advised to look again at the breadth of your proposed study. Planning and completing the data collection on each of your sub-hypotheses will be quite complex, even within a group. Are you sure that all the sub-hypotheses are linked? Can they all be tested effectively in the field? You are advised to be more focused in your aims, and reduce the number of sub-hypotheses. Be more certain about which methods are going to be carried out, and ensure that they are closely linked with the aim of the study. Will 3000 – 4000 words allow you to do this effectively for each of your proposed hypotheses? Bear in mind that all other stages of the enquiry process will need to be conducted independently.				Approved: <input checked="" type="checkbox"/> Not approved: <input type="checkbox"/>	

You have selected a large number of sub-hypotheses here. They are generally pertinent to the investigation but you should reconsider how much data might be needed to test all four hypotheses. **Think about whether the second hypothesis is required.**

A number of different recording sheets will be required. Are these going to be the same for all members of your group?

Think about how you will use the different types of data collected. **Are you confident that the methods of recording human activity will show how interference with plant succession has occurred?**

AO comment (Methodology): The teacher has provided general guidance prompting the student to think about the feasibility of collecting large amounts of data as well as the importance of ensuring that primary data is relevant to the focus of the investigation. This is followed by a comment that directs the student to consider whether his/her methodology will provide him/her with the necessary data to answer the key focus of the investigation. The teacher's questioning of microclimatic data is considered specific guidance. Instead there could be a general questioning of the relevance of each technique. The teacher could have asked: 'Have you considered whether all the data collection methods are feasible? Which methods might produce less helpful results?'

The feedback regarding coverage of the dune system is also specific. It is fine to ask generally about the type of sampling and whether it is representative, but not to ask about specific data sets or methods.

AO comment (Methodology): The teacher has prompted the student to consider whether the small group, collaborating for the purpose of primary data collection, will work together to create a joint recording sheet. This is acceptable in this context but there is a risk associated with choosing to collaborate in this way. Students must be made aware that they should be fully involved in the design of the recording sheet to ensure that they can wholly justify their methodology. Failure to do this may limit their access to marks. The teacher should consider the size and composition of the group to assess whether this will allow for the individual student to be sufficiently involved in the design process.

The teacher has provided general guidance to prompt the student to think about how they will use the data collected but then goes on to direct the student specifically to the EQS of human activity. This would be considered specific guidance. As an alternative, the teacher should have said 'Think about how you intend to use the different types of data collected, considering how they are linked to the underlying theme or hypothesis.'

Exemplar Independent Investigation Proposal Form – No.8

AO Comment (Title and hypotheses):
The teacher has given general guidance regarding the focus of the proposed title and the need for greater clarity in terms of the objectives of the investigation. However, telling the student to cut-down on the number of sub-questions is too specific. The advice on manageability is more general and asks the student to think through the process to decide, independently, what is feasible. Students should link titles directly to the specification but advising that a student uses previous fieldwork to inform their investigation compromises independence. Students can use previous studies as secondary sources of information and data but this decision must be taken independently.

It's not clear from your title whether you have a specific study area – can you clarify? Take a look at the joint-board document that gives all students advice on good practice while forming suitable titles for the investigation. 'Impacts' can be very difficult to measure so you will need to consider the types of impact you can measure and how to measure them.

Well done on explaining this link in your own words. Try to make direct reference to the specification to help sharpen the focus of your study. **You might want to think back to the GCSE coursework we completed on a similar title and use this to help refine your planning.**

Candidate name		Candidate number		Examination Series	
Centre name				Centre number	
Investigation title: To what extent do out of town shopping developments impact on retailing in town centres?		How the title links to specification content: Traditionally retail spending happened in town centres and high streets. Now increased mobility and accessibility, out-of-town shopping centres and internet shopping has lessened the importance of traditional shopping areas.			
Planned investigation hypothesis or question/sub-questions: (1) Why was Banbury Gateway built? (2) How have people's spending habits changed since the building of Banbury Gateway? (3) What are the differences between the the types of shop in the two locations? (4) To what extent do people prefer out-of-town shopping to town centre shopping? (5) How do people perceive each site as a retail location? (6) To what extent does footfall reflect the changes made to retailing in Banbury?					
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. I will look at two areas, Castle Quay, which is a regenerated (2000) area in Banbury town centre, and Banbury Gateway an out-of-town development (2015). This will allow me to focus on the idea that out-of-town shopping areas have direct impacts on traditional town centres. By collecting primary data to compare shopping habits and perceptions in both it will allow me to make judgements on the impacts of the new development on the town centre.					
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. Primary data collection methods will include questionnaires (1 & 3), a footfall survey (5), a classification of retail outlets (2) and perception study (4). Questionnaires will collect both qualitative and quantitative data and a GOAD base map will show the order of retail outlets in both areas (2). A footfall survey (conducted at the same time in both locations) will show a comparison of the amount of people visiting each of the two locations, while the perception study will indicate people's opinions. Secondary data – none due to difficulty in finding suitable sources.				Individual:	<input type="checkbox"/>
				Group data collection:	<input checked="" type="checkbox"/>
Teacher's approval and comments Your investigation links well to the specification but you might want to give further consideration to your sub-questions and methodology regarding primary data collection. Planning and completing all the data collection on each of your sub-questions will be challenging, even within a group. Bear in mind that all other stages of the enquiry process will need to be conducted independently. Will 3000 – 4000 words allow you to effectively analyse and interpret all the data you mention?				Approved:	<input type="checkbox"/>
				Not approved:	<input checked="" type="checkbox"/>
Teacher signature				Date	

What sampling strategies do you intend to use? **You might want to consider stratified sampling in order to ensure a suitable cross-section of respondents for your questionnaires.** How many responses do you aim to collect from your questionnaires and/or perception survey? Perceptions are difficult to measure, so be careful that you choose a suitable method that will allow you to collect and effectively analyse the data that you need in order to draw reliable conclusions.

Is it possible to collect specific data on people's spending habits over time? You might want to spend further time reflecting on the possibilities here?

Don't try to do too much! There are too many sub-questions here to make your study manageable. Are you absolutely clear how each of these sub-questions provides opportunities to present and analyse data? Are they all sharply focused on your title i.e. the impacts of out-of-town retailing on town centres?

You need to think through each of the six stages of enquiry. Remember that you will need to collect, present and analyse the data to answer all these questions so you will need to decide whether this is manageable for you? You can discuss methodologies and collect data in groups but you will have to analyse and interpret this data completely independently.

AO Comment (Methodology): Suggesting a particular sampling strategy constitutes specific guidance and should have been avoided. The teacher should encourage the student to consider the sampling techniques available and to select and justify the most appropriate. The teacher gives sound guidance to the student on further considering how they intend to collect data on spending habits and perceptions. Encouraging students to think of how they will analyse data will allow them to refine their data collection methods effectively.

You mention a GOAD base map. Have you considered where you will source these maps from and if there are current maps available to you? Can you think of other options if these are not available and up-to date?

You also mention that you will not be able to make use of secondary data during your investigation. Are you certain that you can't think of any secondary sources of information that you could utilise regarding perceptions of these two areas?

AO Comment (Teacher approval): The teacher is suggesting that the student needs to refine their methodology as the investigation currently lacks focus and not all sub-questions are well linked to the investigation title. The teacher successfully avoids telling the student which questions to re-think and does not give specific advice on suitable methodologies. The suggestions made will guide the student to think for himself/herself how to tighten the focus.

Exemplar Independent Investigation Proposal Form – No.9

AO comment (Title):
The first and last sentence in the teachers comments are general guidance as the student is encouraged to be clear in their wording. The targeted nature of the questions picking up on individual wording in the title begins to give much more directed guidance however this does not reword the title or take any independence away from the student. What it does encourage, is for the student to plan.

Your title on initial reading seems straightforward however as you read around this topic it will help you to have a clear focus and route for your investigation. What do you mean by energy efficiency? Think about the wording of your title – what exactly is it you are going to be investigating?

Your investigation has definite links to the specification but it would be better explained in your own words as well as the specification sections identified.

AO comment (Focus):
The teacher has given the student general guidance on the focus of their investigation. The teacher is not giving specific guidance as they are re-quoting what the student has included in their title. This indicates to the student that their focus is perhaps too vague and they need to think about how their methodology and data collection will provide them with enough evidence to answer their title.

I think you need to carefully reflect on your investigation focus to ensure it will actually provide you with enough evidence to answer your question. As you have stated 'to what extent' in your title you will need to make a value judgment on this, so think about this in selecting your data collection techniques.

AO comment (Teachers approval):
The teacher's comment indicates areas of the proposal form that the student needs to revisit and 'refine' or 'sharpen' therefore encouraging them to take ownership. The student needs to plan carefully and the teacher's comments can be used and critically reflected on in the students' evaluation. This can show how their investigation evolved as the student became more 'expert' in their topic area. The teacher has given specific guidance (in red) as the student has been directed to climate change and linking their investigation to this topic area.

Centre name		Centre number	
Investigation title To what extent have homeowners in Victoria Road Salford, made their homes more energy efficient?		How the title links to specification content 4.c mitigation strategies to cut global greenhouse gases including: energy efficiency and conservation 4.c adaptation strategies to reduce vulnerability of human populations at risk: including what future homes and transport will look like following adaptation throughout the 21 st century.	
Planned investigation hypothesis or question/sub-questions I am looking to do my primary data collection at a local level, specifically on Victoria Road in Salford. I want to look specifically at how people have adapted their homes to make them more energy efficient such as Smart Metres, loft insulation, light bulbs, double glazing etc. <u>Sub-hypotheses</u>			
<ul style="list-style-type: none"> Loft insulation is the most effective strategy for energy efficiency in the home. Individual behaviour influences energy efficiency more than expensive strategies. Local funding positively encourages people to make their homes more energy efficient. 			
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. I want to examine how individual homeowners have made their homes more energy efficient, either by what they have done physically to their home or by their behaviours e.g. turning lights off. I have chosen my local area, the street I live on as some people have started to modify their homes and I wanted to look at why, how much this costs and whether people's behaviour has changed in their own home and if so why?			
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. To collect qualitative primary data for my investigation I plan to interview homeowners in my street, 6 households in total as I think this will represent a sufficient sample to show what people have done or not done to make their homes more energy efficient and the reasons for this. I want to do semi-structured interviews and I will test my questions on two people to ensure they are clear and I will make any changes to these from feedback. I will look at homeowners who have modified their homes and those that haven't to ensure there is no bias in my data. I am planning to give each household in my street a questionnaire to complete about their homes and I am looking to use both open questions and closed questions where the data could be tabulated, graphed and analysed in more of a quantitative style. For secondary data I will look at local government strategies on energy efficiency and the funding available to help homeowners. I will research people's electricity usage (quantitative data) before and after they make their homes more energy efficient.		Individual: <input checked="" type="checkbox"/> Group data collection: <input type="checkbox"/>	
Teacher's approval and comments Your investigation is clearly linked to the specification however it would be good to see it embedded in a strong geographical context such as climate change; make sure you do some reading. You have chosen an appropriate scale for data collection and with a little refinement and sharpening up in your methodology to include sampling you have a potentially 'rich' source of local information.		Approved: <input checked="" type="checkbox"/> Not approved: <input type="checkbox"/>	
Teacher signature			

I am pleased to see your data collection is at a local level. Why have you chosen to look at energy efficiency? How does this fit with the topic in the specification? **You could link this to climate change in your introduction.**

Ensure that you are careful and consistent with wording e.g. resident / homeowner.

Do you have a clear idea, what information / data you would collect for each of these sub-hypotheses?

You have discussed two main primary data collection techniques; do you think this will provide sufficient information / data to answer your title?

Sampling needs to be more explicitly discussed so that you are clear how you will 'test' your data collection techniques. What is it you want to find out and how will this help to answer your title?

The questionnaire per household is not manageable. This has the potential to generate too much data for analysis, how will you deal with this?

Have you provisionally looked at the secondary data you mention here? Is this information available?

Your investigation needs careful planning and this proposal form helps to think through the initial stages. You need to go back to your plan and focus ensuring that you know how your investigation will break down and what it is you are looking for. Think about what data is most important and most tightly linked to your title and the most effective ways to collect this.

AO comment (Methodology):
The teachers' guidance is general as they have used a series of questions to encourage the student to reflect on their ideas / plans. Whilst there is direct reference to sampling the teachers comment prompts the student to go back and independently decide on how to refine their techniques rather than telling them specifically what to do for each one. The teacher gives specific guidance in red as he / she directs the student away from conducting a questionnaire per household, due to the volume of data this could potentially generate.

Exemplar Independent Investigation Proposal Form – No.10

AO comment (Title):
The teachers' comment begins and ends with general guidance however the section highlighted in red is specific guidance. Here the teacher is directing the student towards specific wording in their title and giving them a clear suggestion about what to consider.

Your title has a clear location for fieldwork however will you look at the whole of Sheringham? You will need to have a clear idea what you mean by 'sufficiently resilient to coastal erosion' as you plan your investigation and break your title down further. In using the word sufficiently **you will need to find a way to measure this** so that you can make a judgement as you gather evidence.

Your investigation has definite links to the specification but it would be better explained in your own words as well as the specification sections identified.

Your focus is generally fine although I do think it could be a bit clearer as you are potentially looking at a lot. As you are reading around this topic revisit this section and think through what it is you want to look at and what data you are going to collect to explore this.

Candidate name		Centre name		Centre number	
Investigation title The coastal management strategies at Sheringham are sufficiently resilient to coastal erosion.			How the title links to specification content 2.a. influence of geomorphic processes at the coast 4.a. coastal landscape that's being managed, management strategy being implemented and the reason for it		
Planned investigation hypothesis or question/sub-questions My primary data collection will take place at the coast in Sheringham, Norfolk. This stretch of coastline in North Norfolk, has a number of coastal management techniques being used and it is a safe and accessible area to collect my data.					
Sub-questions <ul style="list-style-type: none"> • How effective are current coastal management strategies in preventing erosion? • How much coastal erosion has taken place at Sheringham over the last 50 years? • How have the coastal management techniques slowed down coastal erosion in Sheringham? 					
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. Sheringham suffers from serious erosion and as this area has a strong local community and is an important tourist area there have been a number of management strategies put in place such as a sea wall, rock armour and groynes. I am interested to find out if the coastal management strategies are working and stopping erosion on this stretch of coastline.					
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.				Individual: <input type="checkbox"/> Group data collection: <input checked="" type="checkbox"/>	
Primary data collection techniques <ul style="list-style-type: none"> • Beach width and angle • Wave height and energy (frequency) • Annotated field sketches of cliffs, beach and coastal defences • Cost benefit analysis • Measure the strength of the coastal defences • Interview local council / Environment Agency to discuss coastal erosion and management strategies Secondary data collection techniques <ul style="list-style-type: none"> • Rates of erosion at Sheringham for the last 50 years • Maps of coastal management strategies / plans • Local council coastal defence plans / shoreline management plans 					
Teacher's approval and comments You have an interesting and valuable investigation outlined here. You have some terminology in the title e.g. 'sufficiently resilient' that you need to have a clear understanding of from your reading as this will help you refine your data collection techniques. It is not about the volume of data you collect but the skill in deciding what to collect and why so that your investigation is manageable in the time you have available. Make sure you get to know the 'geography' of Sheringham as this will help you make sense of your findings from primary data collection.				Approved: <input checked="" type="checkbox"/> Not approved: <input type="checkbox"/>	
Teacher signature					

AO comment (Focus):
The teacher's guidance is general and encourages the student to continue his / her thinking and reflection as they become more 'expert' in their topic area.

You have potentially identified a large area of coast for your primary data collection, think about what is manageable in the time period you have available and where exactly you will collect your data and why?

It is positive that you have considered safety when planning your investigation. This will however need further consideration by looking in more detail at potential risks e.g. tide times, unstable surfaces (cliffs) and slipping risk (rocks).

With your sub-questions, these should be testable questions which enable you to break your title down. Could some of these **be included in your introduction to set the scene of your investigation?**

You have listed a wide range of primary data collection techniques - however I am not sure all of them are relevant for your title and sub-hypotheses.

Whilst you have clearly considered primary and secondary data, you have not indicated qualitative / quantitative techniques. You have mentioned measuring the strength of coastal defences – **don't forget to look up Hudson's equation and collect data so that you can calculate the resilience of the rock armour.**

Due to the type of fieldwork you are doing, you will need to carry out a risk assessment.

It is important with your methodology to think about how you will analyse the data collected to ensure it is manageable and relevant.

AO comment (Methodology):
The teacher has given significant feedback in this section suggesting that the student needs to be clear on what they are collecting. Particular aspects of the teacher's feedback go beyond general guidance (highlighted in red) where he / she directs the student to a particular approach e.g. Hudson's equation.
The teacher alerts the student to the lack of focus on quantitative / qualitative techniques without giving specific guidance on his / her listed techniques.

Your investigation needs careful planning and this proposal form helps to think through the initial stages. You need to go back to your title and focus ensuring that you know how your investigation will break down and what it is you are looking for. Think about what data is most important so that you do not end up collecting too much. The most effective way is to plan what you will collect, how it will be collected and how the data will be analysed.

AO comment (planned investigation):
The teachers comment begins as general guidance and the question at the end of the first paragraph gives students an opportunity to reflect. The guidance becomes specific as the teacher suggests a structure / information to be included in the students' introduction.
Whilst the teachers guidance on safety is specific, this is essential as part of the risk assessment process.

Exemplar Independent Investigation Proposal Form – No.11

AO Comment (Title and hypothesis): Although the title is appropriate there is a lack of coherence to the sub-questions. There are too many strands to the enquiry, not all are relevant to the title itself. The teacher tries to make the student think about the range and order of the sub-questions but offers guidance that is too specific by suggesting re-ordering of questions. Directly suggesting that OS maps be used is also too specific. General advice would be to ask the student to think of ways to accurately locate the study area.

Focusing on a management strategy currently underway is an ambitious choice but you have wisely chosen an accessible, local area to undertake your fieldwork. **There are good opportunities to make effective use of maps to locate your study area.** There will be plenty of opportunities to collect appropriate data if fieldwork visits and data collection strategies are well-planned.

Consider whether you can see a clear narrative through this investigation? Do your sub-questions form a clear and logical sequence? **Could you consider re-ordering your key questions so that (2) follows (3)?** How will you measure the extent to which conservation is being considered within the project? You will need to give this some further thought.

AO Comment (Focus): The teacher succeeds in staying away from guidance that is too specific by discussing ideas already mentioned by the student such as climate change and the ideas of different stakeholders. The advice is given to encourage the student to keep focused on the investigation title throughout.

You show excellent awareness of what data needs to be collected to address each of your sub-questions. There are plentiful opportunities to collect both quantitative and qualitative data. If you are completing interviews, have you thought about whom will you speak to and how you could present and analyse this data effectively? **Could you use one of the coding methods that we have seen during lessons?** Interviews can be difficult to conduct so it would be good to read about how to create effective interview questions. Make sure that you research this thoroughly.

Your plan is well focused on the impacts of human activity on coastal processes and I am sure that you will be able to make good use of your local knowledge to develop your investigation. There is considerable scope for geographical discussion relating to coastal processes and climate change so you will need to be careful to remain focused on your investigation title throughout. You mention the points of view of various stakeholders. Have you considered who the most important stakeholders are and how you might go about securing access to them?

Candidate name.	Candidate number	Exam Series
Centre name		Centre number
Investigation title: How successful will management of The Hinge at East Head be in the prevention of potential floods in West Wittering?		How the title links to specification content. This investigation relates to the impacts of human activity on coastal processes and landforms. The specification asks us to consider both positive and negative impacts and I am hoping that this investigation will allow me to consider potential benefits and costs of the flood prevention scheme.
Planned investigation hypothesis or question/sub-questions. I have four key questions for this investigation, (1) What is the potential flood risk to West Wittering? (2) How will coastal processes and landforms be affected by the adaptive management strategy? (3) What are the proposed management strategies? (4) To what extent is conservation a consideration with respect to this SSSI?		
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. The Hinge, a shingle spit formed by longshore drift, has been subject to a number of management strategies over recent years – some more successful than others. It is an SSSI, an AONB and is important for recreation and flood prevention. If The Hinge is breached it could have a serious impact on local flooding. I live in West Wittering so have good knowledge of the area and the proposed plans. The focus will be how effective the current management strategy will be at preventing flooding in the area in the face of a changing climate, higher tides and more frequent storms. It is likely that there will be disagreement regarding the potential successes and failures of the current adaptive strategy, depending on the points of view of different stakeholders.		
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. Primary data collection will include questionnaires of visitors and a variety of stakeholders. Areas perceived to be under threat will be mapped using secondary data from the Environment Agency. To measure the effect on landforms, I will measure the rate of longshore drift and construct beach profiles and long profiles across the spit. I will interview local stakeholders to find out about their views on the proposed management strategy. Various websites relating to the area will also be considered, as will local media in order to collect secondary data about perception. Collecting data for longshore drift, beach transects and beach profiles will be group data collection activities, all other data collection will be individual.		Individual: <input type="checkbox"/> Group data collection: <input checked="" type="checkbox"/>
Teacher's approval and comments You have chosen an appropriate title and study area for your investigation and show good understanding of the methodologies that you will use to collect and analyse your data. You have the makings of an excellent investigation here so bear in mind some of the points that we have discussed regarding your sub-questions. Some of these are very descriptive in their nature. You will need to do re-consider in order to sharpen the focus of this investigation and ensure that it is manageable for you.		Approved: <input checked="" type="checkbox"/> Not approved: <input type="checkbox"/>
Teacher signature		Date

AO Comment (Methodology): The teacher gives advice regarding possible ways in which data collection methods (e.g. interviews) could be enhanced. The suggestion that the student should use particular coding methods to analyse this data is too specific and should have been avoided. Sound general advice is given regarding managing independence within a group work scenario. Students should carefully consider the health and safety implications of any fieldwork undertaken and the teacher is right to remind the student of the importance of undertaking a thorough risk assessment before embarking on fieldwork.

Try to consider what we talked about in class regarding different sampling techniques and how to decide on a sample size that will allow you to analyse your data effectively. If you are collecting this data as a group, make certain that you have agreed on appropriate strategies before venturing into the field - you will need to describe and justify all your data collection methods in your final report and you will have to do this independently. You will also need to give full consideration to a risk assessment when collecting data in a potentially dangerous environment like this. Have you thought about the main characteristics of this risk assessment yet? There is plenty of advice and guidance available on how to undertake fieldwork safely so make sure you read up on this.

Exemplar Independent Investigation Proposal Form – No.12

AO comment (Title):
The wording in the teachers comment gives the student some aspects to think about and reflect on without giving him / her specific guidance on any changes to make to their title. The comments encourage the student to be clear on his / her meanings; however the scale of investigation comment is specific guidance as it removes independence.

You have picked a broad title but I can see why you have chosen it as I know you are involved with a local youth group. Cambridge as a city is not a 'local area' but I am assuming you will pick a much smaller scale for fieldwork / data collection? There are terms in your title that you need to be clear what you mean so that you know what data to collect.

It is really good to see this written in your own words as you have thought this through however you need to be explicit in your links with the specification content

I am pleased to see that you have defined what you mean by 'local area'. Can you get hold of data at this local level? Do you remember we talked about super output areas in class? This might even be too small for that.

The purpose of your sub-questions is to break the title down; do you think yours do this? What is it you want to find out and how will you

AO comment (Planned investigation)
The teachers comment above in red is specific guidance as they alerting the student to a particular type of place boundary / data source.

The data collection techniques you have identified are sound for a qualitative methodology. You need to 'flesh out' and be much clearer on the actual data you will collect and how this links back to you sub-questions as well as your title. Your data collection needs to be manageable for example your interviews and questionnaires could generate lots of data / information – how will you manage this and how will you analyse it?

For secondary data, these are sensible ideas. Have you researched whether this data is currently available?

Centre name		Centre number	
Investigation title To what extent do young people feel engaged with their local area in Cambridge?		How the title links to specification content When people live in a place or visit a place they can have or develop an emotional attachment to it. I think what people do in a place for example where they walk, activities they do etc. forms their attachment. I also want to look at how far people engage in a place and why that is.	
Planned investigation hypothesis or question/sub-questions For the local area I am defining this as the Romsey Ward – Mill Road area in Cambridge, this includes schools, a youth centre, park, boxing club, shops and cafes as I am hoping these will give me enough access to young people for the purpose of data collection. My sub-questions for investigation are: <ul style="list-style-type: none"> • What activities to 14 – 18 year olds do in their local area? • How positive do young people feel about their local area? • How and why do young people behave differently in a local area? 			
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. The focus of my investigation is looking at young people in Cambridge identifying how they engage in their local area and why they do or do not engage. As a young person I feel more comfortable in some areas than others and I know that different people will take part in different activities in their local area and I wonder why that is? I have referred to young people and for this I am narrowing this down to 14-18 year olds.			
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. As I am looking at what people do in their local area and how they feel about it, qualitative techniques would work better. I plan to do a survey (and then map) of all the activities in Romsey Ward Cambridge which are available to young people. I would like to interview small groups of young people to look how they feel about their local area and how they behave. I am planning to give a questionnaire to approximately 20 young people to find out what they do in the local area, how they feel and behave. I am going to trial my questionnaire and interview questions on two friends to make sure they are clear and I will get helpful responses for my analysis. The questionnaire sample of 20 should be sufficient to represent the views of young people and I will make sure I have males, females and a mix of age groups. For secondary data I want to collect maps showing the distribution of activities in Romsey Ward, and collect any census data about the number of young people in the ward. I will get in touch with places that young people use such as Romsey Mill and see if they have any data on the activities people engage with.		Individual: <input checked="" type="checkbox"/> Group data collection: <input type="checkbox"/>	
Teacher's approval and comments You have the beginnings of a really interesting investigation, if you take these ideas and plan in greater depth following a period of background reading and some initial research I think your ideas will come together much more clearly. Can I suggest that you do some thinking and resubmit your proposal form having read through the comments and feedback given so that you are very clear on what you investigating and how you are going to do it.		Approved: <input type="checkbox"/> Not approved: <input checked="" type="checkbox"/>	
Teacher signature			

I can see why you are interested in doing this investigation and I think it has the potential to be interesting and relevant however it needs to be more carefully thought through in terms of your plan. Your investigation needs to be clearer in the following areas:

- What age group /s you are investigating and why
- Give a definition of engagement in a local area How will you measure it?
- Is feeling comfortable the same as engagement?
- Identify activities that can be measured and think about how you will do this

AO comment (Focus):
Much of what the teacher has written in the feedback is specific guidance .The student is drawn to very specific wording in the focus and asked to elaborate on this, define the terms and link this to the data collection. The teacher needs to be more of a facilitator, asking questions about the student's investigation so he / she has 'food for thought' and can go away and research further thus retaining independence.

AO comment (Methodology):
The teachers comments are general guidance , whilst they do mention the student's interviews and questionnaires they do not give any suggestions about how to make the data collection methods more manageable or how to refine these.

The teacher has clearly indicated to the student that their data collection is overly ambitious and that he / she needs to be clearer in the methodology and its relevance. The guidance is general as the teacher does not suggest any pathways forward apart from the student doing some reading and giving more depth and detail to the plan. The teacher could perhaps alert the student to planning for their analysis as he / she do not seem clear on this.

It is really important to do an overall plan for your investigation, which you have started to complete already through this proposal form. It all starts from unpacking your title through the key terms used and working out what it is you want to investigate and how you will do this. Sometimes less is more, so good quality, manageable data collection that allows you to go into detail is preferable to collecting lots of data which can be difficult to work out what to use.