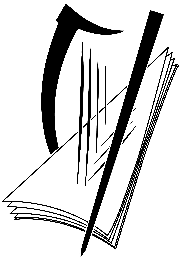
**GI – M23/M24 2024L005N2EL**



Coimisiún na Scrúduithe Stáit

State Examinations Commission

Leaving Certificate Examination 2024

Geography Geographical Investigation – Reporting BookletHigher and Ordinary Level

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| **Examination Number** | 113652 | |
| **Date of Birth** | 27/06/06 | For example, enter  3rd February 2005 as 03/02/05 |

**Information on the use of the digital version of the reporting booklet**

This version of the booklet is designed for completion using a PC, laptop or tablet. You are only allowed to use this version if you have been told that you will be granted approval for the use of a word-processor, text-to-speech technology, or a scribe for the written examination in Geography. If this is not the case, you must use the regular version of the booklet and handwrite your answers in it.

Type all of your work into the relevant boxes in this booklet. You are not allowed to attach or insert any other material. You are not allowed to expand the boxes or to reduce the font size. The completed booklet must be printed out and submitted in the same way as all other (handwritten) booklets. Additionally, the digital copy should be submitted on one of the following forms of removable media: CD, DVD, SD card, or USB flash drive. The requirements for the Coursework Journal are given below.

This booklet is available in Irish.

**Geography – Information for Candidates**

* You must submit your completed Geographical Investigation Report to your teacher by the date specified in the coursework brief.
* Write your answers in blue or black pen. You may use pencil in sketch-maps, graphs and diagrams only.
* This examination booklet will be scanned and your work will be presented to an examiner on screen. Anything that you write outside of the answer areas may not be seen by the examiner.
* The report - based on the selected investigation topic - must be completed in the Reporting Booklet, using the prescribed structure.
* The written element of your Report should not exceed a **total length of 1000 words**. You may in addition, of course, also draw graphs, sketch-maps or diagrams in the appropriate spaces provided. You are not allowed to use software to create these – they must be your own hand-drawn work. You can include them either by scanning them and using “copy and paste” to insert them into this electronic booklet, or by drawing them onto the booklet after you have printed it out. The Booklet gives a maximum number of words for each stage of your report. You should not write more than this.   
  **If you present material in excess of the required length you will lose marks. Do not insert any extra material – paper or otherwise. Any extra material inserted into the booklet will not be marked. Examiners will mark only what is presented on the pages of the booklet itself.**
* The Report presented for assessment must be **your own individual work** – authenticated by yourself and by your teacher.
* The Investigation and Report must be completed under the supervision of your teacher. If the coursework is not completed under your teacher’s supervision, she/he will not be able to validate the work as being your own individual work when requested by the State Examinations Commission to do so.
* Primary sources should make up **at least 60%** of the information gathered, while secondary sources may provide the remainder. All secondary sources used (books, journals, web-sites, etc.) must be duly acknowledged.
* You must reference and acknowledge all research sources used such as: publications including books, professional journals and government reports; online sources and other types of media; any material generated using artificial intelligence (AI) software or applications; and material from specialist organisations and relevant individuals. To include such material without properly referencing the source will be considered plagiarism. In addition, the copying from, or reproduction of, material from such sources may also be considered plagiarism.
* It is recognised that the field-based work in a geographical investigation may be undertaken in groups, such as a class group. **However, the report must in every case be the individual’s own work.** Direct copying of material from secondary sources – other than essential references, e.g. definitions - is not permitted. Where there is evidence of collaboration or copying in the reporting of any aspect of an investigation, the report presented will be deemed invalid.
* In instances where a report cannot be authenticated as a candidate’s own work, the State Examinations Commission will take appropriate action. This often results in the work presented being deemed invalid and marks awarded in respect of it being discounted when determining the overall examination result.
* Any incidence of suspected copying, improper assistance from another party, plagiarism (which includes the use of AI software) or procurement of work prepared by another party will be thoroughly investigated. Candidates are liable to having penalties imposed as provided for in the Rules and Programme for Secondary Schools. The penalties include loss of the subject, loss of the entire examination in all subjects, or being debarred from the Certificate Examinations in subsequent years. There may be serious consequences for any other party involved in improperly assisting a candidate, as the Education Act 1998 provides for certain criminal offences in relation to the conduct of the examinations. Teachers and the authorities of schools are familiar with the detailed requirements to ensure that practical work is valid for examination purposes. Candidates should comply fully with all requests which are made and which are designed to enable authentication of their work.
* Remember: responsibility for complying with the examination requirements rests with **you**, the candidate. If the requirements are not followed, your teacher and the school authority will have no choice but to bring this to the attention of the State Examinations Commission.
* Bonus marks will not be awarded to any Geographical Investigation Report completed in Irish. Bonus marks for answering through Irish will only apply to the final written examination.
* Please keep this booklet in good condition so that it can be fed into a scanning machine. Do not apply stickers, adhesive plastic or any other covering to it.  You should keep it in a cardboard wallet for protection over the course of its use in school.  Remove it from any such wallet when you are submitting it.

**Report Structure and Mark Allocations**

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| **Stage** | **Content** | **Mark Allocation**  **Higher and Ordinary Levels** |
| 1. **Introduction** | **Aims or Hypotheses**  *Maximum of 50 words* | **5 marks** |
| 1. **Planning** | **Identifying:**   * **Information required** * **Method/Tasks of gathering information**   *Maximum of 100 words* | **5 marks** |
| **3. Gathering of Information** | **Description of the gathering process. Description of for example:**   * **Tasks/Methods** * **Use of equipment** * **Recording of information**   *Maximum of 450 words* | **40 marks** |
| **4. Results, Conclusions,   Evaluation** | **Analysing information to:**   * **Establish results** * **Draw conclusions** * **Evaluate the process and outcomes in the context of aims or hypotheses**   *Maximum of 400 words* | **30 marks** |

**5. Presentation of Results 20 marks**

**Examiners will expect you to present your results in graphic form and to discuss them in Stage 4. There must be at least two different types of presentation.**

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| **Prescribed Investigation Topic**:  Investigate the impact of the geomorphic process of erosion on the formation of the landscape in a fluvial or coastal or glacial environment |

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| **Title of Investigation**:  A close look at the coastal geomorphic process of erosion on formation of Corbawn Beach, South County Dublin |

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| **Date of Completion**:  19/04/2024 |

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| **Length of Report (Word Count)**:  1000 |

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| **Stage 1: Introduction (5 marks)** |

*Maximum 50 Words*

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| Hypothesis  To study the processes of erosion active as beaches are normally formed by deposition at Corbawn Beach, and Shanganah cliffs, Shankill Co, Dublin. To achieve this we set out to;   * Calculate the effects longshore drift * Measure wave frequency and its effects * Determine the Cliff height * Examine the beach fabric (Sediment shape & size) |

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| **Stage 2: Planning (5 marks)** |

*Maximum 100 Words*

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| Planning:  I used the OSI application Geohive was used to evaluate sites around our school to determine a suitable field study location.  Factors including ease of access and distance from our school were considered.  I used accuweather.com to check the weather conditions to attempt to find a date that also lined up with the tides using this information we decided on a date September 5 2023  We used sailing.ie to examine the tides and to find the optimum conditions  We gathered and created the equipment needed and practiced using them within the school grounds  We designed worksheets to record our results on the day |

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| **Stage 3: Gathering of Information (40 marks)** |

*Maximum 450 Words*

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| Backshore:  Cliff Height:  We first arrived at the cliff and we observed aspects of human activity as well as erosion, there was a pipe sticking out from the cliff as it had been exposed over time.  The Equipment we used was a handmade clinometer, a trundle wheel, and a measuring tape. I stood with the clinometer and lined it up with the clifftop, I moved backwards and forwards and with the help of Student-A was able to determine the 45-degree angle, once this was found Student-B used measuring tape and a spirt level from my eye level and marked the point on the cliff. and Student-C from ground level to that point. We used a calculation to get the cliff height. We then preformed the experiment 2 more times at sperate places on the beach to get an average  Beach Fabric  Using the same group as before we decided to perform a beach fabric analysis, we observed that closer to the sea the rocks where much smaller then those on the backshore. To ensure there was no bias we made sure no one was behind us and threw the quadrant over our heads. We chose 10 rocks. Student-A tested the length and roundness using a ruler and Student-B tested the hardness of the rock and chose Hard Medium or Soft using a nail. I used a dropper and HCL to test if the rocks where limestone, we then as group decided what rock type it was and noted our results we then repeated this on the foreshore |

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| **Stage 3: Gathering of Information (Continued)** |

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| Foreshore:  Longshore Drift:  Student-C measured 10 meter distance on the shore using the measuring tape. We then used ranging poles to mark this on either side. I got the orange and the stop watch ready I threw the orange to the left of the pole. Student-A stood by the first ranging pole and when the orange passed it told me to start the timer, I monitored the timer to ensure it did not stop early, Student-B was standing by the other ranging pole and called out when the orange passed. I then stopped the timer. We did it twice more to get an average result.    Wave Frequency:  For this experiment me and Student-A paired up together. We saw several large rocks sticking out of the water. I timed using a stopwatch one minute while student-A counted how many times the waves crashed on the rock. After a minute passed we stopped and recorded the number. We repeated twice, swapping roles each time. We ran into an issue hearing each other as the wind had picked up and was harder to hear each other |

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| **Stage 3: Gathering of Information (Continued)** |

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| **Stage 3: Gathering of Information (Continued)** |

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| **Stage 4: Results, Conclusions, Evaluation (30 marks)** |

*Maximum 400 words*

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| Results:  Cliff Height:  Measurement: 9.11m, 10.13m,11.1m  Average:10.11m  Beach Fabric:  See figure  Longshore Drift:  Measurement: 1:43 mins ,2:49 mins,1:45 mins  Average: 2:05 mins  Wave Frequency:  Measurement: 17,16,14  Average: 15.66 |

You must use this space to draw any graphs or diagrams to illustrate your **RESULTS**.   
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| **Stage 4: Results, Conclusions, Evaluation (Continued)** |

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| Conclusions:  1. After measuring the size of the cliffs as well as analyzing the cliff face we concluded that the beach has a high number of destructive waves, this can be seen by the human-caused cement found at the bottom of the cliff as well as the pipe that was sticking out of the cliff. Evidence of this claim can also be seen as there is large amount of rock Armour present along the base of large parts of the cliff  2.  The beach fabric analysis shows us that the rocks at the backshore are slightly larger on average then those at the foreshore this can be for several reasons combined with the fact that the roundness on the backshore is also higher we can conclude that many of the rocks have undergone erosion such as attrition.  3.  The presence of longshore drift means that beach material is being transported along the beach. This can lead to abrasion occurring. Longshore drift moves sediment in a zigzag pattern across the beach therefore erosions is constantly occurring as beach fabric is being removed  4.  The wave frequency average of 15.66 waves per minute suggests that the waves are destructive due to the speed at which they are hitting the shore. This can lead to higher levels of erosion, reducing the size of beaches. This also leads to human infrastructure and housing being threated. This can be seen at Corbawn beach as several houses are at risk of collapse at the edge of the cliff |

You must use this space to draw any graphs or diagrams to illustrate your **RESULTS**.   
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| **Stage 4: Results, Conclusions, Evaluation (Continued)** |

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| Evalutation:   1. An issue we ran into during the cliff height experiment was our use of a homemade clinometer while being cheaper then then a digital alternate made it very difficult to get an accurate result for the height of the cliff. A digital clinometer would make it much quicker and more accurate allows us to take more measurements 2. The use of a ruler during the beach fabric analysis slowed down the experiment as it became very difficult to get values for length and width in a timely manner. Investment in a caliper would make experiment much easier 3. Doing the investigation in late summer allowed us to spend more time on the beach due to the late time for sunset, it allowed us to get more measurements with the crude equipment that was available to us. 4. Overall, I really enjoyed the process of the geographical investigation, it has really helped with my study of costal processes, and I think the information I gathered and learned will help me when it comes to my geography exam in June. It has also inspired me to do more in depth research into topics within geography that I’m interested in |

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