



Mark Scheme (Results)

Summer 2025

Pearson Edexcel GCSE

In Geography A (1GA0)

Paper 03: Geographical Investigations: Fieldwork and
UK Challenges

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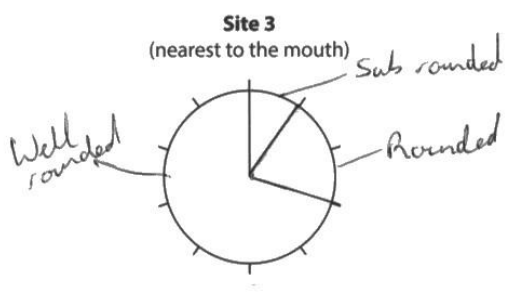
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General Marking Guidance

- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.
- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.
- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.

Question Number	Indicative content A group of students collected data to investigate changes along a section of a river channel. The students measured the velocity in the centre of the river at three different survey sites. Identify one item that could have been used to measure river velocity.	Mark
1(a) (i)	D Stopwatch	(1)

Question number	Indicative content Name the correct unit of measurement for river velocity.	Mark
1(b)	CUMecs (cubic metres per second) Metres per second (m/s) Mph Kph Mps	(1)

Question Number	Indicative content Complete the pie chart for Site 3 by plotting the data below.	Mark
1(c) (i)	Award 1 mark a correctly plotted line. Do not double penalise if error on sub-rounded will lead to further error on rounded. If slice of pie chart is correct, then award 1 mark. 	(2)

Question number	Indicative content Suggest one conclusion the students could make about the changes in pebble shape shown on Figure 1.	Mark
1(c) (ii)	Award 1 mark for a suggested conclusion and a further mark for an explanation of the conclusion made, up to a maximum of 2 marks. The candidate can get marks for a plausible conclusion from either site 1 to site 2 or site 1 to site 3. Candidates can be awarded for second mark when erosion is implied e.g. rocks thrown around. The angularity of the bedload decreases downstream (1) due to the erosion / attrition / abrasion (1) Accept any other appropriate response.	(2)

Question number	Indicative content Describe one fieldwork method that could have been used by the students to measure river width.	Mark
1(d) (i)	Award 1 mark for identification of the method and a further mark for describing how the method is used, up to a maximum of 2 marks. Using a tape measure (1) the students record the measurement by holding the tape measure from one side of the river bank to the other side (1) Accept any other appropriate response.	(2)

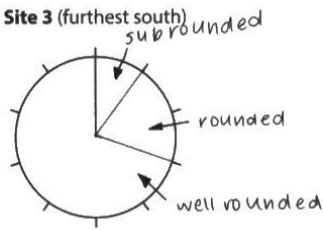
Question number	Indicative content Suggest one way this method to measure river width might not have been accurate	Mark
1(d) (ii)	Award 1 mark for identification of the problem and a further mark for a development of the problem, up to a maximum of 2 marks. Tape measure got caught in the flow of the water (1) which caused the reading to be too high (1) The tape measure was not held tight enough (1) caused the reading to be too low (1) Tape measure was not long enough (1) so it was difficult to obtain the data (1) The tape measure was not taken at water level (1) so the reading was too low (1) Do not credit generic 'inaccurate' statements Accept any other appropriate response.	(2)

Question number	Indicative content You have studied a river as part of your geographical investigation. Evaluate the following statement about your fieldwork. 'My fieldwork location and survey sites helped me to answer my enquiry question(s).'
1(e)	A03 (4 marks)/A04 (4 marks) This question requires candidates to draw on evidence from their own fieldwork investigation to assess the suitability of their fieldwork location and survey sites. Candidates should consider the positive and negatives of their fieldwork location / survey sites. Therefore, examiners should expect to see evidence of this through candidates making specific references to their own river fieldwork for A04. Candidates may demonstrate A03 and A04 through the following examples: • There is evidence of the candidate's own fieldwork investigation location indicated. For example, possible survey sites for river study might be included. - <i>Number of survey sites</i> - <i>Location of survey sites</i> - <i>Detail about survey sites</i> - <i>Names of survey sites</i> - <i>Descriptions of survey sites</i> - <i>Detail about the enquiry question(s)</i> (A04.1d – communicating findings) • There is evidence of consideration in relation to the appropriateness and representativeness of the fieldwork location and survey sites chosen. This might include reference to. - <i>The suitability of the fieldwork location e.g distance from school, location used previously to make comparisons between data from other students</i> - <i>The suitability of the survey sites on the day of the fieldwork</i> - <i>The location of the survey sites in relation to the intentions of the fieldwork investigation (too many sites near the source of the river)</i> - <i>The accessibility of the survey sites</i> - <i>The external issues that affected data collection at the survey sites on the day of the fieldwork</i> <i>For my river fieldwork I completed my study at three sites along the river Bollin. The first survey site was easily accessible, providing the right conditions to collect data on the width, depth and velocity of the river channel. This was linked to my enquiry question on how the river discharge changed downstream. However, when we arrived at site 2 there were people conducting maintenance of the local environment near to the survey sites. This meant that when we were gathering data on the velocity of the river the maintenance happening further along could have been influencing the speed of the river on the day. This may have resulted in data gathered that wasn't true readings of the river velocity.</i> (A03.1d – making judgements)

Level	Mark	Descriptor
	0	No acceptable response.
Level 1	1–3	- Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3) - Few aspects of the enquiry process are supported by the use of geographical skills to obtain information, which has limited relevance and accuracy. Communicates generic fieldwork findings and uses limited relevant geographical terminology. (AO4)
Level 2	4–6	- Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) - Some aspects of the enquiry process are supported by the use of geographical skills. Communicates fieldwork findings with some clarity, using relevant geographical terminology occasionally. (AO4)
Level 3	7–8	- Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently, leading to judgements that are supported by evidence throughout. (AO3) - All aspects of the enquiry process are supported by the use of geographical skills. Communicates enquiry-specific fieldwork findings with clarity, and uses relevant geographical terminology consistently. (AO4)

Question Number	Indicative content Identify one item that could have been used to measure beach gradient	Mark
2(a)	B clinometer	(1)

Question number	Indicative content Name the correct unit of measurement for beach gradient	Mark
2(b)	Degrees	(1)

Question Number	Indicative content Complete the pie chart for Site 3 by plotting the data below.	Mark
2(c) (i)	Award 1 mark a correctly plotted line. Do not double penalise if error on sub-rounded will lead to further error on rounded. If slice of pie chart is correct, then award 1 mark. 	(2)

Question number	Indicative content Suggest one conclusion the students could make about the changes in pebble shape shown in Figure 2.	Mark
2(c) (ii)	Award 1 mark for a suggested conclusion and a further mark for an explanation of the conclusion made, up to a maximum of 2 marks. The candidate can get marks for a plausible conclusion from either site 1 to site 2 or site 1 to site 3. Candidates can be awarded for second mark when erosion is implied e.g. rocks thrown around. The angularity of the bedload decreases downstream (1) due to the erosion / attrition / abrasion / longshore drift (1) Accept any other appropriate response.	(2)

Question number	Indicative content Describe one fieldwork method that could have been used by the students to measure beach width from cliff to water's edge.	Mark
2(d) (i)	Award 1 mark for identification of the method and a further mark for describing how the method is used, up to a maximum of 2 marks. Using a measuring tape (1) the students record the measurement at each change of slope (1) Using a trundle wheel (1) walking up and down the beach several times (1) Do not credit 'cliff to water edge' Accept any other appropriate response.	(2)

Question number	Indicative content Suggest one way this method to measure beach width might not have been accurate.	Mark
2(d) (ii)	Award 1 mark for identification of the problem and a further mark for a development of the problem, up to a maximum of 2 marks. Tape measure might not have been tight (1) causing the reading to be too high (1) Not following a perfect straight line down the beach (1) which resulted in the reading being too high (1) The tape measure blowing in the wind (1) which made it difficult to obtain a reading (1) The tape measure was not taken to the water's edge (1) so the reading was too low (1) Do not credit generic 'inaccurate' statements Accept any other appropriate response.	(2)

Question number	Indicative content You have studied a coast as part of your geographical investigation. Evaluate the following statement about your fieldwork: 'My fieldwork location and survey sites helped me to answer my enquiry question(s).'
2(e)	AO3 (4 marks)/AO4 (4 marks) This question requires candidates to draw on evidence from their own fieldwork investigation to assess the suitability of the fieldwork location and survey sites. Candidates should consider the positive and negatives of their fieldwork location / survey sites. Therefore, examiners should expect to see evidence of this through candidates making specific references to their own coastal fieldwork for AO4 Candidates may demonstrate AO3 and AO4 through the following examples: • There is evidence of the candidate's own fieldwork investigation location indicated. For example, possible survey sites for coastal study might be included. - <i>Number of sites</i> - <i>Location of sites</i> - <i>Detail about survey sites</i> - <i>Names of survey sites</i> - <i>Descriptions of survey sites</i> - <i>Detail about the enquiry question(s)</i> (AO4.1d – communicating findings) • There is evidence of consideration in relation to the appropriateness and representativeness of the study sites chosen. - <i>The suitability of the fieldwork location e.g distance from school, location used previously to make comparisons between data from other students</i> - <i>The suitability of the survey sites on the day of the fieldwork</i> - <i>The location of the survey sites in relation to the intentions of the fieldwork investigation (too many sites near the source of the river)</i> - <i>The accessibility of the survey sites</i> - <i>The external issues that affected data collection at the survey sites on the day of the fieldwork</i> <i>For my coastal fieldwork I completed my study at three sites along Slapton sands. The first survey site was easily accessible, providing the right conditions to collect data on the sediment to consider how it changes along the coastline. My enquiry question was to find out if the sediment size decreases in size along the coast a result of erosional processes such as attrition. However, when we arrived at site 2 there were people conducting maintenance of the local</i>

	<i>natural state of the sediment had been disturbed. This may have resulted in data gathered that wasn't true for the changes along the coast.</i> (AO3.1d – making judgements)
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Level	Mark	Descriptor
	0	No acceptable response.
Level 1	1–3	- Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3) - Few aspects of the enquiry process are supported by the use of geographical skills to obtain information, which has limited relevance and accuracy. Communicates generic fieldwork findings and uses limited relevant geographical terminology. (AO4)
Level 2	4–6	- Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) - Some aspects of the enquiry process are supported by the use of geographical skills. Communicates fieldwork findings with some clarity, using relevant geographical terminology occasionally. (AO4)
Level 3	7–8	- Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently, leading to judgements that are supported by evidence throughout. (AO3) - All aspects of the enquiry process are supported by the use of geographical skills. Communicates enquiry-specific fieldwork findings with clarity, and uses relevant geographical terminology consistently. (AO4)

Question number	Indicative content State one risk you considered before collecting your fieldwork data.	Mark
3 (a) (i)	Award one mark for the identification of an appropriate risk. Sun burn (1) Getting lost (in the group) (1) Injury (1) Cars (on the road) (1) Bias (data) (1) Weather (conditions) (1) Do not credit 'collecting inaccurate data' Accept any other appropriate response.	(1)

Question number	Indicative content Describe one way you attempted to reduce this risk.	Mark
3 (a) (ii)	Award one mark for the identification of what was done to reduce the risk and a further mark for the development, up to a maximum of 2 marks. Kit list which included sun cream (1) and we were reminded to apply this regularly (1) A map outlining our route (1) and conducted our study in small groups (1) A risk assessment prior to our fieldwork (1) which highlighted the importance of paying attention to our surroundings (1) Reducing bias by choosing sites / interviewees with a sampling strategy (1) plus development (1) Staying on designated paths (1) plus development (1) Conducted our study in groups (1) plus development (1) Accept any other appropriate response.	(2)

Question number	Indicative content Explain one limitation of your fieldwork method to record environmental quality	Mark
3 (b)	No credit for naming the fieldwork method. Award one mark for a suitable limitation for recording environmental quality and a further mark for the development of the limitation, up to a maximum of 2 marks. The categories were too broad to make an accurate judgement (1) leading to results not being a true representation (1) Making judgements about the environmental quality is subjective (1) leading to results that are not representative (1) Using closed questions (1) plus development (1) Other possible qualitative methods: interviews / questionnaires Accept any other appropriate response.	(2)

Question number	Indicative content Explain one way the use of Census data helped your investigation.	Mark
3 (c)	Award one mark for a suitable conclusion from the Census data and a further mark for the development of the conclusion, up to a maximum of 2 marks. Census data provided an overview of the demographics of the central/inner urban area (1) plus development (1) Census data provided an overview of employment in the central/inner urban area (1) plus development (1) Do not credit vague statements such as 'accurate' / 'easy to measure' Allow reference to other demographic data sets. Accept any other appropriate response.	(2)

Question number	Indicative content Explain one conclusion that you made about the land use in your urban area.	Mark
3 (d)	Award one mark for a suitable conclusion from the land use function data and a further mark for the development of the conclusion, up to a maximum of 3 marks. Clothing stores was the dominant land use (1) with a wide range of independent and chain store brands (1) which reflected the local demand (1) The number of commercial properties decreased with distance from the urban centre (1) plus development (2) Land use changed from being residential dominate to commercial (1) plus development (2) Max 1 mark for a general narrative about land use changes. Accept any other appropriate response.	(3)

Question number	Indicative content A group of students were investigating the quality of the environment in an urban area. Evaluate the following statement. "The reduction in vehicles allowed into the city centre is a positive change for people and the environment."
3 (e)	AO3 (4 marks)/AO4 (4 marks) This question requires candidates to evaluate the statement based on data gathered from a fieldwork method for an urban study. Candidates should consider both sides of the argument based on the statement. Candidates may demonstrate AO3 and AO4 through the following examples: • The student's questionnaire data indicates mixed results with the younger age group 18-30 believing the reduction in vehicles into the city had brought a negative change with 70% saying no compared to 80% of the age group 51+ saying yes. (AO4.1d – communicate findings) The positive comments from the 51+ age group could be linked to improved accessibility (AO3.1d – making judgements), which is further supported by the comments from the respondents. However, we are not aware of the sample size and therefore this data might not be fully representative of the views (AO3.1d – making judgements). Candidates may also draw on other evidence from the data provided. - <i>Increased traffic flow on the edge of the city centre (AO4) which could be contributing towards increased commuter times and therefore create negativity from local people wanting to get to and from work (AO3).</i> - <i>The increased perception of safety now that the roads into the city centre are now longer busy (AO4) which could increase the footfall in the city centre and provide a financial boost for the local businesses and the wider economy (AO3).</i>

Level	Mark	Descriptor
	0	No acceptable response.
Level 1	1–3	- Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3) - Few aspects of the enquiry process are supported by the use of geographical skills to obtain information, which has limited relevance and accuracy. Communicates generic fieldwork findings and uses limited relevant geographical terminology. (AO4)
Level 2	4–6	- Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) - Some aspects of the enquiry process are supported by the use of geographical skills. Communicates fieldwork findings with some clarity, using relevant geographical terminology occasionally. (AO4)
Level 3	7–8	- Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently, leading to judgements that are supported by evidence throughout. (AO3) - All aspects of the enquiry process are supported by the use of geographical skills. Communicates enquiry-specific fieldwork findings with clarity, and uses relevant geographical terminology consistently. (AO4)

Question number	Indicative content State one risk you considered before collecting your fieldwork data.	Mark
4(a) (i)	Award one mark for the identification of an appropriate risk. Sun burn (1) Getting lost (in the group) (1) Injury (1) Cars (on the road) (1) Bias (data) (1) Weather (conditions) (1) Do not credit 'collecting inaccurate data' Accept any other appropriate response.	(2)

Question number	Indicative content Describe one way you attempted to reduce this risk.	Mark
4(a) (ii)	Award one mark for the identification of what was done to reduce the risk and a further mark for the development, up to a maximum of 2 marks. Kit list which included sun cream (1) and we were reminded to apply this regularly (1) A map outlining our route (1) and conducted our study in small groups (1) A risk assessment prior to our fieldwork (1) which highlighted the importance of paying attention to our surroundings (1) Reducing bias by choosing sites / interviewees with a sampling strategy (1) plus development (1) Staying on designated paths (1) plus development (1) Accept any other appropriate response.	(2)

Question number	Indicative content Explain one limitation of your fieldwork method to record views about environmental quality.	Mark
4(b)	No credit for naming the fieldwork method. Award one mark for a suitable limitation for a fieldwork method to record views about environmental quality and a further mark for the development of the limitation, up to a maximum of 2 marks. The categories were too broad to make an accurate judgement (1) leading to results not being a true representation (1) Making judgements about the environmental quality is subjective (1) leading to results that are not representative (1) Using closed questions (1) plus development (1) Accept any other appropriate response.	(2)

Question number	Indicative content Explain one way the use of Census data helped your investigation.	Mark
4(c)	Award one mark for a suitable conclusion from the Census data and a further mark for the development of the conclusion, up to a maximum of 2 marks. Census data provided an overview of the demographics of the rural settlement (1) plus development (1) Census data provided an overview of employment in the rural settlement (1) plus development (1) Do not credit vague statements such as 'accurate' / 'easy to compare' Allow reference to other demographic data sets. Accept any other appropriate response.	(2)

Question number	Indicative content Explain one conclusion that you made about the flows of people within your rural settlement.	Mark
4(d)	Award one mark for a suitable conclusion from the views of people and a further mark for the development of the conclusion, up to a maximum of 3 marks. Flows of people are higher near key physical / human attractions (1) with tourists drawn to places of interest (1) to spend the day with their families (1) Flows of people are higher near shops (1) plus development (2) Max 1 mark for a general narrative about the change in flows of people. Accept any other appropriate response	(3)

Question number	Indicative content A group of students were investigating the quality of the environment in a rural area. Evaluate the following statement. 'The new farm shop in the village is a positive change for people and the environment.
4(e)	AO3 (4 marks)/AO4 (4 marks) This question requires candidates to evaluate the statement based on data gathered from a fieldwork method for a rural study. Candidates should consider both sides of the argument based on the impact of the new farm shop. Candidates may demonstrate AO3 and AO4 through the following examples: • The student's questionnaire data indicates mixed results with the younger age group 18-30 believing the farm shop will bring a positive change with 70% answering yes. This is similar to the responses from the 51+ group with 80% answering yes. (AO4.1d – communicate findings) The positive comments from the 18-30 age group could be linked to improved employment opportunities (AO3.1d – making judgements), which is further supported by the comments from the respondents. However, we are not aware of the sample size and therefore this data might not be fully representative of the views (AO3.1d – making judgements). Candidates may also draw on other evidence from the data provided. - <i>Increased traffic flow into the village (AO4) which could be contributing towards increased commuter times and therefore create negativity from local people wanting to get to and from work (AO3).</i> - <i>The new farm shop has increased employment opportunities (AO4) which will contribute towards reducing local unemployment and boosting the economy through the multiplier effect (AO3).</i>

Level	Mark	Descriptor
	0	No acceptable response.
Level 1	1–3	- Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3) - Few aspects of the enquiry process are supported by the use of geographical skills to obtain information, which has limited relevance and accuracy. Communicates generic fieldwork findings and uses limited relevant geographical terminology. (AO4)
Level 2	4–6	- Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) - Some aspects of the enquiry process are supported by the use of geographical skills. Communicates fieldwork findings with some clarity, using relevant geographical terminology occasionally. (AO4)
Level 3	7–8	- Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently, leading to judgements that are supported by evidence throughout. (AO3) - All aspects of the enquiry process are supported by the use of geographical skills. Communicates enquiry-specific fieldwork findings with clarity, and uses relevant geographical terminology consistently. (AO4)

Question number	Indicative content Study Figure 5a in the Resource Booklet. Identify the total UK greenhouse gas (GHG) emissions in 2005.	Mark
5(a) (i)	C 700 million tonnes	(1)

Question number	Indicative content Describe the trend in UK GHG emissions from 1990 to 2022. You must use data in your answer.	Mark
5(a) (ii)	Award one mark for identifying a trend and a further mark for use of data, up to a maximum of 2 marks. The trend of total UK greenhouse gas emissions in the UK is decreasing (1) from just over 800 to 420 million tonnes (1) / decreasing by approximately 380 million tonnes (1). Accept any other appropriate response.	(2)

Question number	Indicative content Define the term sustainability.	Mark
5(b)	Award one mark for the correct definition. Sustainability is meeting the needs of the present without compromising the ability of future generations to meet their own needs. (1) Allow for reference to the idea of 'maintaining resources for the future' Accept any other appropriate response.	(1)

Question number	Answer Study Figure 5b in the Resource Booklet. Identify which source had the lowest GHG emissions in 2019	Mark
5(c)	A agriculture	(1)

Question number	Indicative content The increasing UK population has led to a debate about the use of brownfield and greenfield sites. Explain two benefits of regenerating brownfield sites.	Mark
5(d)	Award one mark for each identification of each benefit of building on brownfield sites and a further mark(s) for development of the reason, up to a maximum of 4 marks. Improves the aesthetics of the local environment (1) improving footfall for businesses (1) Utilities are already in place (1) reducing construction costs (1) Planning permission can often be easier to obtain (1) which reduces timescales / cost of projects (1) Reduces crime (1) with the removal of derelict buildings (1) Creates local employment (1) plus development (1) Reduces the need to develop on greenfield sites (1) plus development (1) Do not accept 'cheap' in isolation with no context Accept any other appropriate response.	(4)

Question number	Indicative content Explain one benefit of building on greenfield sites.	Mark
5(e)	Award 1 mark for the identification of a benefit of building on greenfield sites and a further mark(s) for explanation of this, up to a maximum of 3 marks. Lower initial costs (1) because you don't need to demolish old buildings (1) which can delay timescales and increase the final construction cost (1) Flexibility in design and layout (1) because greenfield sites provide a blank space / canvas (1) allowing developers more freedom (1) Employment opportunities (1) from the construction of new buildings and roads (1) which contributes towards the wider economy (1) Accept any other appropriate response.	(3)

Question number	Indicative content Use the information from the Resource Booklet (Figures 5a, 5b, 5c, 5d, 5e and 5f) as well as knowledge and understanding from the rest of your geography course. 'The development of sustainable transport is the best option to improve environmental sustainability in the UK.' Discuss this view
5(f)	AO2 • The UK's population is approximately 64 million and over the next 20 years is expected to rise. This will put increasing pressure on the ability for cities to meet the needs of its people in a sustainable way. • Rising populations will inevitably lead to an increase in resource consumption, which will need to be sourced from renewable sources to maintain the UK's sustainable development strategy goals. • Sustainability refers to 'meeting the needs of the present without compromising the ability of future generations to meet their own needs'. • The rise in affluence has increased the ability for people to own a car which is contributing towards increased CO² emissions in UK cities. • The development of new technologies like hybrid and electric vehicles will be key to reducing air pollution and contributing towards creating new employment and boosting local economies. • A need to create energy security, but at the same time reducing the use of fossil fuels and creating a more sustainable energy mix to meet the UK's climate change challenges. • Improving air quality in cities through sustainable transport options will be an important strategy for cities. AO3 • The rise in sustainable transport schemes have contributed towards improved air quality in cities but this has been at a financial cost and further development of these strategies will be dependent upon the financial situation. • Many cities have introduced sustainable transport options in recent years which have included bus and cycle lanes, hybrid and electric public transport however, the dominant mode of transport is still private vehicles. This is because some public transport systems are unreliable and public confidence in them is low. • The use of sustainable transport is just one option to improve environmental sustainability in the UK. If this remained the only focus, the progress towards environmental sustainability would be hindered. A strategic approach with the use of other strategies is more likely to contribute towards improvements to the environment in the longer term. AO4

Question number	Indicative content Use the information from the Resource Booklet (Figures 5a, 5b, 5c, 5d, 5e and 5f) as well as knowledge and understanding from the rest of your geography course. 'The development of sustainable transport is the best option to improve environmental sustainability in the UK.' Discuss this view
	- Figure 5a the total GHG emissions in the UK since 1990 has been declining. In 1990 it was over 800 MtCO₂e to 400 MtCO₂e in 2022. There have been a number of years over this time period when the GHG emissions have risen from the previous year. - Figure 5b demonstrates the distribution of UK emissions by sector is predominantly caused by transport and buildings with heat being the key contributor. - Figure 5c supports the evidence from Figure 5b with heating the dominant contributor to UK average household CO₂ emissions at an average of 2745 kg in 2017 compared to waste at 305 kg. - Figure 5d highlights the key features of an eco friendly house with key features such as solar panels, insulation and efficient lighting demonstrating that the contribution of how people live is an equally important factor to improving sustainability in the UK. - Figure 5e highlights the cycling and walking strategy for the UK outlined by the Prime Minister in 2020 in a bid to improve the air quality and congestion on roads. The rise in the use of bicycles and people walking can have a positive influence on air quality, health and reducing traffic congestion. - Figure 5f illustrates gas and wind are key contributors to electricity generation in the UK in 2022 at 38.4% and 24.7%. The graph demonstrates the contribution of coal and oil is at an all time low with both fuel types only contributing a combined total of 2.4% in 2022.

Level	Mark	Descriptor
	0	No acceptable response.
Level 1	1–4	- Demonstrates isolated elements of understanding of concepts and the interrelationship between places, environments and processes. (AO2) - Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3) - Uses some geographical skills to obtain information with limited relevance and accuracy, which supports few aspects of the argument. (AO4)

Level 2	5–8	• Demonstrates elements of understanding of concepts and the interrelationship between places, environments and processes. (AO2) • Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) • Uses geographical skills to obtain accurate information that supports some aspects of the argument. (AO4)
Level 3	9–12	• Demonstrates accurate understanding of concepts and the interrelationship of places, environments and processes. (AO2) • Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently, leading to judgements that are supported by evidence throughout. (AO3) • Uses geographical skills to obtain accurate information that supports all aspects of the argument. (AO4)

Marks for SPGST		
Performance	Marks	Descriptor
SPaG 0	0	<i>No marks awarded:</i> • Learners write nothing. • Learner's response does not relate to the question. • Learner's achievement in SPaG does not reach the threshold performance level, for example errors in spelling, punctuation and grammar severely hinder meaning.
SPaG 1	1	<i>Threshold performance:</i> • Learners spell and punctuate with reasonable accuracy. • Learners use rules of grammar with some control of meaning and any errors do not significantly hinder meaning overall. • Learners use a limited range of specialist terms as appropriate.
SPaG 2	2–3	<i>Intermediate performance:</i> • Learners spell and punctuate with considerable accuracy. • Learners use rules of grammar with general control of meaning overall. • Learners use a good range of specialist terms as appropriate.

SPaG 3	4	<i>High performance:</i> • Learners spell and punctuate with consistent accuracy. • Learners use rules of grammar with effective control of meaning overall. • Learners use a wide range of specialist terms as appropriate.
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