

Investigating river environments- 5

Name: _____

Class: _____

Date: _____

Time:

Total Marks Available:

Total Marks Archived:

Level: IGCSE Mathematics A

Subject: Geography

Exam Board: Edexcel IGCSE Geography- it is however suitable for use by mathematics student of other boards

Topic: Investigating river environments -5

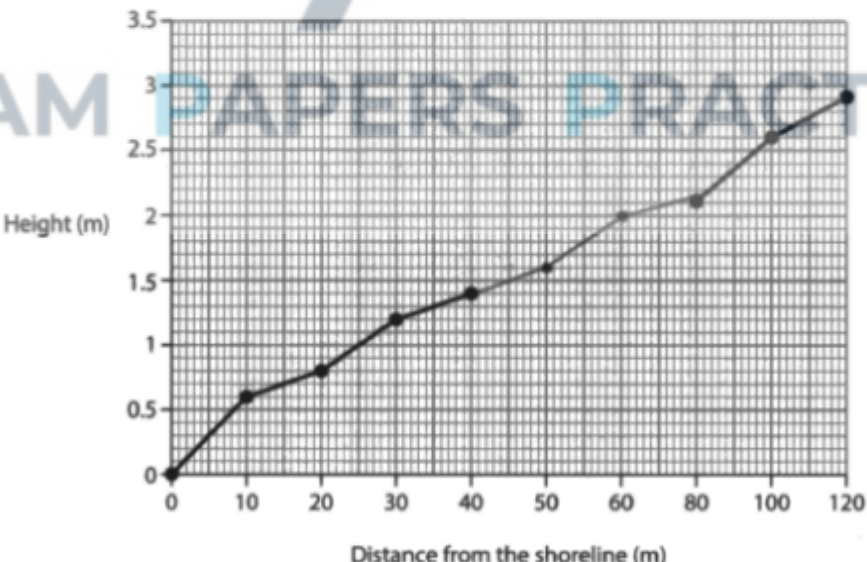
Type: Mark Scheme

To be used by all students preparing for Edexcel IGCSE Geography- Students of other Boards may also find this useful



Mark Scheme

Q1.

Question number	Answer	Mark																						
(i)	<p style="text-align: center;">AO4 (2 marks)</p> <p>Award one mark for plotting one data point correctly, and a further mark for plotting second data point and the line.</p> <p>Two correct data points plotted with no line drawn award one mark.</p> <p>Completed version:</p>  <table border="1"><caption>Data points from the graph</caption><thead><tr><th>Distance from the shoreline (m)</th><th>Height (m)</th></tr></thead><tbody><tr><td>0</td><td>0.0</td></tr><tr><td>10</td><td>0.6</td></tr><tr><td>20</td><td>0.8</td></tr><tr><td>30</td><td>1.2</td></tr><tr><td>40</td><td>1.4</td></tr><tr><td>50</td><td>1.6</td></tr><tr><td>60</td><td>2.0</td></tr><tr><td>80</td><td>2.1</td></tr><tr><td>100</td><td>2.6</td></tr><tr><td>120</td><td>2.9</td></tr></tbody></table>	Distance from the shoreline (m)	Height (m)	0	0.0	10	0.6	20	0.8	30	1.2	40	1.4	50	1.6	60	2.0	80	2.1	100	2.6	120	2.9	(2)
Distance from the shoreline (m)	Height (m)																							
0	0.0																							
10	0.6																							
20	0.8																							
30	1.2																							
40	1.4																							
50	1.6																							
60	2.0																							
80	2.1																							
100	2.6																							
120	2.9																							



Question number	Answer	Mark
(ii)	<p style="text-align: center;">AO3 (3 marks)</p> <p>Award 1 mark for identification of a suitable advantage, and a further 2 marks for explanation.</p> <ul style="list-style-type: none">• (Line diagrams) allow patterns to be visualized easily (1) and therefore compared to other sites (1) to check if they fit with hypothesis (1).• (Beach profiles) are easy to construct (1) using Excel / by hand (1) to be able to spot any anomalies in the data (1).• (Line graphs) are easy to understand (1) which means connections are easily spotted (1) and anomalies can be identified (1). <p>Accept any other reasonable response.</p>	(3)

Q2.



Question number	Answer	Mark																						
(i)	<p style="text-align: center;">A04 (2 marks)</p> <p>Award one mark for plotting one data point correctly, and a further mark for plotting second data point and the line.</p> <p>Two correct data points plotted with no line drawn award one mark.</p> <p>Completed version:</p> <table border="1"><caption>Temperature Data</caption><thead><tr><th>Day</th><th>Temperature (°C)</th></tr></thead><tbody><tr><td>1</td><td>21</td></tr><tr><td>2</td><td>20</td></tr><tr><td>3</td><td>22</td></tr><tr><td>4</td><td>23</td></tr><tr><td>5</td><td>25</td></tr><tr><td>6</td><td>18</td></tr><tr><td>7</td><td>16</td></tr><tr><td>8</td><td>17</td></tr><tr><td>9</td><td>16</td></tr><tr><td>10</td><td>17</td></tr></tbody></table>	Day	Temperature (°C)	1	21	2	20	3	22	4	23	5	25	6	18	7	16	8	17	9	16	10	17	<p>(2)</p>
Day	Temperature (°C)																							
1	21																							
2	20																							
3	22																							
4	23																							
5	25																							
6	18																							
7	16																							
8	17																							
9	16																							
10	17																							



Question number	Answer	Mark
(ii)	<p style="text-align: center;">A03 (3 marks)</p> <p>Award 1 mark for identification of a suitable advantage, and a further 2 marks for explanation.</p> <ul style="list-style-type: none">• (Line diagrams) allow patterns to be visualized easily (1) and therefore compared to other sites (1) to check if they fit with hypothesis (1)• (Line graphs) are easy to construct (1) using Excel / by hand (1) to be able to spot any anomalies in the data (1).• (Line graphs) are easy to understand (1) which means connections are easily spotted (1) and anomalies can be identified (1). <p>Accept any other reasonable response.</p>	(2)

Q3.



Question number	Answer
	<p style="text-align: center;">A03 (4 marks)/A04 (4 marks)</p> <p>Marking instructions Markers must apply the descriptors in line with the general marking guidance and the qualities outlined in the levels-based mark scheme below.</p> <p>Indicative content guidance The indicative content below is not prescriptive and candidates are not required to include all of it. Other relevant material not suggested below must also be credited. Relevant points may include the following.</p> <p>A03</p> <ul style="list-style-type: none">• Accuracy is about making judgements about how close conclusions are to the actual changes occurring in the river environment where the fieldwork was carried out.• Accuracy of conclusions will be most likely linked to evaluation of the data collection methods.• Recognition of the extent to which there were equipment errors, e.g. faulty or uncalibrated equipment, and/or operator errors, e.g. misinterpreting the data being recorded, and how this might have affected the accuracy of the results.• Recognition of whether there were issues with the design of the data collection and/or sampling methodologies, which may be flawed in terms of the location/number of sites (spatial), the time of year (temporal), or the equipment chosen.• A supported judgement is reached about the accuracy of conclusions, drawing on evidence such as strengths, weaknesses, alternatives and relevant data. <p>Do not credit responses that make reference to how far the conclusions can be trusted (validity of conclusions) or the extent to which the investigation can be repeated to obtain the same results/conclusions (reliability).</p>



EXAM PAPERS PRACTICE

A04

- There is evidence of using different skills and techniques to measure changes in a river channel.
- There is evidence of using different skills and techniques to analyse data and reach conclusions about changes occurring in a river channel.
- There is evidence of using different skills and techniques to evaluate conclusions about changes occurring in a river channel.
- There is evidence of own fieldwork conclusions, i.e. reference to field data collected by the student.



EXAM PAPERS PRACTICE



Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	<ul style="list-style-type: none">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	<ul style="list-style-type: none">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	<ul style="list-style-type: none">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)

Q4.



Question number	Answer
	<p style="text-align: center;">A03 (4 marks)/A04 (4 marks)</p> <p>Marking instructions Markers must apply the descriptors in line with the general marking guidance and the qualities outlined in the levels-based mark scheme below.</p> <p>Indicative content guidance The indicative content below is not prescriptive and candidates are not required to include all of it. Other relevant material not suggested below must also be credited. Relevant points may include the following.</p> <p>A03</p> <ul style="list-style-type: none">• Accuracy is about making judgements about how close conclusions are to the actual changes occurring in the coastal environment where the fieldwork was carried out.• Accuracy of conclusions will be most likely linked to evaluation of the data collection methods.• Recognition of the extent to which there were equipment errors, e.g. faulty or uncalibrated equipment, and/or operator errors, e.g. misinterpreting the data being recorded, and how this might have affected the accuracy of the results.• Recognition of whether there were issues with the design of the data collection and/or sampling methodologies, which may be flawed in terms of the location/number of sites (spatial), the time of year (temporal), or the equipment chosen.• A supported judgement is reached about the accuracy of conclusions, drawing on evidence such as strengths, weaknesses, alternatives and relevant data. <p>Do not credit responses that make reference to how far the conclusions can be trusted (validity of conclusions) or the extent to which the investigation can be repeated to obtain the same results/conclusions (reliability).</p>
	<p>A04</p> <ul style="list-style-type: none">• There is evidence of using different skills and techniques to measure coastal processes and form.• There is evidence of using different skills and techniques to analyse data and reach conclusions about coastal processes and form.• There is evidence of using different skills and techniques to evaluate conclusions about coastal processes and form.• There is evidence of own fieldwork conclusions, i.e. reference to the field data collected by the student.



Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	<ul style="list-style-type: none">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	<ul style="list-style-type: none">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	<ul style="list-style-type: none">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)

Q5.



Question number	Answer
	<p style="text-align: center;">A03 (4 marks)/A04 (4 marks)</p> <p>Marking instructions Markers must apply the descriptors in line with the general marking guidance and the qualities outlined in the levels-based mark scheme below.</p> <p>Indicative content guidance The indicative content below is not prescriptive and candidates are not required to include all of it. Other relevant material not suggested below must also be credited. Relevant points may include the following.</p> <p>A03</p> <ul style="list-style-type: none">• Accuracy is about making judgements about how close conclusions are to the actual changes occurring in the hazardous environment where the fieldwork was carried out.• Accuracy of conclusions will be most likely linked to evaluation of the data collection methods.• Recognition of the extent to which there were equipment errors, e.g. faulty or uncalibrated equipment, and/or operator errors, e.g. misinterpreting the data being recorded, and how this might have affected the accuracy of the results.• Recognition of whether there were issues with the design of the data collection and/or sampling methodologies, which may be flawed in terms of the location/number of sites (spatial), the time of year (temporal), or equipment chosen.• A supported judgement is reached about the accuracy of conclusions, drawing on evidence such as strengths, weaknesses, alternatives and relevant data. <p>Do not credit responses that make reference to how far the conclusions can be trusted (validity of conclusions) or the extent to which the investigation can be repeated to obtain the same results/conclusions (reliability).</p>



EXAM PAPERS PRACTICE

A04

- There is evidence of using different skills and techniques to measure the physical processes involved in an extreme weather event.
- There is evidence of using different skills and techniques to analyse data and reach conclusions about physical processes involved in an extreme weather event.
- There is evidence of using different skills and techniques to evaluate conclusions about physical processes involved in an extreme weather event.
- There is evidence of own fieldwork conclusions, i.e. reference to field data collected by the student.



EXAM PAPERS PRACTICE



Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	<ul style="list-style-type: none">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	<ul style="list-style-type: none">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	<ul style="list-style-type: none">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)



Q6.

Question number	Answer	Mark
	<p style="text-align: center;">A03 (3 marks)</p> <p>Candidates will need to outline one method of data presentation and why it was used in their enquiry. This could be linked to advantages over other methods.</p> <p>For example, they might describe how they put the river data velocity in a table to (1) to compare the data at each site (1) so that they could identify any trends (1)</p>	(3)

Q7.

Question number	Answer	Mark
	<p style="text-align: center;">A03 (3 marks)</p> <p>Candidates will need to outline one method of data presentation and why it was used in their enquiry. This could be linked to advantages over other methods.</p> <p>For example, they might describe how they put the coastal data on pebble size in a table to (1) to compare the data at each site so that they could identify any trends (1) as compared to putting in a bar chart as it makes it easier compare the sites (1)</p> <p>Accept any other appropriate response.</p>	(3)



Q8.

Question number	Answer	Mark
	<p style="text-align: center;">A03 (3 marks)</p> <p>Candidates will need to outline one technique used for data presentation and why it was used in their enquiry. This could be linked to advantages over other methods.</p> <p>For example, they might describe how they put the rainfall data in a table to (1) to compare the data at each site (1) they could suggest this was an easier a clearer way to see the raw data as compared with putting it in a graph (1)</p> <p>Accept any other appropriate response.</p>	(3)

