

GCE A Level Examiners' Report

Geology

A level

Summer 2025

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Introduction

Our Principal examiners' report provides valuable feedback on the recent assessment series. It has been written by our Principal Examiners and Principal Moderators after the completion of marking and moderation, and details how candidates have performed in each component.

This report opens with a summary of candidates' performance, including the assessment objectives/skills/topics/themes being tested, and highlights the characteristics of successful performance and where performance could be improved. It then looks in detail at each unit, pinpointing aspects that proved challenging to some candidates and suggesting some reasons as to why that might be.¹

The information found in this report provides valuable insight for practitioners to support their teaching and learning activity. We would also encourage practitioners to share this document – in its entirety or in part – with their learners to help with exam preparation, to understand how to avoid pitfalls and to add to their revision toolbox.

Further support

Document	Description	Link
Professional Learning / CPD	Eduqas offers an extensive programme of online and face-to-face Professional Learning events. Access interactive feedback, review example candidate responses, gain practical ideas for the classroom and put questions to our dedicated team by registering for one of our events here.	https://www.eduqas.co.uk/home/professional-learning/
Past papers	Access the bank of past papers for this qualification, including the most recent assessments. Please note that we do not make past papers available on the public website until 12 months after the examination.	Portal by WJEC or on the Eduqas subject page
Grade boundary information	Grade boundaries are the minimum number of marks needed to achieve each grade. For linear specifications, a single grade is awarded for the subject, rather than for each component that contributes towards the overall grade. Grade boundaries are published on results day.	For unitised specifications click here: Results and Grade Boundaries and PRS (eduqas.co.uk)

¹ Please note that where overall performance on a question/question part was considered good, with no particular areas to highlight, these questions have not been included in the report.

Exam Results Analysis	Eduqas provides information to examination centres via the WJEC Portal. This is restricted to centre staff only. Access is granted to centre staff by the Examinations Officer at the centre.	Portal by WJEC
Classroom Resources	Access our extensive range of FREE classroom resources, including blended learning materials, exam walk-throughs and knowledge organisers to support teaching and learning.	https://resources.eduqas.co.uk/
Bank of Professional Learning materials	Access our bank of Professional Learning materials from previous events from our secure website and additional pre-recorded materials available in the public domain.	Portal by WJEC or on the Eduqas subject page.
Become an examiner with WJEC.	We are always looking to recruit new examiners or moderators. These opportunities can provide you with valuable insight into the assessment process, enhance your skill set, increase your understanding of your subject and inform your teaching.	Become an Examiner Eduqas

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Executive Summary

Each of the three written-exam components had a similar structure to those seen in previous years. Overall, the performance of candidates on these was similar to that seen in 2024.

In Component 1, candidates generally showed good knowledge of the formation of unconformities and the interpretation of modes of life of trilobites. The construction of the cross-section was undertaken well. The answers to the extended writing fieldwork design question were not tackled particularly well, and answers requiring an appreciation of the formation of natural gas, hydrothermal mineral formation, and factors affecting rock deformation, were weaker.

In Component 2, candidates generally performed well in answers related to meteorites, an understanding of aeolian facies, and phase diagrams. Candidates had more difficulty recalling information related to the formation of fault breccia, volcanic hazards in an intraplate setting, and Walther's Law.

In Component 3, candidates displayed good knowledge of tsunami hazards addressed in Section A, and generally tackled mathematical questions competently, including the interpretation of stereonet in the Geological Evolution of Britain option. Topics in which candidates did not perform particularly well included the disposal of radioactive waste, deformation and principal stress interpretation from the BGS map and evidence for the early history of the opening of the North Atlantic Ocean,

It is important that candidates pay attention to answering the question fully, using all the key information given in the stem of the question. Candidates should also make sure that their answers appropriately address the command word in each question.

Areas for improvement	Classroom resources	Brief description of resource
Planning fieldwork investigations	COMPONENT 1 EXAM WALK THROUGH	PowerPoint with audio commentary. Slides for Q5 exemplify how to tackle a fieldwork planning question
Writing answers that respond to all the key information given in the stem of the question	Online exam review	Annotated samples of candidate responses which can be used to show good practice.
Recall of more complex topic areas	KNOWLEDGE ORGANISERS	A collection of knowledge organisers to support the learning of AS and A level Geology.

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COMPONENT 1 – GEOLOGICAL INVESTIGATIONS

Overview of the Component

As in line with previous years Section A had two stand-alone questions with Section B being an integrated geological practical paper that included a map, specimens and photographs.

The topics covered this year included: oil and gas, James Hutton and the principle of uniformitarianism, trilobite modes of life, igneous and metamorphic petrology, hydrothermal mineralisation, structural geology and rock deformation.

Many skills including the following were assessed: mineral testing and identification, drawing fossils, interpreting seismic surveys, planning a field investigation, geological map interpretation and drawing a geological cross-section.

Overall, candidate performance on this component was similar to previous years.

Comments on individual questions/sections

Q.1 While the vast majority of candidates had little difficulty in identifying the role of the different rock units in the Ekofisk oil field, a surprisingly high number of candidates were unable to explain how oil is converted into gas at higher temperatures, with the most common mistake being to suggest that oil evaporates into gas. The rest of the question proved to differentiate well between candidates.

Q.2 Most candidates had little difficulty identifying the type of fossil present and giving a reason. It was pleasing to see most candidates clearly have experience of measuring dip angles and directions in the field and were confident using technical language to describe the equipment and techniques involved.

The most common error in part c was to confuse the principle of uniformitarianism with the principle of superposition. In part c it was clear that the vast majority of candidates had a sound and secure knowledge and understanding of how unconformities form. However very few candidates were able to relate this to the rate at which geological processes take place.

Q.3 It was pleasing to see that the vast majority of candidates had little difficulty in producing a high scoring diagram of the fossil trilobite *Dalmanites*, but some had difficulty in correctly identifying the fossil using the key provided. Most candidates gained full marks on section c.

Q.4 It was disappointing to see that most candidates failed to recognise that Mann-Whitney U test was the correct answer, with a fairly even split of incorrect answers. Very few candidates were able to justify their choice of statistical test.

The contradictory evidence within the data made section b a good discriminator, with nearly all candidates gaining some credit for recognising evidence either in support or against Locality 1 being a death assemblage.

Q.5 It was pleasing to see that most candidates had little difficulty identifying Specimen C as dolerite and were able to give suitable reasons for their answer. Part b provided a wide range of marks, with most candidates being able to relate the crystal size of Specimen C to that expected in a lava flow. The most common error was to just use evidence from Map 1 despite also being directed to Specimen C in the rubric of the question.

Q.6 This question produced a wide range of marks. Those candidates that embraced the spirit of the question and planned a relevant investigation scored highly. However, a significant minority of candidates gave a generic response which often included a very lengthy discussion about potential health and safety issues, followed by a list of possible observations that would only be suitable in an investigation into the depositional history of a sedimentary rock. These answers were not awarded any credit.

It was quite remarkable how many candidates suggested using radioisotopes to date the rocks or intended to drill a borehole during a field investigation. Maybe some centres have access to resources way beyond what would be regarded as standard A level field equipment.

The most common reason for candidates not being able to be placed in the top band was a lack of detail with regards to the observations being suggested. For example, suggesting that crystal size is something that could be observed to determine if Rock Unit C had a chilled margin, but no mention of how a hand lens and ruler would be required in order to do this.

Q.7 While most candidates had little difficulty identifying Specimen G as barite, few candidates recognised what would be a diagnostic test to confirm this. The majority of incorrect answers involved testing the streak.

Most candidates were able to link Locality 4 to the fault but very few then went on to discuss hydrothermal processes. Many candidates instead suggested that the mineral had been formed as a result of dynamic metamorphism.

Q.8 This question produced a wide range of marks. As in previous years a number of candidates continued to use sedimentary terminology when describing a metamorphic rock.

Part b discriminated well with nearly all candidates gaining credit for recognising that the schist was formed by regional metamorphism but not of a limestone.

Q.9 This proved to be one of the most accessible questions on the paper. The most common error was to extend the fold axial plane traces across the unconformities.

Q.10 Completing the geological cross-section continued to be a good discriminator which again produced a wide range of marks. Although a few candidates achieved full marks, the most common errors were not using the borehole data correctly and not showing the cross-cutting relationship between the base of rock unit B and fault F1. It was pleasing to note that the high overall quality of cross-sections seen in summer 2024, was maintained this year.

Q.11 The majority of candidates scored full marks on parts a and b. In part c very few candidates scored full mark. The most common mistake was a lack of recognition that below the elastic limit there would be no permanent deformation. The vast majority of candidates completed the table correctly.

Most candidates were able to correctly link localities 5 and 6 with the fault and fold, although few were able to use technical language in their answers, such as fracture point, plastic deformation etc. In part e most candidates gained credit for stating that locality 5 had experienced more stress than locality 6. A common misconception was to relate the proximity of the igneous body to locality 6. Credit was however given to those candidates who then correctly discussed the role of temperature in rock deformation.

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COMPONENT 2 – GEOLOGICAL PRINCIPLES AND PROCESSES

Overview of the Component

In this paper AO2 accounted for 39 of the 90 marks, with AO1 representing 29 marks, and AO3 accounting for 22 marks, the same weighting observed in the 2024 component 2 examination. As in previous years, the paper consisted of six questions which generally increased in difficulty. Topics covered this year, included: Earth's layers, meteorites, and the Goldschmidt classification system; interpretation of field exposures of faults and sedimentary textural analysis; mid-plate volcanism and the solid solution series for olivine; sedimentary graphic logs and structures, and Walther's Law; the proposed Anthropocene Epoch; and fossil leaf climate adaptations and preservation. Overall, candidate performance was slightly higher than in 2024.

Comments on individual questions/sections

- Q.1** In response to this question, most candidates successfully attempted the maths questions, easily substituting and rearranging the equation, confidently showing their working, and sensibly rounding their answer. They demonstrated good knowledge of meteorites and use of the Goldschmidt classification. However, a significant proportion lacked precision when reading from the graph which lost them a mark. Recall of key elements in the Earth's crust was also poor.
- Q.2** In question two surprisingly few candidates accurately estimated the throw of the fault. The wide range of answers made it difficult to pinpoint where candidates had erred. Although it became apparent that many did not know the intended meaning of fault 'throw'. Generally, candidates were able to show a good understanding of principal stresses and fault reactivation. In the six-mark QER question strengths lay in textual descriptions, understanding of aeolian facies, and the basics of dynamic metamorphism. Weaknesses arose in the explanation of how fault breccias form, even when the candidate had successfully identified the rock. Broadly speaking this was a well-received question where candidates demonstrated ease in interpretation and confidence in answering. Candidates responded very well to the QER six-mark question, with many scoring in the upper five-six marking band.

- Q.3** In question three most candidates measured the required distance and calculated the mean rate of movement with success. Those who lost marks usually neglected to convert the distance from 'km' to 'cm'. Most were able to access all the marks available for describing the relationship, showing candidates generally have a good grasp of the demands of two or three mark 'describe' questions when provided with data. When naming and describing the volcanic hazard there was a tendency to disregard the reference to 'present-day volcanism' in this intraplate setting and proceed to give examples of hazards which are not a threat in this location today. Evidence provided for the plume theory was sometimes vague, with mention of a linear island chain but no reference to the pattern of age. Candidates who did not score highly on this question tended to expand on only one valid point, often repeating themselves, instead of recognising that this is a three-mark question requiring three valid points. In the second part of this question decompression melting was rarely referenced and some incorrectly assumed that partial melting of oceanic lithosphere alone had taken place. The solid solution series phase diagram section of the question was answered with greater prosperity, showing in general a good understanding of the data, and the best candidates had no difficulty in recognising the importance of the olivine composition at this location with regard to temperature of the eruptions.
- Q.4** In response to question four candidates generally scored highly in part (a) showing sufficient graphic log skills and an ability to interpret and complete the sea water graph. Most were able to either remain within the stated range, or construct the curve at the very least, to obtain one mark. To avoid losing marks when attempting to construct graphic logs it is advised to carefully read all information available beforehand – some candidates missed (or at least initially missed, hence the crossing out) the order in which the beds should be constructed. Candidates are also reminded to draw lightly in pencil first and then check their response. The vast majority correctly identified location K and provided clear and concise reasoning, obtaining full marks. Typically, however, candidates struggled with the remainder of part (b). Few were able to articulate their understanding of Walther's Law, and indeed it was this section which saw the highest number of blank responses, suggesting that candidates either struggled to interpret the meaning of the question or did not possess the prerequisite knowledge. Those who were able to deliver a comprehensive response scored highly in this section of the question, and strong performance in this section seemed to correlate with candidates who scored highly overall. In part (c) most correctly identified cross bedding, but in the second part of the question several candidates unfortunately missed the instruction to select a different structure to that in the photograph and proceeded to submit an illustrated description of cross bedding. Some of the best responses included simple but effective labelled illustrations of imbricate structures, symmetrical ripples, or sole structures to name but a few. Notably few candidates who selected flute casts were able to provide an answer worthy of the full five marks available due to fundamental misconceptions associated with the formation of these structures.

- Q.5** Overall, candidates seemed able to interpret the graph data well, again demonstrating a good awareness of the requirements of such questions. In the six-mark QER question a high level of understanding was shown, beyond the data provided in the two figures, and the question discriminated well between candidates. To better organise their response, candidates are reminded that additional space is provided at the end of the examination booklet. This should be used to avoid cramming several lines into one line-space or writing outside of the box provided. Candidates can also use this space to plan their answer; some responses arguably suffered in quality due to a tendency to ramble or more commonly repeat information unnecessarily. Candidates are encouraged to practise answering QER questions in a structured manner which makes reasoned points, each addressing the command words of the question.
- Q.6** In response to question six candidates exhibited adequate recall of geological periods and the principle of uniformitarianism, but found difficulty in identifying similarities and differences between the fossil and present-day plant. Marks awarded for stating observations should, in theory, prove to be easily obtained, and yet candidates failed to provide the precision and detail expected of geologists. It is advised that candidates are encouraged to improve precision in answering questions which require detailed observation skills. Equally few candidates were able to suggest meaningful limitations in comparing the morphology of the plants. In answering the preservation process question candidates tended to confuse the term carbonation with carbonisation, and even when correctly identifying the process, showed a weak understanding of what the process entails. Common misconceptions included references to the leaf 'weathering away' or references to 'crystallising in the mould/formation of a cast'. Furthermore, candidates who understood the process often stopped short of using key terms, which would have saved precious exam time and undoubtedly increased the number of marks awarded. In part (b) of the question graphical skills were again tested; candidates should always use a sharp pencil and ruler to increase precision when adding to graphs to then fall within the marking tolerance. In the final section of the question, part (c), candidates were able to state the relationship shown in the figure but lost marks when quoting figures from the graph, again evidencing a lack of precision. Candidates were able to comment on the climate-latitude relationship but struggled to give meaningful reasons for the relationship, and very few referenced water availability at all. Notably some wrote much more than required for a two-mark question suggesting candidates should use mark schemes to better understand the level of requirement for two, three and four-mark questions.

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COMPONENT 3 – GEOLOGICAL APPLICATIONS

Overview of the Component

As in previous years, the paper consisted of two Geohazards questions, a series of questions related to a Geological Survey map, and three questions assessing each of the three options. Topics covered this year included: seismic and tsunami hazards, hazards related to storage of radioactive waste, geological map interpretation, and fold and fault characteristics.

The Component 3 paper produced a wide range of marks with candidates able to access all parts of the paper. Candidates who used the data in the figures, and read the question carefully achieved good marks across all sections of the paper. The most successful candidates paid attention to the command words in the questions, notably explain questions, and were able to justify their answers with sound geological knowledge. Overall, candidate performance was not quite as high as that in 2024.

Comments on individual questions/sections

Section A

- Q.1**
- (a) Few students were able to explain reasons why high-level radioactive waste could not be disposed of in domestic landfill sites. Many answers made vague references to the harm it could cause, but very few articulated what the harm from radioactive waste would be.
 - (b) Most students attempted the calculation using Darcy's Law with many correct answers credited. The most common error was failing to convert the horizontal distance between sites from kilometres into metres. Few students who made errors then thought of using the values given in the key as a checking strategy for their answer.
 - (c) Most candidates identified some reasons for the suitability of the two locations, often based on the permeability and structure of the sites. A few candidates considered the properties of the rock type for the construction of disposal facilities.
 - (d) In their answers to part d, many candidates didn't consider the relatively short return period of the data in the context of the duration of radioactive hazards. Only some of the better responses took an overall view of level of seismic hazard in Britain as part of assessing the risk to geological disposal facilities.
- Q.2**
- (a) A full range of answers was seen in response to this question, with weaker candidates relying on a solely tectonic origin rather than using the data. Most candidates were aware of the role of displacement of water in the generation of a tsunami.

- (b) Many candidates were able to interpret the texture of the Storegga deposit, but some weaker candidates struggled to use that to make the link with its interpretation as a tsunami deposit. Only the strongest candidates used the radiocarbon dates to make interpretations about the rate of deposition.
- (c) This question discriminated well. A full range of answers was seen with strongest candidates able to synthesise the information from all the data used in the question, particularly the origin of Atlantic tsunamis, the location of Shetland and the frequency of events.

Section B

Q.3 This question highlighted the age relationships shown on the map and the nature of the igneous bodies which were present. Candidates easily accessed a(i) and the higher achieving candidates in a(ii) were able to accurately represent and interpret the age relationships shown in box A, labelling the correct unconformity described in the question. Question a(iii) required explanation, not just a statement. The most successful candidates were able to explain why the interpretation was incorrect and explain the correct order of units using the information available to them on the geological map, the key and the geological column.

Part b was answered best by those who recognised the importance of the dip of the coal seams. All but one, the Gutter Coal seam, were dipping away from the mineshaft and therefore this was only coal seam encountered.

Question c(i) was answered well, with the best responses clearly linking map evidence to either a sill or a pluton. Question c(ii) required more than simply stating what a candidate would look for in the field – the best responses explained why a piece of evidence would clearly show that the intrusion was younger than the surrounding beds.

Q.4 This question focussed on the geological structure and deformation which had taken place in the area of the map. It was hoped that a(i) would be an introduction to the dip of the beds in the area, with the most successful candidates highlighting the presence of a valley and recognition of the direction of dip of the beds. Question a(ii) was answered well with many candidates utilising the key to correctly label the APT. In a(iii) the question describes an outlier with the most successful candidates linking both rock type, in terms of resistance to erosion, and the synformal structure to the ages of exposed beds.

Question b(i) was answered most effectively by those candidates who were able to visualise the dip of the fault and who paid close attention to the direction of dip, cross mark and age of the beds on either side of the fault plane. In the final section of this question, the highest marks were achieved by those who were able to correctly discuss the directions of the maximum principal stress as well as the types of stress which had occurred to create both the fault and the fold, whilst identifying the cross-cutting relationship between the two.

Q5 This question focussed on mining within the Clee Hill area. Question a(i) was accessed best by those with a clear understanding of the term aggregate – crushed rock used for construction. Question a(ii), a prospecting techniques question, was well answered with highest marks being awarded to those who were able to state suitable techniques and link them to the properties of iron ore which would enable it to be located.

Section b focussed on a proposed extension to the quarry. The most successful candidates were familiar with calculating the cross-sectional area and volume of a triangular prism.

Part c showed a photograph of pollution in a nearby stream. The candidates were asked for a probable origin for this pollution and the highest marks were awarded to those who recognised that the cause was acid mine drainage and were able to step by step explain how it occurs. A notable absence from many responses was the fact that the iron was left exposed to the air post mining, leading to oxidation. The final section of this question, d, focussed on the potential for this site to be used as a landfill site for domestic waste. The most successful candidates were able to discuss the lithology and structure of the area, linking these properties to the potential for retaining waste products. Responses where potential adaptations to the site, lining and management techniques, were awarded due credit.

Section C – Quaternary Geology

- Q.6** (a) A range of answers was seen to this question. The best responses recognised the importance of the occurrence of a periglacial ice wedge as an indicator of an intervening glacial event between the interglacial deposits.
- (b) Many students did not fully engage with the information given in Table 2 about the habitat and distribution of the fossil beetle species. As a consequence, the answers to parts (i) and (ii) were often not fully developed.
- Q.7** (a) Most candidates were able to determine the differences between the climates in the two locations, although some confusion about the meaning of the term 'range' was apparent.
- (b) This question proved to be challenging for many candidates. Answers to part (i) were often limited to description rather than explanation and gained no credit as a result. For part (ii) a minority of candidates were confused by the link between oxygen isotope composition and climate. Part (iii) was often answered well.
- (c) The correlation between the two variables was described well by the majority of candidates. Stronger candidates were able to apply their knowledge of the Quaternary course to make the link to the former position of oceans and continents and how that impacted Cenozoic climates.
- Q.8** A full range of responses was seen from simple statements about melting ice raising sea levels through to detailed explanations of eustatic and isostatic processes. The strongest candidates were able to make links between the two processes in terms of the amount, extent and rate of change of both processes as well as their common cause.

Section C – Geological Evolution of Britain

- Q.9** (a) This question was generally answered well, with only a few candidates who did not read the question rubric carefully failing to gain full marks.
- (b) Most candidates recognised differences between the folds in the two areas and the majority demonstrated they could read the stereonet accurately to describe the folds. There was a good awareness of the orogenies during which these folds were formed.
- (c) This question discriminated well. Most candidates were able to link the formation of granites to proximity to a plate boundary, and many suggested how this linked to subduction. Only a few candidates explained how crustal thickening and the evolution of magma would lead to the intrusion of granite.
- Q.10** (a) Most candidates described changes between the sedimentary rocks from south to north. Only a minority could then explain how the changes related to the palaeogeography and sedimentary environments of the Devonian.
- (b) The texture of the sedimentary rock was well described, with many candidates using quantified descriptions that earned credit.
- (c) This question produced a wide range of answers. Only the strongest candidates were able to effectively use the graphs in Figure 10c to form the basis for their evaluation. Many candidates limited their responses to their own knowledge, often limiting the marks they achieved therefore.
- Q.11** Many candidates were able to describe the features of the Palaeogene Igneous Province, often supported with examples from the geology of northwest Scotland. Only a minority were able to link these features to the processes at divergent plate margins. A few candidates were able to discuss the tensional features, such as dyke swarms and rifting in the North Sea to show how they provide evidence for the opening of the Atlantic Ocean.

Section C – Geology of the Lithosphere

- Q.12** This question presented data regarding global heat flow and the age of oceanic lithosphere. Part a was answered well with the best responses utilising Figure 12a to give sound descriptions of heat flow distribution, quoting available figures. Section b linked global heat flow to the age of the lithosphere. Question b(i) was answered well by most, linking the rate of spreading to the width of young lithosphere in an ocean basin. Question b(ii) required the use of both figures to link heat flow to the age of the lithosphere. The best responses did this well linking the age of lithosphere and its thickness to the observed heat flow. Part c aimed to highlight the impact of sediment in an ocean basin to the observed heat flow. In describing the probable distribution and thickness of sediment the most successful candidates were able to link sediment thickness to the age of the lithosphere and its position relative to an ocean ridge, across an ocean basin. In the final part of the question, the best responses evaluated the impact a layer of sediment would have on the conduction of heat from the Earth's interior.

- Q.13** This question had a focus on the deformation which can take place within orogenic belts. Section a focussed on the position and formation of ophiolite sequences. The most successful candidates correctly described the position of the ophiolites within the orogenic belt along fault lines and explained the process which led to their formation, notably thrusting and obduction linked to a convergent plate boundary. Section b focussed on the processes of delamination and gravitational collapse. The best responses to question b(i) linked the process to the relative densities of different areas of the crust and their impacts on isostasy, notably, the replacement of dense delaminating lithosphere with less dense asthenosphere. It is important to be aware that the upwelling lithosphere does not forcibly uplift the crust, rather it increases the buoyancy of the area which results in subsequent uplift. Question b(ii) was answered well by those who noted a change in regional stress due to increased gravitational potential of an orogenic belt, which can cause faults to reactivate in an opposite sense of motion. The final part of this question was designed for candidates to discuss the limits that the global system puts on lithosphere elevation. The most successful candidates linked rock cycle processes (weathering and erosion), isostasy and the occurrence of continental collision to explain why the lithosphere is limited in the height it is able to reach.
- Q.14** This QER question dealt with the evidence for the reconstruction of supercontinents and produced a full range of marks. The highest scores were awarded to those who accurately described and explained the use of palaeomagnetism and explained the geological evidence which backs this up. Whilst there were many candidates who successfully described and explained the formation of oceanic lithosphere and its magnetic properties, few were able to accurately discuss the use of polar wandering curves. Many candidates made superficial comments regarding lithologies, fossils, orogenies and the shape of present-day continental shelves. The highest marks were awarded to those who explained this evidence in more detail and used specific examples.

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PRACTICAL ENDORSEMENT

General Comments

Most centres visited demonstrated a good grasp of the principles behind Practical Endorsement (PE) and designed suitable practical / field work assessments. This enabled the large majority of their candidates to produce suitable evidence towards their PE. However, there were a few cases where centres needed additional support to satisfy the regulatory requirements. Problems often arose when there was a sudden change in staffing at a centre. Where there were issues, these were all sorted by the time a second visit took place at the centre.

Examples of good practice the monitoring team observed during visits included:

- A suitable plan of practical / field work, which was either incorporated into the Scheme of Work or, more often, maintained as a separate document. These plans detailed the specified practical tasks, the Common Practical Assessment Criteria (CPAC) to be assessed, and the proposed timing within the academic year.
The plan facilitated the development of skills within the Practical Endorsement, covering all elements of each CPAC over the two-year teaching period.
Note: All centres are reminded that this plan must be available to the monitor during visits. Failure to produce one will always lead to a second visit!
- Accurate and up-to-date Teacher and Candidate Records were maintained. Most centres now use Excel Spreadsheets to record outcomes, often indicating the CPAC element assessed.
Note: If teacher records lack this detail (i.e. CPAC element), annotations should be made on the candidate work to specify the element achieved (e.g., CPAC 3(a) or CPAC 3(a&b)).
- Practical books were used in real-time at the bench for collecting experimental data.
Note: Candidates should avoid using scraps of paper to later transcribe neater versions into practical books.
- Candidates were informed of the CPAC assessed in each practical and understood the criteria for success. They were given feedback (either verbally or in writing) so that they could improve their skills in future assessments,
- When candidates work in groups, the teacher had carefully considered how the contribution of each individual would be assessed.
Note: It is important that when you use group work in the assessment of candidates that you are careful to ensure you still assess each individual's contribution and not assess the group performance as a whole.
- Candidates were not awarded CPAC for attending. Teachers understood that in order to award a pass in Practical Endorsement, it was not necessary for candidates to achieve a CPAC in every practical. In effective centres, the teacher used CPAC as part of 'assessment for learning' strategy ensuring that skills are properly developed through the course.
Note: A monitor will be most surprised if it is claimed that a candidate achieves a CPAC every time it is assessed and will be concerned if the teacher has understood the standards

- Fieldwork was used as an important aspect of developing and assessing PE.

Notes on Assessment of CPAC

High standards should be set early in the course by the teacher, with clear explanations provided for any unmet standards.

CPAC 1

This CPAC assesses the candidate's ability to follow written instructions accurately. The monitor will respect the judgment of the teacher unless there is clear evidence of incorrect assessment.

If a teacher needs to intervene or interpret instructions for a candidate, then this CPAC should not be awarded.

CPAC 2

This CPAC involves higher-level skills and requires careful planning to ensure sufficient development time before assessment. Fieldwork presents excellent opportunities for assessment and these opportunities should be used. The 'Lab-based fieldwork exercise' (available on the EDUQAS website) is recommended as a template for generating evidence toward this CPAC.

It is **not** necessary to assess every element of CPAC2 each time this CPAC is assessed. However, it is a requirement that each element of CPAC2 is met during the course. If you are monitored, the monitor will look at the coverage of each element.

Monitors also saw a good use of extension activities, and practical tasks where candidates select and justify equipment usage are also beneficial.

CPAC 3

A simple written risk assessment is the most effective method of assessing 3(a) of this skill. Make sure candidates are instructed into what makes a good risk assessment. Please read risk assessments produced by candidates carefully. There is a large range in the standard of risk assessments produced in different centres. Ask yourself the question, do you think that the risk assessment meaningfully identifies the main hazards and risks? Are all the significant risks identified and have suitable controls considered? If not, do not award the risk assessment.

Direct observations of candidates working safely by the teacher working during practical sessions or fieldwork will be accepted by the monitor for 3(b).

Please ensure that you select practicals with some safety hazards when assessing this CPAC. The monitor will also expect to see the meaningful evidence provided by candidates in fieldwork for both aspects of this CPAC.

CPAC 4

This CPAC deals with both qualitative and quantitative data. There are multiple opportunities in geology to both develop and assess this skill.

There still is a tendency for centres to be too lenient when awarding this skill. It is surprising how poor some candidates are at correctly recording data. Ensure that you demand high standards from early in the course for this skill and take time to ensure candidates understand what is required from them. Make sure when data is recorded that the data is recorded to the correct precision. Do not accept shoddy work. Give candidates clear guidance on what is expected of them when they record data (see for example the points identified below).

Unfortunately, the monitor feels that the entire section of guidance given in last year's needs to be repeated once again. Please read the following carefully and act on the comments where necessary.

CPAC4(a) making accurate observations.

Ensure that the following points are borne in mind when awarding this CPAC:

- Observations should be made directly into candidate practical books / spreadsheet. Do not award this CPAC if the candidate writes results on to scraps of paper to copy up later.
- Do **not** award this CPAC if you provide a template table to the candidates for recording results.
Templates may be useful to teach candidates a good approach to recording data early in the course but when it comes to assessment candidates **must** devise their own tables. Where necessary, remove table templates from the documentation you provide to candidates and allow candidates to construct their own tables.
- The tables which candidates construct **must** have appropriate headings and units, where relevant. Please maintain high standards here. It is perfectly possible for all candidates to achieve this.
- The units must be written in the table column head and not in the body of the table. If units are missing, do **not** award criteria.

When the candidate draws a diagram, please ensure good practice is followed before awarding the criterion. For example, where relevant:

- The diagram is reasonably accurate
- A sharp pencil used
- There is a title
- Continuous clear lines are used
- Key structures are labelled
- Scale bar present
- Annotation lines are straight, and annotations written horizontally
- Shading not used
- Field sketches should have compass directions on each side of the sketch

CPAC4(b) obtaining accurate, precise and sufficient data

Please carefully check candidates' data.

- Is it recorded to appropriate precision? Too often centres are lenient on this. Make sure that recordings are to the correct number of decimal places. If data readings are not consistently recorded by a candidate, then do **not** award the criterion.
Be particularly careful to check that candidates are recording readings from an instrument correctly. You should be walking around the classroom checking on candidates as they record some of their values.
- Is there sufficient data? Is the data what you expect? Please set suitable standards at the beginning of the course. It does not matter if a candidate did not always achieve the criterion.

CPAC 5

This important higher-level skill should be assessed from early in the course. Occasionally centres do not take up the assessment opportunities provided by the work done by candidates. There really is no shortage of suitable assessment opportunities. CPAC 5 has two elements:

- (a) Uses appropriate software and/or tools to process data, carry out research and report findings.
- (b) Sources of information are cited demonstrating that research has taken place, supporting planning and conclusions.

CPAC5(a) There should be evidence of candidates processing data using graphs and calculations. Centres should require candidates to use software (e.g. Excel) to draw graphs on a number of occasions. **SP19** and **SP20** are good places to use Excel to generate graphs. In order to do this to an acceptable standard, candidates will often need instruction in using Excel.

Once again, the monitor will repeat comments made in previous reports about graphs and calculations.

- Make sure graphs are constructed correctly, i.e. there is a title, each axis is correctly labelled, points plotted correctly, an appropriate scale used, etc. Candidates will need to be shown how to use Excel to correctly title graphs etc. It is evident that candidates do not always know how to use Excel appropriately. Excel graphs can be disappointing and show the candidate does not know how to use this powerful tool. Please ensure candidates are taught how to use Excel first.
- Processing data also involves carrying out calculations. This may involve transformation of data using mathematical equations, statistical analysis etc.

CPAC5(a) also includes 'carry out research and report findings'. The report does not need to be long. Some centres seem to imagine that long detailed reports are necessary. This is a misunderstanding; it may simply be the conclusion they draw from their data. However, neither is it appropriate to award this CPAC for a one-word answer. A conclusion requires a reasoned response to the data observed.

The research may be internet or book based.

CPAC5(b)

This is not a difficult CPAC to evidence, but it is **still not** getting enough attention from many centres and as a result is poorly evidenced in candidate work. Only a few centres can be commended for having candidates demonstrating referencing on multiple occasions; a few of these even using the Harvard System (which exceeds our requirements for this CPAC).

Please try to get candidates in the habit of evidencing this every time they source data (e.g. a density value) or indeed any information they quote. This should happen from **early** in the course and you want it to become second nature to candidates. The information may come from a textbook, journal, website, EDUQAS data sheet. It is understood that candidates can be reluctant to do this, but it is the place of the teacher to ensure candidates understand why this is an essential skill to develop.

Further comments

- Most geology centres are small and there is only one teacher delivering practical endorsement. However, in larger centres, where multiple teachers deliver A-level Geology, evidence of standardisation across all staff is required. This can be achieved through cross-marking or discussions in meetings. Standardisation is mandatory for passing the monitoring visit and must be implemented for all involved teachers.
- The centre is advised to ensure that candidates understand how well they are achieving in practical endorsement throughout the course and are informed whether there are issues that may lead to their not obtaining PE (e.g. poor attendance, lack of engagement with practical work).

Summary

- Successful delivery of Practical Endorsement needs careful thought and planning. Make sure that there are ample opportunities for candidates to evidence all elements of each CPAC statement over the two years of the course. We do **not** expect candidates to achieve each CPAC every time practical work is assessed. Where CPAC is met every time by all candidates then that is an indicator that a centre may not be appropriately assessing.
- Make Practical Endorsement a servant of the subject. Use Practical Endorsement as part of an assessment for learning strategy. Do not let it become an end in itself.
- Set high standards from early in the course. Do not be frightened to give 'not achieved'. However, ensure that you give good feedback when students fail to make the standard so that they have the opportunity to improve their performance next time.
- Field trips are an ideal place to assess CPAC once candidates have some experience, but this does require some thought beforehand. Which CPAC statements can be assessed? Where is the evidence going to be generated? The field notebook is an obvious place e.g. for CPAC 3(a), 4 and, when assessed, CPAC 2. If it is evidence from observation (e.g. CPAC 1 or 3(b)) how are you going to record this? Will a checklist help? Don't be over ambitious but don't lose the opportunity.
- Inform candidates on whether they have achieved Practical Endorsement before the final outcomes are submitted to Eduqas in accordance with JCQ requirements.
- The principal monitor also wishes to emphasise the importance of acting upon any issues identified in centre monitor reports made after earlier visits.

Supporting you

Useful contacts and links

Our friendly subject team is on hand to support you between 8.30am and 5.00pm, Monday to Friday.

Tel: 029 2240 4235

Email: geology@eduqas.co.uk

Qualification webpage: [AS and A Level Geology | Eduqas](#)

See other useful contacts here: [Useful Contacts | Eduqas](#)

CPD Training / Professional Learning

Access our popular, free online CPD/PL courses to receive exam feedback and put questions to our subject team, and attend one of our face-to-face events, focused on enhancing teaching and learning, providing practical classroom ideas and developing understanding of marking and assessment.

Please find details for all our courses here: <https://www.eduqas.co.uk/home/professional-learning/>

Regional Rep Team

Our regional team covers all areas of England and can provide face-to-face and online advice at a time which is convenient to you.

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