



Rewarding Learning

General Certificate of Secondary Education

Centre Number

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Candidate Number

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Geography

Unit 1

Understanding Our
Natural World



[GGY11]

GGY11

Assessment

TIME

1 hour 30 minutes.

Assessment Level of Control:

Tick the relevant box (✓)

Controlled Conditions	
Other	

INSTRUCTIONS TO CANDIDATES

Write your Centre Number and Candidate Number in the spaces provided at the top of this page.

You must answer the questions in the spaces provided.

Do not write outside the boxed area on each page or on blank pages.

Complete in black ink only. **Do not write with a gel pen.**

Answer **all four** questions.

You are provided with an O.S. map for use with **Question 2**.

Do **not** write your answers on this map.

INFORMATION FOR CANDIDATES

The total mark for this paper is 100.

Figures in brackets printed down the right-hand side of pages indicate the marks awarded to each question or part question.

Quality of written communication will be assessed in questions **1(c)**, **3(d)** and **4(e)**.

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28GGY1101

Theme A: River Environments

- 1 (a) A drainage basin has many features. Answer the questions which follow.
- (i) Complete **Table 1** by inserting the correct key term for each definition. Choose your answers from the list below.

watershed tributary confluence mouth

river channel source

Table 1

Key term	Definition
	A small river or stream that flows into a larger river
	The outer edge of the drainage basin
	The place where two rivers meet

[3]



- (ii) Complete **Table 2** by writing the word INCREASE or DECREASE to describe how each river characteristic usually changes between the source and the mouth of the river. One has been completed for you.

Table 2

River characteristic	Change between the source and the mouth of the river
Discharge	INCREASE
Gradient	
Depth	
Width	

[3]

- (b) State the meaning of the term **levee**.

[2]

[Turn over



(c) A meander is a river landform.

Explain the processes and features in meander formation.

[6]

[6]

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- (d) State the soft engineering method of managing a river shown in **Photograph 1**. Evaluate its sustainability.

Soft engineering method _____ [1]



© Getty Images

Photograph 1

Evaluate its sustainability as a method of managing a river.

[3]

[Turn over



(e) With reference to a river in the British Isles, explain the physical and human causes of a flood on your named river.

[illegible]

[7]

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Theme B: Coastal Environments

- 2 (a)** Study the Ordnance Survey extract of part of the coast at Barmouth Bay, Wales, and answer the questions which follow.

- (i)** State the height of the land shown by the triangulation pillar at the top of Pen y Garn, GR 6210.

_____ m [1]

- (ii)** State the straight line distance between the two viewpoints located at GR 627162 and GR 644181.

_____ km [2]

- (iii)** State the direction of the town of Barmouth GR 6115 from the waterfall at GR 6212.

_____ [1]

- (iv)** Estimate the approximate area of the National Trust land found mainly in GR 6512. Underline your answer in the list below.

0.5 km² 1.0 km² 2.0 km² [1]

- (v)** Name the type of beach found at Gwastadgoed GR 5910.

_____ [1]



(vi) Much of the coastline on the map extract has been shaped by constructive waves. Complete **Table 3** by placing a tick (✓) opposite each correct statement about constructive waves.

Table 3

Statement about constructive waves	Tick three correct statements
They have a weak backwash compared to their swash	
They are high in relation to their length	
They are long in relation to their height	
They are gentle (break at a rate of 6–9 per minute)	
They are frequent (break at a rate of 15 per minute)	

[3]

[Turn over

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28GGY1109

(b) **Photograph 2** shows the coastline north of Fairbourne which takes the form of a hooked spit GR 6114.

Answer the question which follows.



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Photograph 2



[6]

[Turn over



28GGY1111

(c) Many coasts are under threat and need protection.

- (i) Complete **Table 4** by using a tick (✓) to sort the following methods of coastal management into hard engineering methods and soft engineering methods. One has been completed for you.

Table 4

Method	Hard engineering	Soft engineering
Managed retreat		
Sea walls	✓	
Beach nourishment		
Gabions		
Groynes		

[4]



[6]

[6]

[Turn over

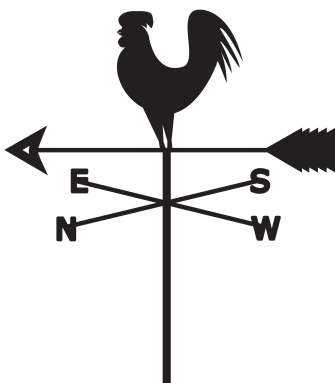


28GGY1113

Theme C: Our Changing Weather and Climate

- 3 (a) Study **Table 5** below which shows information about some elements of the weather. Answer the questions which follow.

Table 5

	Weather element	Unit of measurement
 © Getty Images		8 points of the compass
 © CCEA	Cloud cover	

- (i) Complete **Table 5** by writing the correct answers in the boxes provided.

[2]

- (ii) Name **two** sources of data collected to make a weather forecast.

1. _____ [1]

2. _____ [1]



(b) (i) **Fig. 1** below lists some factors which affect climate. Complete **Fig. 1** by drawing a line to join each factor with the correct description of how it affects climate.

Factor affecting climate		How factor affects climate
Latitude	•	Upland areas are colder and wetter than lowlands
Altitude	•	The climate will be wetter if the winds usually come from over the sea
Prevailing winds	•	Places near the Equator are warmer than nearer the Poles because they receive the sun more directly

Fig. 1

[3]

[Turn over



(ii) Explain how distance from the sea can affect the temperature of a place in winter.

[3]





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28GGY1117

(c) Study **Fig. 2** below which shows the distribution of rainfall for the British Isles on one day in September 2018. Answer the questions which follow.

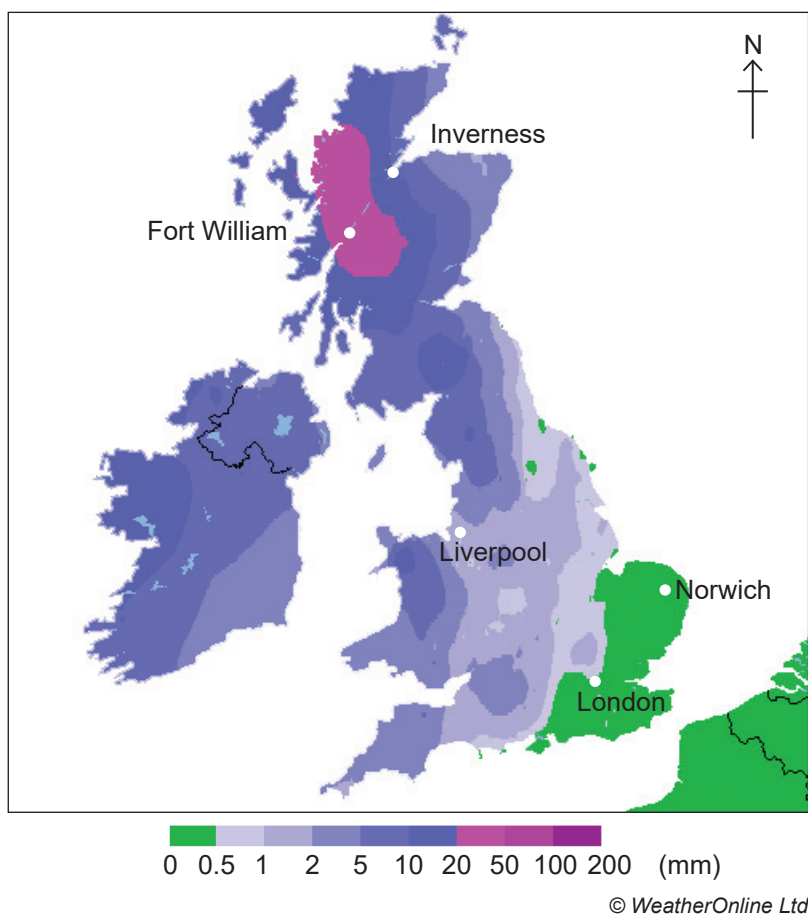


Fig. 2

(i) Underline the place with the highest amount of rainfall.

Liverpool

Fort William

Inverness

[1]

(ii) State the amount of rainfall experienced on this day at Norwich.

_____ mm

[1]



- (iii) State whether the rainfall increases or decreases towards the east of the British Isles.

[1]

- (iv) A depression caused this rainfall over the British Isles. Explain why a depression brings rainfall to the British Isles.

[3]

- (v) The depression also brought strong winds to the British Isles. Explain why windy weather is associated with depressions.

[3]

[Turn over

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[6]



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28GGY1121

Theme D: The Restless Earth

- 4 (a) Underline the correct words in the following statements relating to basic rock types. One has been completed for you.
- Sedimentary rocks are formed by sediments that have been built up over a long / short period of time.
 - **Slate / Granite** is an example of a metamorphic rock.
 - Basalt is an igneous rock and it is formed **within** / **at the surface of** the crust.
 - **Limestone / Marble** is an example of a sedimentary rock.
 - Metamorphic rocks are rocks which have **changed** / **aged** due to great pressure or heat acting on them.

[4]

(b) Plate boundaries often have associated landforms.

- (i) Complete **Table 6** below by naming the correct type of plate boundary for each landform. One has been completed for you.

Table 6

Landform	Plate Boundary
Mid-ocean ridge	
Ocean Trench	
Fold Mountains	Collision Plate Boundary
Fault lines	

[3]



(ii) Explain the formation of **fold** mountains at a collision plate boundary.

[3]

(c) An earthquake generates shock waves.

(i) Name the instrument which records shock waves.

[1]

(ii) One physical consequence of earthquakes is liquefaction. Describe the process of liquefaction and state **one** impact it may have.

[3]

[Turn over

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28GGY1123

(d) The eruption of a supervolcano would have global impacts on people and the environment.

(i) State the meaning of the term **supervolcano**.

[2]

(ii) State **two** potential global impacts a supervolcano eruption may have upon people and/or the environment.

Name of supervolcano _____ [1]

1. _____

2. _____

[2]



[illegible]



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For Examiner's use only	
Question Number	Marks
1	
2	
3	
4	

Total Marks	
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Examiner Number

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ROADS AND PATHS	Not necessarily rights of way
Junction number Elevated	Motorway (dual carriageway)
M1	Primary Route (recommended through route)
Unfenced	Main road
A 470	Road under construction
A 493	Secondary road
Footbridge	Narrow road with passing places
B 4518	Road generally more than 4m wide
A 855	Road generally less than 4m wide
Bridge	Path / Other road, drive or track
B 885	Gradient: steeper than 20% (1 in 5), 14% to 20% (1 in 7 to 1 in 5)
Gates	Gates, Road tunnel
Road tunnel	
Ferry P	Ferry (passenger), Ferry (vehicle)
Ferry V	

RAILWAYS	
Track multiple or single	Bridges, footbridge
Track under construction	Level crossing
Siding	Viaduct, embankment
Tunnel, cuttings	Station, (a) principal
Light rapid transit system, narrow gauge or tramway	Light rapid transit system, narrow gauge or tramway

WATER FEATURES	
Marsh or salting	Slopes
Canal	Cliff
Lock	Shingle
Aqueduct	Flat rock
Weir	Lighthouse (in use)
Footbridge	Lighthouse (disused)
Bridge	Low water mark
Lake	Mud
Canal (dry)	High water mark

HEIGHTS	1 metre = 3.2808 feet
Contours are at 10 metres vertical interval	
Heights are to the nearest metre above mean sea level	

Where two heights are shown the first height is to the base of the triangulation pillar and the second (in brackets) to the highest natural point of the hill.

PUBLIC RIGHTS OF WAY	OTHER PUBLIC ACCESS
Footpath	Other route with public access (not normally shown in urban areas). Alignments are based on the best information available. These routes are not shown on maps of Scotland.
Bridleway	
Restricted byway	
Byway open to all traffic	

The symbols show the defined route so far as the scale of mapping will allow.
The representation on this map of any other road, track or path is no evidence of the existence of a right of way. Not shown on maps of Scotland

Danger Area Firing and Test Ranges in the area. Danger! Observe warning notices.

BOUNDARIES	ANTIQUITIES
National	Site of antiquity
District	Battlefield (with date)
County, Unitary Authority, Metropolitan District or London Borough	Visible earthwork
National Park	Roman
	Non-Roman

TOURIST INFORMATION	
Camp site / caravan site	
Garden	
Golf course or links	
Information centre (all year / seasonal)	
Nature reserve	
Parking, Park and ride (all year / seasonal)	
Picnic site	
Recreation / leisure / sports centre	
Selected places of tourist interest	
Telephone, public / roadside assistance	
Viewpoint	
Visitor centre	
Walks / Trails	
World Heritage site or area	
Youth hostel	

LAND FEATURES	
Electricity transmission line (pylons shown at standard spacing)	
Pipe line (arrow indicates direction of flow)	
Buildings	
Important building (selected)	
Bus or coach station	
Current or former place of worship with tower with spire, minaret or dome	
Place of worship	
Glass structure	
Heliport	
Triangulation pillar	
Mast	
Wind pump, wind turbine	
Windmill with or without sails	
Graticule intersection at 5' intervals	
Cutting, embankment	
Landfill site or slag/spoil heap	
Coniferous wood	
Non-coniferous wood	
Mixed wood	
Orchard	
Park or ornamental ground	
Forestry Commission land	
National Trust (always open / limited access, observe local signs)	
National Trust for Scotland (always open / limited access, observe local signs)	

ABBREVIATIONS	
Br Bridge	MS Milestone
Cemy Cemetery	Mus Museum
CG Cattle grid	P Post office
CH Clubhouse	PC Public convenience (in rural areas)
Fm Farm	PH Public house
Ho House	Sch School
MP Milepost	TH Town Hall, Guildhall or equivalent

