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Rugby School 16+ Geography

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Rugby School

Sixth Form Entrance Examination

Geography

Time allowed: 1 hour

Instructions to candidates:

This paper consists of 2 sections. You must answer **all of the questions in section A and one question in section B** on lined paper.

Equipment Required: **Pen, pencil, ruler, calculator,**

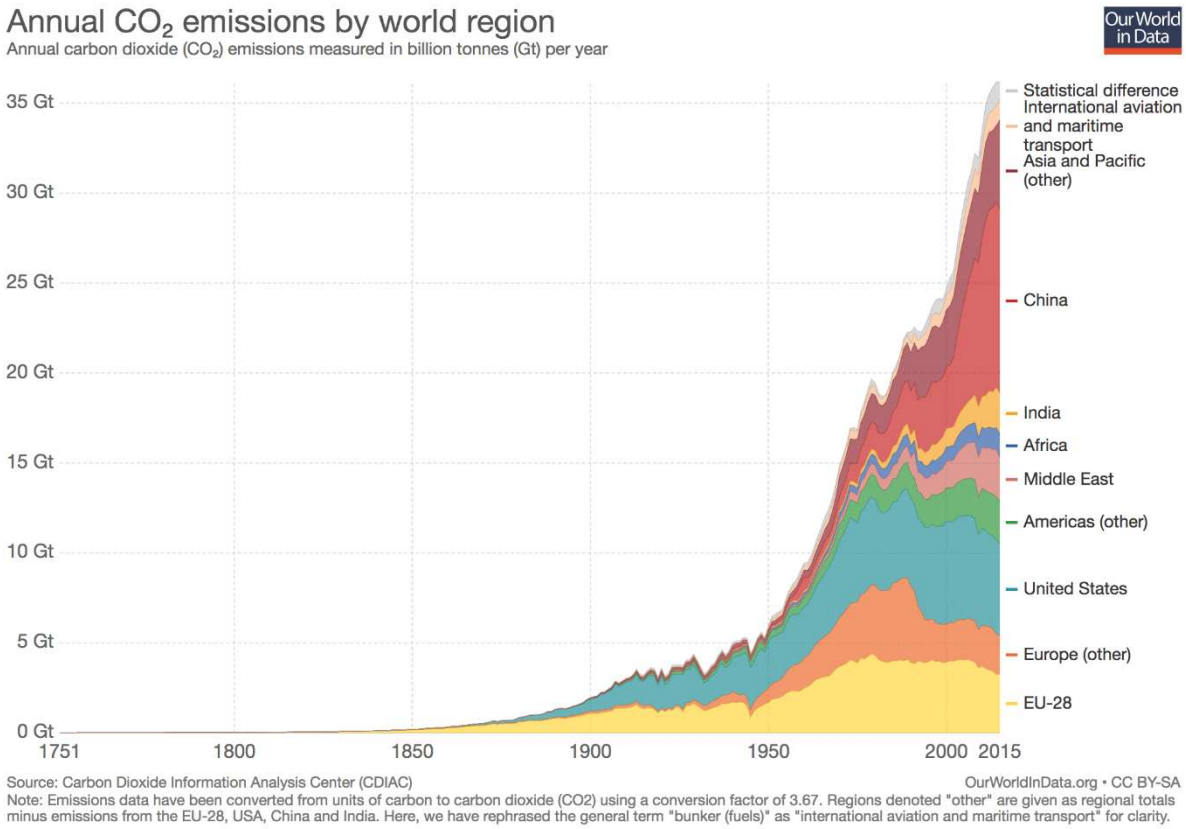
There are 30 **marks** available in total.

Name: _____

Specimen paper

Section A

Answer ALL questions



The graph above shows CO2 emissions by world region.

1. Describe the pattern of CO2 emissions since 1751 (2)
2. Suggest and explain one possible reason for the pattern of CO2 emissions (3)
3. Using fig. 1 outline any possible geographical issue and how it might be managed. (10)

Section B

Answer ONE question

1. "The development gap is closing." To what extent do you agree with this statement? (15)
2. With reference to examples evaluate strategies for managing the coast (15)
3. With reference to examples explain why natural hazards have a greater impact in developing countries. (15)
4. "High levels of urbanisation indicate high levels of development." Is this statement true? (15)
5. Assess the impacts of primary resource extraction (mining, fishing, farming). (15)
6. Evaluate strategies for managing a growing population. (15)

Paper Notes: 16+ Geography Specimen Paper (16+ Geography Specimen Paper)

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Overview

This is a **Sixth Form Entrance Examination** specimen paper in **Geography**, published by **Rugby School** for candidates applying to enter Year 12. The paper comprises two sections with a total of **30 marks** available and a **one-hour** time allowance. Section A is compulsory and data-driven, focusing on CO_2 emissions by world region, whilst Section B offers a choice of six essay-style questions on global development, natural hazards, coastal management, urbanisation, resource extraction, and population growth.

The format balances quantitative skills (graph interpretation, pattern description) with evaluative and analytical writing. Section A requires candidates to describe trends, suggest explanations, and propose management strategies based on a single dataset. Section B demands extended responses that integrate case studies, theory, and critical judgement on major geographical issues. Answers in Section B should be written on lined paper, signalling the expectation of structured, essay-length responses.

This paper is designed for able students approaching A-level Geography, testing whether candidates can think geographically about contemporary global challenges. It suits those who have studied GCSE Geography or equivalent and are comfortable moving beyond descriptive recall towards argument, evaluation, and the use of specific examples. The specimen format allows applicants to familiarise themselves with Rugby's assessment style and expectations.

How this paper is organised

The paper is divided into **two distinct sections**. **Section A** is compulsory and carries **15 marks** in total, split across three data-response questions based on a graph of annual CO_2 emissions by world region from 1751 to the present. Question 1 (2 marks) asks for a description of the pattern, question 2 (3 marks) requires a suggested explanation, and question 3 (10 marks) asks candidates to outline a geographical issue arising from the data and propose how it might be managed.

Section B offers a choice of **six essay questions**, each worth **15 marks**. Candidates must select and answer **only one** question on lined paper. Topics span the development gap, coastal management strategies, natural hazards in developing countries, urbanisation and development, primary resource extraction impacts, and

population management strategies. All Section B questions require the use of specific examples and evaluative or analytical language ('To what extent', 'Evaluate', 'Assess').

Equipment permitted includes pen, pencil, ruler, and calculator. The **total time allowed is 60 minutes**, meaning roughly 15 to 20 minutes for Section A and 40 to 45 minutes for the extended essay in Section B.

Topics covered

- Graph interpretation and description of trends in global CO_2 emissions over time, identifying regional contributors and temporal changes
- Explanation of factors driving patterns in carbon emissions, such as industrialisation, population growth, and economic development
- Geographical issues arising from CO_2 emissions (e.g. climate change, international equity) and strategies for management (mitigation, adaptation, international agreements)
- Global development disparities and the concept of the development gap, including measures of development and evidence for convergence or divergence
- Coastal management strategies (hard and soft engineering, managed retreat) with reference to specific case studies from contrasting contexts
- Natural hazards (e.g. earthquakes, floods, hurricanes) and differential impacts in developing versus developed countries, including vulnerability, preparedness, and response capacity
- Urbanisation as an indicator of development, examining counter-examples (e.g. rapid urbanisation in LICs without corresponding economic growth)
- Impacts of primary resource extraction (mining, fishing, farming) on environment, economy, and society, with reference to specific locations
- Population policies and strategies for managing growth (e.g. China's one-child policy, Kerala's education approach, ageing populations in HICs)

How to use this paper for revision

- Practise describing patterns in data precisely, using figures from the graph (e.g. 'China's emissions rose sharply from approximately 5 Gt in 2000 to over 10 Gt by 2015') rather than vague statements.
- Prepare a bank of **detailed case studies** for Section B topics, ensuring you know specific place names, dates, figures, and stakeholders for each example.
- For essay questions, spend the first five minutes planning a clear structure with an introduction, three to four analytical paragraphs, and a conclusion that directly answers the question.
- When a question asks 'to what extent' or 'evaluate', ensure you present both sides of the argument and reach a judgement, rather than simply describing.
- Use geographical terminology accurately (e.g. 'mitigation' vs 'adaptation', 'urbanisation' vs 'urban growth', 'sustainable development') to demonstrate subject fluency.
- Time yourself strictly: aim to finish Section A in 15 to 18 minutes, leaving at least 40 minutes for your chosen essay in Section B.
- Annotate the CO_2 emissions graph lightly in pencil to mark key turning points, regional dominance, or anomalies before you begin writing.

Common mistakes to avoid

- Describing the graph superficially without referencing specific regions or time periods, e.g. writing 'emissions went up' instead of identifying when and where growth was steepest.
- Confusing correlation with causation in question 2, such as assuming emissions rise only because of population without explaining the mechanism (industrialisation, energy consumption).
- In question 3, listing generic solutions (e.g. 'use renewable energy') without linking them to the geographical issue or explaining how they would be implemented or managed.
- Choosing a Section B question based on familiarity with the topic rather than ability to provide **specific examples and evaluate**, leading to vague, generalised essays.
- Writing a purely descriptive essay in Section B that narrates case studies without analysing, comparing, or reaching a conclusion on the question posed.
- Running out of time on Section B by spending too long on Section A or failing to plan the essay structure before writing.

Exam technique

Begin by reading through the entire paper to identify which Section B question you can answer most confidently with **specific examples**. Then tackle Section A first, aiming to spend no more than 15 to 18 minutes on all three questions. For question 3 (10 marks), write a structured paragraph or two that clearly identifies an issue (e.g. climate change, unequal responsibility) and suggests management strategies (international treaties, carbon pricing, technology transfer), linking back to the graph.

Once Section A is complete, spend five minutes planning your Section B essay. Jot down your argument, three or four main points, and the case studies you will use for each. Write an introduction that defines key terms and previews your line of argument, then develop each point in a separate paragraph with evidence, before concluding with a direct answer to the question. Aim for around 300 to 400 words in total for the essay, written legibly on lined paper.

Leave two to three minutes at the end to check your work, ensuring you have answered the question asked (not the one you hoped for) and that your examples are named and detailed. If time is tight, prioritise completing your conclusion over adding more body paragraphs, as examiners reward a clear argument over exhaustive coverage.

What to revise alongside this paper

To prepare fully for this paper, revise **global environmental challenges** such as climate change, deforestation, and ocean pollution, as these underpin both Section A and several Section B options. Study the characteristics and measurement of development (HDI, GDP per capita, Gini coefficient) and familiarise yourself with theories of development (Rostow, dependency theory) to support arguments about the development gap.

Broaden your understanding of **hazard management and resilience**, including the disaster risk equation and the role of governance, wealth, and infrastructure in shaping outcomes. Look at contrasting examples of coastal management from the UK (e.g. Holderness, Medmerry) and low-income contexts (e.g. Bangladesh, Maldives). Review population case studies (China, Kerala, Singapore, Japan) and the demographic transition model to contextualise population management strategies.

Finally, practise interpreting a range of **data presentation types** (line graphs, bar charts, choropleth maps, scatter graphs) and writing concise, evidence-based descriptions and explanations under timed conditions. This will build confidence for Section A and improve the clarity of argument in extended writing.

Key terms

> **CO_2 emissions**, **Development gap**, **Urbanisation**, **Natural hazards**, **Vulnerability**, **Coastal management**, **Hard engineering**, **Soft engineering**, **Primary resource extraction**, **Sustainability**, **Mitigation**, **Adaptation**, **Population policies**, **Industrialisation**, **Global inequality**

Rugby School

Geography

Sixth Form Examination

Mark Scheme

16+ Mark Scheme

1. Describe the pattern of CO2 emissions since 1751 (2)	
Rational: This question is used to assess ability to identify and accurately convey patterns. We are looking for basic geographical knowledge in terms of countries, compass points and understanding of patterns. Candidates should refer specifically to the resource.	Example Response: The total amount of carbon produced has risen dramatically since the 1900s from under 5Gt to over 35Gt. Europe (28) and the US increased their emissions first around 1950, quickly followed by the rest of Europe and more recently China and India. There is an unequal distribution of CO2 emissions shown in fig.1 Countries such as the USA and Europe have a high CO2 emissions the USA alone produces over 10Gt of carbon. While developing countries such as those in Africa the Americas and India produce relatively little carbon.
2. Suggest and explain one possible reason for the pattern of CO2 emissions (3)	
Rational: Candidates should appreciate that there are several reasons behind access to basic services but should only focus on one here. They should be able to show cause and effect and link the reasoning to the pattern they have described question 1. Any valid reasoning so long as it is well explained is worthy of marks, candidates can choose either Human or Physical reasoning	Example Response: Higher levels of development in countries such as Europe and the USA allow investment into infrastructure such as power stations and electricity power lines. This allows not only more people to be connected to energy it also increase the total amount of energy available to the population meaning you have more people living more energy intensive lives. OR In recent years EU 28 and Europe and to a lesser extent USA have reduced their carbon emissions. This is due to more energy efficient technologies being manufactured such as energy saving bulbs as well as improved education about climate change and its negative effects.
3. Using Figure 1 Outline any possible Geographical issue how it might be managed.	
Rational: Having identified an issue it is expected that students can then identify the system or cycle that it is caused by. While they may not use such technical terms of positive or negative feedback it is important that they convey their understanding of interlinked	Example: High carbon emissions can cause higher levels of rainfall in some areas of the world. The CO2 creates an enhanced greenhouse effect that increases evapotranspiration, warmer air holds more water so when saturation point is reached it is a lot higher

processes. They should then be able to justify their solution again showing cause and effect. They can call on a range of geographical issues and no one issue is more valid than another, but they should be able to link it to part of their GCSE course. Similarly with a proposed solution specifics are not required, though this is indicative of a top level response, but the solution should appropriately deal with the issue they have identified and explain how is resolved.	leading to heavier downpours that quickly saturates the soil and instead flows through surface run-off. This can be counter-acted by legislation to reduce emissions on a global scale such as the Paris Climate Agreement. OR The highest level of population growth is currently in Africa, and yet Africa currently produces the lowest levels of carbon emissions. The future trend is that many more people will move to cities and live energy intensive lives leading to more carbon emissions. A counteract to this is to improve conditions in the countryside with appropriate technology. The Haller foundation is doing work to improve the life of farmers with afforestation helping to replenish soil nutrients and aiding them in building a more sustainable lifestyle which allows them to stay in their rural viallages.

Section B: Debates Question

Rational:

Students are presented with a range of questions from across GCSE and IGCSE topics they should pick one they feel best suited to answer. This is a levelled response.

The questions are presented as debates and candidates should be able to see both sides of a debate. The debate may not be positive vs. negative but may also encourage the candidates to consider changes over space, time and scale. Students do not have to consider all these dimensions but it is thought that the top responses will consider at least two.

This is an opportunity for students to show of their flare for knowledge and understanding of the geographical world and present their own opinion while justifying it with use of evidence.

Mark Breakdown

Mark	0 -1	2-3	4-5
Knowledge	There is little or no specific knowledge or examples used. Technical geographical	There is some specific case study knowledge used. Technical language is present but there are some inaccuracies.	There is clear evidence of deep knowledge about a range or specific examples. Technical language is appropriately and accurately used

	language is missing.		throughout the response.	
Understanding	There is little cause and effect shown; answers are descriptive rather than explanatory.	Answers are explained well showing cause and effect. Understanding of geographical processes is clear.	Cause and effect is well explained and well linked the question focus. Geographical processes are clearly understood and well applied.	
Evaluation	There is little attempt to show two sides of a debate or consider changes over space, time or scale. There is no conclusion.	There is an attempt to show two sides of a debate though this may be unbalanced or consider time space and scale, but no judgement is made on these considerations. There is a limited descriptive (repetition of points made in main essay) conclusion.	There clear consideration of debate with a balanced view of both sides and how this changes over time space and scale. Clear judgements are made supported by evidence/points presented and there is a clear conclusion that is summative in it judgements.	

Answer-Key Notes: 16+ Geography Mark Scheme (16+ Geography Mark Scheme)

Compiled by SATs-Papers.co.uk to help you mark this paper and learn from each answer.

How to use this answer key

This mark scheme rewards disciplined geographical thinking, not just recall. **Section A questions test how well candidates can describe, explain and evaluate** using the resource provided, whilst Section B essays demand balanced debate and judgement. When marking, distinguish between description (identifying patterns) and explanation (showing cause and effect). A student who describes accurately but fails to explain why has met only part of the requirement. Use the worked examples below to understand what 'linking to the resource' or 'showing interlinked processes' looks like in practice.

Careless errors in Section A often involve stating a pattern without citing specific data from the figure (e.g. saying 'emissions rose' rather than 'emissions rose from under 5Gt to over 35Gt since the 1900s'). In Section B, **weak responses describe one side of a debate then add a token counter-argument**, whereas strong responses weigh both sides throughout and reach a clear, justified conclusion.

If a candidate loses marks, check the rationale column in the mark scheme to see which skill was missing. Did they fail to refer to the resource? Did they describe rather than explain? Did they propose a solution without linking it to the issue? Pinpointing the gap will focus revision far more effectively than simply noting the score.

Score interpretation

Section A carries 15 marks and Section B carries 15 marks, for a total of 30. **A score above 24 (80 per cent) indicates strong readiness for Sixth Form Geography**, especially if marks are distributed across both sections. Students scoring in this range have shown they can interpret data, construct causal explanations and debate geographical issues with evidence and balance.

Scores between 18 and 24 suggest solid foundational skills but gaps in one or more areas. Check whether marks were lost in Section A (data interpretation, cause-and-effect reasoning) or Section B (evaluation, balance, use of examples). A student who scores well in Section A but poorly in Section B may need practice structuring extended arguments and considering multiple perspectives. Conversely, strong Section B performance with weaker Section A results often signals difficulty reading graphs or linking explanations tightly to the resource.

Below 18 marks, the candidate may benefit from further GCSE consolidation before tackling Sixth Form material. Look at the three Section B criteria (knowledge, understanding, evaluation) to identify which is weakest. A score of 0 to 1 in 'evaluation' means the essay was one-sided or lacked a conclusion; a score of 0 to 1 in 'understanding' means the writing was descriptive rather than explanatory. Targeted practice on the missing skill will yield faster progress than re-sitting the whole paper immediately.

Worked examples

Section A, Q1–2: Describing and explaining patterns

Markers reward specific reference to the figure and clear causal links. In Q1 (2 marks), naming regions, citing values and using temporal or spatial language ('since the 1900s', 'more recently') scores higher than vague statements like 'it went up'. In Q2 (3 marks), a full answer identifies one reason, explains how it causes the pattern (cause and effect) and ties the explanation back to the data described in Q1. Generic statements about development or technology without a chain of reasoning rarely earn all three marks.

> **Q1** : `The total amount rose dramatically since the 1900s from under 5Gt to over 35Gt; Europe (28) and the US increased first around 1950, followed by the rest of Europe and more recently China and India; unequal distribution with USA and Europe producing high emissions (USA over 10Gt) whilst Africa, the Americas and India produce relatively little.`
>
> This response **cites specific values and dates from the graph** ('under 5Gt to over 35Gt', 'around 1950') and names regions precisely. It identifies both the overall trend (dramatic rise) and the spatial pattern (unequal distribution). Weaker answers say only 'emissions increased' without quantifying or naming which regions led the rise.

> **Q2** : `Higher levels of development in Europe and the USA allow investment into infrastructure such as power stations and electricity power lines, which connects more people to energy and increases the total amount available, meaning more people live energy-intensive lives.`
>
> **Cause and effect are explicitly chained:** development → infrastructure investment → increased access and total energy → energy-intensive lifestyles. The answer also links back to the regions identified in Q1 (Europe, USA). An alternative answer about recent emissions reductions (EU 28, energy-efficient technologies, education) would score equally well because it explains a different part of the pattern with the same causal rigour.

Section A, Q3: Identifying an issue and proposing management (10 marks)

This question tests understanding of **interlinked processes (systems thinking) and the logic of management strategies.** Strong responses identify a specific geographical issue (e.g. increased rainfall, future urbanisation in Africa), explain the mechanism or cycle behind it (enhanced greenhouse effect and evapotranspiration, or rural-urban migration and rising energy demand) and propose a solution that directly addresses the cause (legislation to cap emissions, appropriate technology to improve rural livelihoods). Markers penalise vague issues ('climate change is bad') and solutions that do not link to the issue described.

> **Q3 (first example)** : `High carbon emissions cause higher rainfall in some areas. CO2 creates an enhanced greenhouse effect that increases evapotranspiration; warmer air holds more water, so saturation point is higher, leading to heavier downpours that quickly saturate the soil and flow as surface run-off. This can be counteracted by legislation to reduce emissions on a global scale, such as the Paris Climate Agreement.`
>
> The response identifies the issue (heavier rainfall, surface run-off), **explains the physical mechanism step by step** (enhanced greenhouse effect → higher evapotranspiration → more water held in air → heavier precipitation → soil saturation), then proposes a solution (Paris Agreement) that targets the root cause (emissions). The answer demonstrates systems thinking by linking atmospheric processes to hydrological outcomes.

> **Q3 (second example)** : `Africa has the highest population growth but lowest current emissions. Future urbanisation will lead to more energy-intensive lives and higher emissions. A counteract is to improve rural conditions with appropriate technology; the Haller Foundation uses afforestation to replenish soil nutrients and helps farmers build sustainable livelihoods, allowing them to stay in rural villages.`
>
> **This answer projects a future issue from current data** (low emissions now, high population growth, likely urbanisation) and proposes a preventive solution (improve rural livelihoods to reduce migration pressure). The Haller Foundation example gives specificity (afforestation, soil nutrients) and shows how the solution addresses the cause (urbanisation driven by poor rural conditions). Weaker answers would identify urbanisation as bad without explaining why or how the solution works.

Section B: Extended essay questions (15 marks)

The three criteria (knowledge, understanding, evaluation) are equally weighted and assessed independently. **Knowledge rewards named examples, technical vocabulary and specific facts** (case studies, place names, data). Understanding rewards causal

explanation and application of geographical concepts (processes, systems). Evaluation rewards balance (seeing both sides, or considering change over time, space or scale) and a conclusion that synthesises the argument rather than repeating it. A common mistake is writing a one-sided essay with a token counter-paragraph tacked on; top-band answers weigh evidence throughout and reach a measured judgement.

Section B, knowledge criterion (4–5 marks) : `A response that names specific countries, case studies or schemes (e.g. 'In Bangladesh, the Grameen Bank…', 'China's One Child Policy…', 'London's Thames Barrier…') and uses technical terms accurately (e.g. 'longshore drift', 'demographic transition', 'hard engineering') throughout.`

Deep knowledge is shown through precise examples and correct terminology. An answer scoring 2 to 3 would have some examples but also inaccuracies or vague references ('a country in Asia'). An answer scoring 0 to 1 relies on general statements with no named places or processes. If an essay is well argued but lacks specifics, it will lose marks here even if understanding and evaluation are strong.

Section B, understanding criterion (4–5 marks) : `A response that explains why a strategy works or why an impact occurs, not just what happens. For example: 'Groynes trap sediment moved by longshore drift, building up the beach on the updrift side; this absorbs wave energy and reduces erosion. However, the downdrift side is starved of sediment, increasing erosion there.'`

Cause and effect are clear and linked to geographical processes (longshore drift, wave energy, sediment transport). **The answer goes beyond description ('groynes build up beaches') to explain the mechanism and knock-on effects.** An answer scoring 0 to 1 would describe what groynes are without explaining how or why they work.

Section B, evaluation criterion (4–5 marks) : `A response that weighs evidence on both sides of the debate throughout the essay, considers how the answer might vary by place, time or scale, and concludes with a clear judgement supported by the points made (e.g. 'The development gap is closing in some regions, such as East Asia, but widening in others, such as sub-Saharan Africa. Overall, global trends mask significant spatial variation.').`

Balance and judgement are both present. The candidate does not simply list pros then cons but integrates different perspectives and reaches a nuanced conclusion. An answer scoring 2 to 3 might consider both sides but fail to reach a clear judgement, or reach a judgement without supporting it. An answer scoring 0 to 1 is one-sided and has no real conclusion, just a summary.

Next steps

After marking, **identify which of the three Section B criteria (knowledge, understanding, evaluation) was weakest** and focus revision there. If knowledge was low, build a bank of case studies with specific names, dates and data. If understanding was weak, practice explaining processes out loud before writing them down; if you cannot say why something happens, you will struggle to write it clearly. If evaluation was the gap, take a past question and write two short paragraphs arguing opposite sides, then a third paragraph that weighs them; this trains the skill of balance.

For Section A, if marks were lost on Q1 or Q2, practice describing graphs using precise values and compass directions, then explaining one cause in a tight chain (A leads to B, which causes C). If Q3 was weak, revisit a GCSE topic (coasts, rivers, climate, development) and for each issue, sketch the system or cycle that drives it and a solution that breaks the cycle. If the score was strong across the paper (above 24), extend by reading a geographical article (National Geographic, *Geographical* magazine) and writing a short evaluation of a claim it makes, practising the skill of weighing evidence. Retake this paper only if the score was below 18 and you have completed targeted work on the gaps identified.
