

Year 12 Geographical Investigation: the sand dune succession at Braunton Burrows

The five stages of enquiry

Your investigation **MUST** be clearly set out under the following sections/stages:

1. Identification of the question/hypothesis;
2. Development of a strategy;
3. Collection and recording of the data
4. Presentation of the data;
5. Analysis and interpretation of the data;
6. Summary and evaluation.

All students should follow these stages.

Some students may also be able to show that they have revisited previous stages in the sequence 1 to 5 and revised work done in them if this is required.

Stage 1 - Identification of the question/hypothesis

- Make some introductory comments about Braunton Burrows: history, formation, development, present status. A location map of the area should be included. Perhaps a specialist map (geological or soil map).
- Clearly state **ONE** hypothesis or question. It may or may not relate to distance from the strandline.
- Explain the theory behind your hypothesis or question. What are you expecting to happen and why?

Stage 2 – Development of a strategy

- Describe the route of the transect. Another map might be useful to show this.
- Set out a plan of how your time was used.
- Describe the primary data that was collected.
- Describe the sampling techniques used in the collection of your primary data.
- Outline the risk assessment that was considered when collecting this primary data.
- Describe the secondary data that has been used (tide tables and weather data)

Stage 3 - Collection and recording of the data

- Organise the raw data from your booking sheet into a neat tabular form.
- Include a neat version of the soil analysis booking sheets;
- Include the secondary data that is relevant to your investigation.

Stage 4 – Presentation of the data

- Draw one scattergraph to show the relationship between your two chosen variables.
- Select at least two further presentational techniques to display your data. The techniques should be appropriate to your own hypothesis.
- Include any further photographs (annotated) or maps that you feel are appropriate to your investigation.

Stage 4 – Analysis and interpretation of the data

- Describe key patterns in the graphs and other techniques you have used, including anomalies.
- Complete one Spearman Rank test to analyse the correlation between your two chosen variables. Justify the use of the test. **Most** students should test their result for significance (i.e. analysing a figure of, for example, 0.7, is not enough at AS level)

- Suggest reasons for both the expected and unexpected results. Refer to the primary and secondary you have collected. Use your geographical knowledge and understanding to use include both physical and human related reasons.
- Interpret your statistical test using some geography.
- Refer explicitly to other maps and photographs you have included.
- Begin to make some statements about your original hypothesis.
- Include quotes and sections from other written sources of information such as books and news articles (clearly reference them – see below)

Examiners prefer it if you integrate your data presentational and analysis together. For example, include the analysis of the scattergraph on the same page as the graph

The analysis is an important section. It tells the examiner how good a geographer you are.

Stage 5 – Summary and evaluation

- Summarise your findings by referring explicitly to the main pieces of evidence that will allow you to accept or reject your hypothesis. Conclusions must be justified with reference to the hypothesis.
- Comment on the significance of your findings in the light of the data's reliability and accuracy.
- Critically evaluate all aspects of your investigation, not just the collection of the data.
- Suggest new lines of enquiry, e.g. the implications of your study for the management of the dunes.
- Suggest other data that may be required to help develop the investigation further.

Allow enough words to write a decent conclusion. Too many students pay little attention to this importance section

Wider reading and helpful materials

Use different sources of information to enhance the quality of your work. This booklet and other handouts give you hints and ideas about how to select and set out the information and what to include. The following is a list of essential reading:

- Hart, C (ed) (2000): **Geography for AS** (Cambridge University Press)

Pages 52-55 give you some basic information on the natural and human processes occurring in a sand dune system. Pages 247-258 provide you with advice on selecting the right graphs, carrying out statistical tests and how to go about the different stages of enquiry.

- Keene, J (1996): **Braunton Burrows Ecology Trail** (Thematic Trails)

A very detailed look at Braunton Burrows. Using this book is essential if you are access the higher marks in your analysis.

- <http://atschool.eduweb.co.uk/kingworc/departments/geography/index.htm>

An informative website which will help you decide and justify the graphs, maps and statistics you are using. Also very useful in your preparations for the exam in June.

- Various websites on sand dune systems and Braunton Burrows

Overall presentation of the investigation

References

Plagiarism is when you use someone else's work, words and diagrams and claim them as your own. If you use a section of text, a diagram, a graph or picture from a book, article or internet site you should include a reference.

- If it is text then you might put 'quotes around the section and then include a reference at the end (Hart, 2000, p52).
- If it is a diagram, map or graph put the reference at the bottom.
- If it is an Internet site do the same as the first two points but include the name of the website instead (www.northdevongeography.com)

Make a list of the references you have used in a bibliography at the end of your work. They should be in alphabetical order. Look how one example is set out:

Hart, C (ed) (2000): **Geography for AS** (Cambridge University Press)

Putting the investigation together

This section gives you some guidance on how the investigation should be set out.

- Title page at the front with the main title of the investigation and your name;
- Contents page showing where different sections of the investigation can be found (so all pages need to be numbered);
- Illustrations, diagrams, maps graphs and photographs need to be clearly titled and numbered (e.g. Figure 1);
- Bibliography at the back (see above)
- Appendix to contain raw data such as your primary data and soil analysis booking sheets;
- A4 paper should be used for the report. A3 can be used for illustrations but must be folded to A4 size;
- Do not use plastic pockets for individual sheets. No folders are required. A single hole should be punched into the top left hand corner of the pages and held together using a treasury tag.
- The word limit is **1000 words**. As you will see from the mark scheme below this is very important. An accurate word count of the continuous prose should be provided but should not include headings, subheadings, titles, genuine tables and annotations.
- The report may be hand-written or word-processed. **It is strongly recommended that you use IT for your entire investigation.**

Mark scheme

The following section is taken from the exam board's literature. Read it carefully.

The investigation report carries 15 of the 75 marks available for the Geographical Investigation module. The investigation should be a complete study. Both primary and secondary data should be included .

13-15 marks	A complete geographical investigation with appropriate use of both primary and secondary data. The work is very clearly expressed with correct use of geographical terminology and will be almost entirely free of errors in all sections. It will not exceed 1000 words and may be less than 1000 words.
10-12 marks	A complete geographical investigation using both primary and secondary data. The work is clearly expressed with mainly correct use of geographical terminology. The work may have a few errors.
7-9 marks	A complete geographical investigation. Primary data is used but there is little use of secondary data. The work geographically sound but may have some weaknesses in written communication and geographical terminology. The work is substantially correct but there are errors.
0-6 marks	A submission that is not a complete geographical investigation. Poor or no use is made of primary and/or secondary data. The work may be poorly expressed and geographical terminology may be weak. Much of the work may not be correct and there are errors.

Check list