

Assessment Objectives Grid for Geography - G1

	Knowledge and Understanding	Application	Skills	Total	Key Question
Question 1					
(a)	0	2	3	5	1.5
(b)	8	2		10	1.3
(c)	7	3		10	1.4
	15	7	3	25	
Question 2					
(a)	0	2	3	5	2.5
(b)	8	2		10	2.2
(c)	7	3		10	2.6
	15	7	3	25	
Question 3					
(a)	1	1	5	7	2.2
(b)	2	1	5	8	
(c)	3	2	5	10	
	6	4	15	25	
	36	18	21		
	(48%)	(24%)	(28%)		

Using the mark bands

The aim is to find the descriptor that conveys most accurately the level attained by the candidate, using the best-fit model. A best-fit approach means that marks should be awarded for a response that most fairly matches different aspects of the descriptor.

GCE GEOGRAPHY G1
CHANGING PHYSICAL ENVIRONMENTS

Q.1 (a) Use Figure 1 to describe global variations in green energy investment. [5]

Answers may refer to the size of the investments in green energy and/or the growth rate in green energy investment 2004-2008. The resource shows that Europe has the largest investment whilst Africa has the smallest. The fastest growing investment is in South America (1 mark) whilst the lowest rate of growth is in Africa (1 mark). Accept comparatives of different areas e.g. Europe and Asia/Oceania are growing at approximately the same rate; North America has a larger investment than South America. The greatest amount of energy investments is in Europe (1 mark) with US\$ 50 billion (1 mark). Allow 1 mark for a **comparative** comment with an extra mark for use of data from the resource.

(b) Explain two environmental causes of climate change. [10]

Responses may consider a variety of processes/causes that are linked with climate change.

Volcanic activity may be addressed with candidates commenting on the production of volcanic gases and particulate matter. This can be linked with the trapping of heat or the reflection of heat and thus an increase/decrease in temperatures. This approach can fulfil two natural processes (reflection and absorption).

Changes in the temperatures of oceans may be cited as the cause of short-term climate change. The periodic changes in the temperature of the Pacific may be linked to variations in pressure conditions, which lead to the El Nino/La Nina effect.

Descriptions of climate change can be given credit.

Variations on global orbits may also be used to explain climate change at a variety of scales. Candidates may refer to periodic changes in the distance from the Sun or changes in the angle of the axis. These can then be linked with variations in the amount of energy received by the earth and consequent changes in climate.

Sunspot activity is a valid approach. Some candidates may explore the feedback mechanisms related to albedo/gulf stream/methane. Accept and credit those elements that are physical.

The question is looking for an understanding of process, ability to link process to climate change and use of exemplar materials. Where candidates have examined the human-induced causes of changes in atmospheric pollution give credit for the environmental processes that are linked to change, for example deforestation, industrial development, population growth.

Level 3 8-10 marks	Detailed and developed knowledge of processes that lead to climate change. Developed and linked understanding of link between process and climate change. Good development of examples.
Level 2 4-7 marks	Some knowledge of processes that lead to climate change. Some understanding of link between process and climate change. Lacks balance between processes. Examples are evident and enhance the explanation.
Level 1 0-3marks	Basic knowledge of processes that lead to climate change. Basic understanding of link between process and climate change. Little use of examples.

(c) Outline the possible effects of rising sea levels on people. [10]

The question enables a wide range of approaches in both content and areal extent. Some candidates may take an approach that has a focus on a single aspect such as economy, society or demography. Others may address the question by giving a composite view. There may be a number of answers that approach the question from a case study viewpoint. An examination of the economic impacts may look at the impact on agricultural production, tourism, transport, costs of protection, insurance and rebuilding and repair after damage caused by storms. Social impacts can be loss of homeland and culture, political unrest generated by protests and conflicting interest groups, health issues caused by contamination of groundwater and refugees and changing life styles.

Demographically, rising sea levels will change population distributions, lead to a large number of refugees, and may give an increase in casualties from events such as flooding. Candidates may examine strategies that have been put in place as a result of sea level change. There may be other valid content which should be given credit. An alternative approach may take a region or small area and give a combination of the above impacts. The most obvious examples that could be used are Bangladesh, tundra regions, Pacific islands and coastal UK.

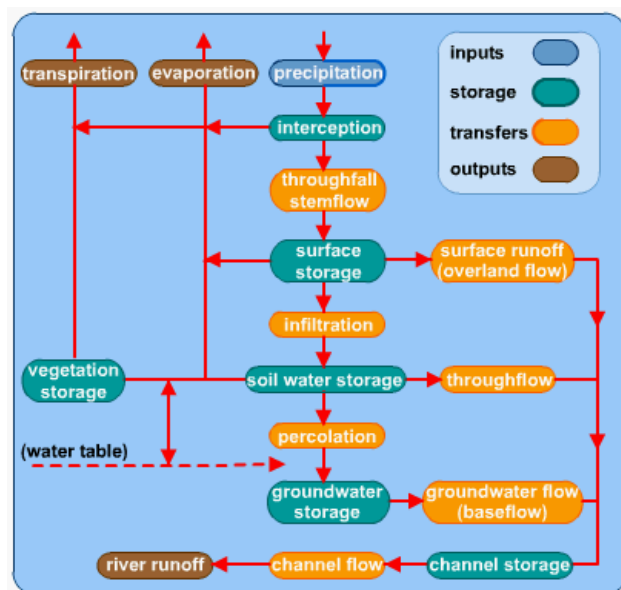
Level 3 8-10 marks	Good description and detailed understanding of process and integrated link to effects of rising sea levels. Good examples.
Level 2 4-7 marks	Description and understanding of effects of rising sea levels has some depth. Examples are evident.
Level 1 0-3 marks	Basic knowledge and understanding of effects of rising sea levels. Little use of examples.

- Q.2 (a) Use *Figure 2* to describe the effects of flooding in Thailand on Japanese companies. [5]

There are a number of effects that can be seen on the resource. There has been a suspension in production in Japanese firms and this has happened in Thailand, Japan and the USA. Firms are considering the movement of production from the affected area to other parts of Thailand or other countries and large numbers of Japanese firms are being impacted. Some answers may refer to the breakdown of transport. Allow one mark for a valid comment with a further mark for evidence from the resource. Allow one mark for linkage of elements of the resource that refer to effects e.g. digital camera production has been suspended due to submergence of factory (up to 5 marks). Accept logical, immediate effects from the information in the resource e.g. production suspended/damaged factories leads to unemployment. Award a maximum of 3 marks for straightforward list of material e.g. printer factory is submerged.

- (b) Outline how the drainage basin operates as a system. [10]

Answers should display knowledge of the structure of a system and recognise that there are inputs, throughputs and outputs. This can be done formally or deduced from the answer. Many answers will examine the idea of stores and flows and display an understanding of the passage of water through the drainage basin. Answers that take this approach should put the response into a systems context to gain access to Level 3. Accept fully annotated diagrams for full marks. Some candidates may approach the question by looking at variables within the system that affect its operation e.g. geology, slope, vegetation, which is also valid for Level 3.



Level 3 8-10 marks	Outlines operation in detail. Detailed understanding of process and linkage.
Level 2 4-7 marks	Some outline of operation. Some understanding of process and linkage.
Level 1 0-3 marks	Basic outline of operation.

- (c) **Suggest why perceptions of *either* flood hazards or tectonic hazards may vary between different groups of people.** [10]

Answers should show an understanding that different groups can see hazards from separate perspectives. Many answers will take a positive and negative viewpoint showing an appreciation that whilst hazards are destructive for some groups they may present opportunities to others. So volcanic activity can be destructive but it also presents tourism opportunities. Floods can kill but they also bring valuable alluvium. Other answers may take different groups and see negativity through the eyes of different people – earthquakes at a personal level may bring trauma through loss of relatives whilst at a community level there may be issues with loss of housing. Some answers may look at the challenges that are brought about by the hazards – there may be the challenge at an international scale of feeding and housing victims and at a national scale of rebuilding.

It is important that candidates recognise the groups that are involved and any answer that is general should not access Level 3. Groups can be recognised in a variety of ways and need not be named specifically – so a group could be simply the local residents, farmers or aid workers.

The command word is ‘suggest why’ and so answers should focus on more than just description for Level 3. Some rationalisation of the perception of the group is needed. Inevitably there will be some element of description and this should be given credit where appropriate.

Many answers will focus on particular events or locations but be willing to fully credit comment that may illustrate points from different examples.

Where a candidate does both hazards mark both and select the best.

Level 3 8-10 marks	Description and explanation in detail. Developed understanding of the different perception of identified groups. Good use of an example(s).
Level 2 4-7 marks	There may be an imbalance between description and explanation. Some understanding of the different perception of identified groups. Example(s) enhances the explanation.
Level 1 0-3 marks	Description and explanation is basic. Little use of an example(s).

Q.3 (a) Use *Figure 3* to describe how volcanic activity varies. [7]

Candidates may refer to a number of variables that describe the nature of volcanic activity. There may be comment on the amount of material ejected using the volume scale. Some candidates may refer to the height of the plume whilst others may comment on the frequency of the eruption. Other valid comments may refer to the numbers of eruptions in the last 10,000 years.

An alternative approach may describe the characteristics of volcanic activity via the scale of eruption.

Level 3 6-7 marks	Shows clear and detailed identification and description of variables. Good use of data.
Level 2 3-5 marks	Shows some ability to identify and describe variables. Uses some information table in form of data.
Level 1 0-2marks	Basic ability to identify and describe variables.

(b) Outline *two* ways of presenting information from *Figure 3*. (8)

The question asks for an outline which can take the form of a description of the method of presentation. There are a variety of possible methods that could be selected. Candidates may choose to organise their answers to examine the columns on the table.

- Proportional symbols could be used to show the amount of material ejected or the height of the plume. Bar graphs could illustrate the occurrence or amount. Line graphs could be used to show occurrence. Some candidates may comment on the difficulty of producing a scale for the y axis.
- Others may organise their answers to show differences in the levels of VEI to encompass all measures of eruption. These answers may refer to pictograms or proportional symbols.
- Some answers may refer to the mapping of examples as an alternative approach.

Be prepared to award full marks for a response that answers through well-annotated diagrams.

Level 3 6-8 marks	Good knowledge of two presentation techniques. Developed ability to apply knowledge of presentation technique to information shown in the table.
Level 2 3-5 marks	Some knowledge of two presentation techniques or good knowledge of one presentation technique. Some ability to apply knowledge of presentation technique to information shown in the table.
Level 1 0-2 marks	Basic knowledge of one or two presentation techniques.

- (c) **Discuss the methods used to collect data in an investigation into a changing physical environment that you have completed.**

You should state clearly the question that you have investigated [10]

The content of the answer will vary greatly as individual centres will engage in a wide variety of investigations. However, the content should have a link to the substance of the specification. Answers should show knowledge of the methods used to collect data. There will be a wide variety of description of the methods used depending on the investigation chosen so a flexible approach will be required in this section. The focus is on the mechanics of data collection (questionnaire, collection of discharge data, land use mapping, etc) but also credit a sampling method. If the answer is only sampling without data collection it is limited to Level 2.

The discussion element of the question can take a variety of formats. Some candidates will give depth to their descriptions of methods and this is sufficient to reach the top of Level 3. Other candidates may take this as an opportunity to comment on the validity of the outcomes of their study or suggest ways to further the investigation.

Level 3 8-10 marks	Good description of methods. Good discussion.
Level 2 4-7 marks	Some description of methods. Some discussion.
Level 1 0-3marks	Limited description of methods.