SACE Logo CoBrand Black grayscale

Geography

2015 Chief Assessor’s Report

# Geography

# 2015 Chief Assessor’s Report

## Overview

Chief Assessors’ reports give an overview of how students performed in their school and external assessments in relation to the learning requirements, assessment design criteria, and performance standards set out in the relevant subject outline. They provide information and advice regarding the assessment types, the application of the performance standards in school and external assessments, the quality of student performance, and any relevant statistical information.

In 2015, there was a 15% increase in the number of students studying Geography compared with 2014 with 520 students completing the assessment requirements for the subject.

Students generally performed soundly within the range of assessment types. Teachers and schools have become familiar with the assessment model and the administration of the subject, and the design of assessment tasks in the folio was effective. Many students were able to show good achievement against the performance standards and demonstrated a sophisticated understanding of the key concepts and ideas.

An interesting range of folio tasks was presented, and teachers and schools are developing some innovative and engaging tasks for assessing student learning against the assessment design criteria and the performance standards.

## School Assessment

Assessment Type 1: Fieldwork

Students undertake one report on their individual fieldwork relating to one of the option topics.

Performance standards

A number of students produced outstanding work this year, which met the performance standards at the highest level. A wide range of relevant fieldwork techniques was evident at moderation and this was especially true of the more successful responses. Teachers are encouraged to carefully guide student selection of topics and of fieldwork techniques that are relevant to the topic. The best fieldwork reports were those where the topic was obvious throughout. Surveys require careful planning and the sample population should also be relevant to the topic chosen. It is important that students ensure that their survey questions are relevant to their fieldwork.

The details of how fieldwork was undertaken were often limited and teachers are encouraged to ensure that students provide detail on the fieldwork techniques used. The better fieldwork reports demonstrated sophisticated evaluation of each fieldwork technique. Teachers are encouraged to emphasise the importance of students evaluating fieldwork, in particular the strengths and limitations of the field techniques used, within the text or in a table.

Teachers should use the performance standards and subject outline to guide and assist students to develop, organise and structure their fieldwork. Fieldwork techniques must be relevant to the chosen topic. Some teachers were overly generous in their assessment of specific feature Ap1: selection, application, and evaluation of a range of geographical and fieldwork skills and technologies in a range of contexts. The best responses skilfully integrated comprehensive geographical knowledge and understanding of fieldwork using text and diagrams, many of which students had created themselves. Greater sophistication was evident where students integrated different forms of data, linking quantitative and qualitative data with a spatial component, thereby addressing different aspects or themes within their research question. Strong responses showed seamless integration of results and analysis: students are encouraged to do this.

Carefully developed maps can clearly illustrate the spatial nature of a chosen topic and provide excellent opportunities for analysis. Essential features of mapping (refer to page 24 of the 2015 subject outline) should be included on a map to illustrate the location of fieldwork sites and where data was collected. Highly effective mapping techniques were evident, including hand-drawn maps and GIS-generated maps modified to suit the purpose. Maps were well integrated in a number of fieldwork reports. Students are encouraged to use GIS in mapping their fieldwork. Overlays were also used effectively to illustrate key aspects of student findings.

Many students are highly skilled at using a range of information and communication technologies (ICT) to improve the presentation of their work. Stronger responses displayed a range of techniques to manipulate, integrate, and present information gathered, including titles, annotations, sourcing data, overlays, survey annotations, timelines for methods, flow charts, tables, PNI charts, flow line maps, and text references to these and received credit for doing so. Students should not use photographs from secondary sources such as Google Street View in place of primary data. Weaker fieldwork reports were often photo essays that lacked fieldwork data. Better responses went beyond a description of the results and considered why the results had been obtained. Lack of refinement and synthesis limited success for some students.

Task design

More successful responses had a narrow focus for the topic and followed the structure in the Subject Outline leading to greater depth of analysis. Some topics were extremely broad and more suited to an inquiry, thus limiting students’ success. Fieldwork topics should be geographical and spatial in nature; if a topic can be mapped then it is likely to be geographical. The chosen guiding question or hypothesis can significantly influence success in addressing the performance standards. A clearly stated purpose, hypothesis, or question assisted many students to structure their fieldwork effectively. Students who chose small and local issues tended to be more successful and were able to develop creative and innovative field techniques to evaluate their question or hypothesis. More sophisticated fieldwork reports perceptively analysed both the spatial and temporal patterns and processes involved in their chosen topics.

Some students relied too heavily on secondary sources, thus limiting their achievement, as the focus of this assessment type is the collection of primary data. Students should outline how the fieldwork was conducted and evaluate the positives and negatives of each fieldwork technique undertaken within the body of the report, not in the appendices. Sophisticated evaluation of the areas of success and opportunities for improvement in fieldwork techniques was notable in the better responses.

It was apparent that an increasing number of students are using SurveyMonkey to collect data. The validity of this method in producing a reliable and representative sample is questionable. It is suggested that teachers discourage the use of SurveyMonkey and discuss the limitations of this form of data collection with their students.

Teachers are reminded the students should not include completed surveys in the report. Yes/ No questions in surveys can limit the quality of data collected and developing questions that require a range of responses provides more opportunities for graphs and diagrams. Many of the better responses integrated quotes from surveys or interviews and referenced these.

Students should be encouraged to survey a sample that is sufficiently large to be representative of the larger population being studied. When undertaking surveys, students should plan a variety of ways to collect completed surveys and consider how the response rate can be increased, such as surveying face to face rather than dropping questionnaires in letter boxes.

**Range of topics**

A variety of option topics were chosen to represent the best possible opportunities for developing, selecting and applying a range of geographical and fieldwork skills. Teachers are reminded that the option topic chosen for the Fieldwork should be different than that for the inquiry. Students should be commended for their inventiveness in developing their own fieldwork techniques to match the particular needs of their topic.

**Word limit**

Although very few students exceeded the word limit, students are reminded that 1800 words is the limit. Work presented in appendices will not be considered for assessment purposes and is not a way to increase the word count. Annotations and work included in tables do count towards the word count.

**Opportunities for students to achieve**

The moderation panel offered the following advice, which may enable teachers to assist their students to perform at all levels of the performance standards including the highest level:

* The option topic of the fieldwork should be clearly specified. Teachers are reminded that fieldwork should be completed on an option topic, not the core topic.
* The best fieldwork reports were well structured using the structure outlined in the subject outline and addressed the relevant performance standards.
* The central focus of the fieldwork is primary data obtained by the student; secondary data should be supplementary to this.
* Ensure the fieldwork has an appropriate geographical and spatial context.
* A number of outstanding responses included the temporal variation of their topic.
* The best results and analysis were structured by theme rather than field technique.
* It is recommended that students integrate results and analysis to enable them to achieve at the highest level in the specific feature Ap2.
* A range of fieldwork techniques should be used to gather data to address each aspect or question being considered.
* Students should avoid raw data but rather data should be modified or adapted to suit the purpose of the report.
* Students should avoid simple description of data.
* Students should avoid including methods, results, and/or analysis in the conclusion; results should be integrated throughout the main body of the report.
* Students should avoid including appendices; these are not assessed and should not be used as a method of reducing or increasing the word count.
* Students should use statistically significant sample sizes in their fieldwork.
* Many of the successful responses had graphs, flow charts, or diagrams that demonstrated either the students’ understanding of geographical concepts pertinent to their fieldwork or high-quality synthesis of findings.
* Students are encouraged to customise legends or keys when creating maps using Google Earth, scribble maps, or Google Maps Engine Lite to illustrate their fieldwork report.
* Small sample sizes limited the quality of student survey results; larger sample sizes increase the validity of results.
* The better fieldwork reports seamlessly integrated relevant geographical terminology throughout, included detailed spatial analysis of fieldwork and had valid conclusions supported by results.
* Teachers must assess this task against the performance standards specified in the current subject outline, and should submit a copy of the performance standards, clearly indicating the standard achieved for each specific feature to justify the final grade allocated.

Assessment Type 2: Inquiry

Students initiate and carry out one inquiry into a particular issue addressed in an option topic. The selected option topic must differ from that used for the fieldwork.

Performance standards

Teachers are encouraged to refer to the performance standards and the current subject outline to guide the development and structure of the Inquiry. Each section of the recommended format should be included to enable students to achieve at the highest level. Most students were able to select, apply, and evaluate a variety of geographical skills and technologies in their Inquiry. Students should be commended for the highly integrated nature of their Inquiries using a range of technologies and forms (e.g. tables, pictures, mind maps, flow charts). The best responses illustrated a range of methods of communication to present the information and highlight the interdependent nature of the issue. Analysis of spatial patterns and processes related to geographical issues was evident in most students’ work.

There is an expectation that students will consider their issue at local, national, and global scales. They are encouraged to look for patterns or issues on a global scale, rather than just exploring local case studies from locations across the globe. The better responses evaluated the environmental, social, political, and/or economic implications of responses to geographical issues. Less successful responses tended towards a description of the social, environmental, and economic impacts of the issue rather than evaluating the impacts of current or possible responses.

Many students successfully used a variety of methods including text, tables, flowcharts, and mind maps to evaluate the responses to their issue. Strong research skills and a high degree of referencing were evident in many students’ work. Better inquiries perceptively analysed and evaluated the conflicting demands and diverse values, views, and perceptions related to the chosen geographical issue. A number of students skilfully evaluated the relevance, bias, accuracy, and usefulness of various sources in table or written form.

Successful responses provided in-depth analysis of stakeholder issues including the use of annotated photographs, and often sought conflicting opinions to contrast the viewpoints of experts. Few students provided in-depth reflection on sustainability when examining geographical issues. The ideas of sustainability and interdependence were quite frequently misinterpreted and glossed over rather than analysed in-depth, using relevant examples.

Task design

Teachers should use the performance standards in the current subject outline to guide the development of the inquiry. Avoid using the structure from the previous course that required ethical issues to be addressed. Teachers should ensure that the topics selected by students are spatial in nature and relatively narrow in focus. Issues structured around an appropriate question rather than a topic enabled students to achieve at the highest level against the performance standards; for instance, students are more easily able to evaluate a variety of viewpoints. A number of formats were available for the presentation of this Assessment Type, but the most common was the report. When teachers prescribe a task or option topic for the whole cohort, students were often unable to achieve at the higher levels.

Range of topics

The students are to be commended for selecting a wide range of controversial geographical issues related to many of the option topics of Climate Change, Sources and Use of Energy, and Biodiversity. Specific topics such as wind power, solar energy, desertification, child labour, food miles, and the impact of Climate Change on disease were among the most popular.

Word limit

Almost all students met the word limit presented in the 2015 subject outline.

**Opportunities for students to achieve**

The moderation panel offered the following advice, which may enable teachers to assist their students to perform at all levels of the performance standards including the highest level:

* Students should be encouraged to follow the structure for the Inquiry as detailed in the subject outline.
* Students should choose an issue related to an option topic that is different fro the option topic selected for their fieldwork.
* If a whole class use the same option topic, teachers should ensure that there is sufficient variation in each student’s inquiry.
* Teachers should encourage students to choose quite narrow topics with a geographical and spatial focus. The use of a research question or hypothesis to guide the inquiry is more successful than a general heading.
* Students are encouraged to assess the economic, environmental, and social implications of the responses to the issue.
* Contemporary and relevant sources provide students with greater opportunity to achieve at the higher grade levels. All sources should be correctly referenced.
* Teachers should encourage students to use appropriate visual representations, including relevant maps and graphs.

Assessment Type 3: Folio

Students undertake a planned program of four to six group and individual assessments for the folio.

Performance standards

Students continue to produce work that meets the performance standards at the highest level. The best students demonstrated comprehensive knowledge and understanding of the key geographical concepts across all the tasks in the folio. Assessment tasks rich in relevant geographical terminology led to better student results. A number of responses were well integrated using a range of technologies and forms (e.g. tables, pictures, mind maps, flow-charts). Analysis of spatial patterns and processes related to geographical issues was evident in student work using a range of unique maps, tables, annotations, and charts. Strong responses were rich in relevant geographical terminology.

The best responses indicated that a comprehensive range of relevant, current information in various forms had been accessed, and this was correctly referenced. More capable students effectively used a variety of methods including text, flowcharts, tables, and mind maps to present their information. Students are encouraged to avoid adding maps, graphics, or pictures that are too small and difficult to read in broadsheets.

Few students provided in-depth reflection on sustainability when examining geographical issues.

Task design

Assessment task design is critical to student success. Through designing assessment tasks for the folio that assess only a limited number of assessment design criteria, teachers allow students to respond to each assessment design criterion in depth and thus students are more likely to achieve at a higher level. Furthermore, where students were given only four assessment tasks they were afforded the opportunity to show greater depth of analysis and sophistication in their responses. Folio assessment tasks were most successful when teachers provided detailed task instructions that integrated the required assessment criteria.

Folio assessment tasks should provide students with sufficient opportunity to achieve at the highest level through activities that challenge, but at the same time develop students’ skill and knowledge. Folio tasks must have a geographical dimension. There was a broad range of formats presented, including PowerPoints, broadsheets, and essays.

Some assessment tasks presented in the Folio were too simplistic to enable students to achieve at the highest level. Higher-order thinking skills should be required to complete tasks in preference to simple description.

Teachers are reminded that mapping tests should authentically assess the depth and breadth of skills for students to achieve at the highest level. Teachers who used past examination extended and short-answer questions in a similar format to the external examination, tended to present work at the right level of difficulty. A variety of assessment methods will provide opportunities for all students to demonstrate achievement at the higher grade levels.

Range of topics

There was a significant range of tasks presented. Mapping tests were commonly used and often enabled the teacher to set four to six assessment tasks that the students could respond to within the set word limit. Many assessment tasks in the folio related directly to the core topic, including population change, migration, ecological footprints, and transboundary issues of rivers.

Word limit

Teachers are encouraged to limit the number of assessment tasks presented in order to keep students within the set word limit. In addition, teachers should limit the components of the task and address fewer assessment criteria in a task to avoid exceeding the word limit. Large examinations or tests with a number of extended-response questions made it difficult for students to stay within the prescribed word limit.

**Opportunities for Students to Achieve**

The moderation panel offered the following advice, which may enable teachers to assist their students to perform at all levels of the performance standards including the highest level:

* Tasks that assess a limited number of specific features allow students to demonstrate achievement at the higher grade levels.
* By limiting the number of folio tasks, students were able to develop more in-depth analysis and more sophisticated responses.
* PowerPoint presentations should include transcripts or a recording of the presentation to help the moderators understand teachers’ assessment decisions.
* Student’s work should be accompanied by a sheet of the relevant performance standards with clear indication of the grade determined for each task.

## External Assessment

Assessment Type 4: Examination

Students undertake one 2-hour written examination on the core topic.

There was a wide spread in students’ results. Many students were able to score in the mid-to-high 30s up to the mid-40s, with the top of the cohort scoring more than 50 out of a possible 60 marks. In general, mapping was done well. Students who had been explicitly taught examination techniques stood out. Students appeared to find the examination of appropriate length as all but a handful completed the examination.

Question 1

Part (a) was answered correctly by many students. Although there was an improvement in understanding of longitude and latitude there were still many wrong responses to part (b). There was also evidence of improvement in the understanding of compass directions, although part (c) was answered incorrectly by many students.

Question 2

This question was answered well and the majority of students were able to identify successfully the direction from which photographs were taken.

Question 3

This question was very well done by nearly all students. If incorrect, the answer given was spot height.

Question 4

The focus of this question was the concept of gradient. Most students identified the tunnel, but very few identified both strategies used so that the railway avoided steep gradients. Students did not always identify how the railway line followed the contour lines.

Question 5

Question 5 was generally answered well with most students achieving at least 2 of the 3 possible marks. Students were quite successful at identifying the position of the Class D road on the cross-section and the land use of the region labelled L on the cross-section, but could not identify the concave slope on the cross section.

Question 6

Very few students knew that both attribute and locational data are required to construct a GIS and therefore this question was not well answered.

Question 7

Students were successful in analysing the map and satellite image in part (a) to correctly identify that the satellite photo was more recent. A range of supporting evidence was correctly provided. In part (b), students appeared to realise that the satellite photo was two times bigger than the map - in some instances writing 1:2 as their answer, but few were able to correctly calculate the scale.

Questions 8 and 9

All aspects of these questions were answered well by most students. It was evident that students had a better understanding of what constitutes a non-renewable resource than in previous years. The understanding of how a resource is perceived has also improved. Students who did not answer Question 8(b) correctly, commonly believed that bauxite would continue to develop into high-grade ore.

Question 10

All parts of this question were answered correctly, with many students showing a good understanding of food webs.

Question 11

This question required students to apply the concept of an ecosystem to the case study of bauxite mining in the Cockpit Country. Unfortunately some students did not attempt this question. Students are encouraged to attempt all questions as many responses were awarded 2 or 3 marks .Many students did not draw an ecosystem model and many sketches or diagrams only showed or described changes caused by mining without clearly explaining the impact. Rarely did students include a discussion of the impact of mining on climate. Most students who attempted this question appeared to understand the effects of mining, but found it difficult to provide a model that included all biotic and abiotic aspects of an ecosystem.

Question 12

All parts of this question were answered correctly by the majority of students, with many showing an excellent understanding of the different contributors to CO2 emissions.

Question 13

Part (a) was also answered correctly by the majority of students, although in some instances students forgot to explain whether the changes were increases or decreases in price. Nearly all students correctly identified a varied range of renewable energy sources with appropriate disadvantages in part (b).

Question 14

In part (a) some students incorrectly chose Hanover which was the least populated parish, not the parish with the lowest population density.

Responses to part (b) indicated that many students did not know the term ‘natural increase’, which is a key population term.

Question 15

Response to part (a) revealed that many students had a somewhat limited understanding of the main components of the water balance and only a small number were able to identify evaporation or evapo-transpiration as the missing component. Part (b) was answered well, with most students correctly identifying a variety of factors that can affect the rate of surface water run-off.

Question 16

This question was answered well by many students, with evidence of excellent understanding of the principles of convectional rainfall. Less successful responses did not identify specific causes of rainfall and /or did not use correct terminology such as ‘uplift’ and ‘condensation’ when explaining the processes responsible for rainfall.

Students demonstrated a high degree of success in describing the pattern of rainfall. Better answers included diagrams related to the information provided on relief and wind direction while less successful responses included general diagrams and/or text of everything the student knew about all types of rainfall. Many sketchy diagrams lacked labels. However, students who understood about orographic rainfall and recognised the significance of tropical location (i.e. a high probability of convectional rainfall was a high probability) and the predominant wind patterns were able to provide an excellent written and diagrammatical explanation of the rainfall distribution.

Question 17

Question 17 was answered well by most students although some explained how factors caused increasing rather than decreasing mortality. Some students gave the example of contraception and were unable to explain how reducing births led to infant mortality.

Question 18

Question 18 also received a large number of correct responses.

Question 19

This question firstly required students to identify at least two population trends for more economically developed countries which included ageing, declining birth and death rates, increased life expectancy and increased age dependency ratios. There was a wide range in the quality of responses. Students who were less successful struggled with interpretation of the question and were unable to identify any trends. Many students simply recounted a case study on migration without any link to population trends while others only considered push-and-pull factors and gave inappropriate examples. It appeared that some students had learned a response and used whatever they had prepared without actually addressing the question. This was particularly true for students who used the current Syrian refugee crisis in Europe as a case study. The best responses referred to specific trends using statistics and gave very detailed case study information regarding migration movements.

Question 20

Part (a) of this question gave mixed results with better responses including and explanation of the concept of ‘dependency ratio’ succinctly in students’ own words while less successful responses demonstrated limited understanding, answers that were inaccurate or merely repeated the term.

Many students failed to read the graph accurately in part (b), being outside the degree of tolerance by 2% or 3 %. Students are encouraged to use a ruler to carefully measure data on graphs.

Part (c) required students to identify that child dependency ratios are higher in less developed countries because the birth-rate is higher and life expectancy is lower than in more developed countries.

Part (d) was answered well by a majority of students, who demonstrated excellent knowledge of the effects of an ageing population.

Question 21

Question 21 was answered well by a majority of students.

## Operational Advice

School assessment tasks are set and marked by teachers. Teachers’ assessment decisions are reviewed by moderators. Teacher grades/marks should be evident on all student school assessment work.

The following advice is offered to teachers:

* Teachers are encouraged to assist their students by clearly outlining the requirements for each task and linking them to the relevant performance standards.
* When marks schemes, rubrics, and/or specific features of the assessment design criteria are included with task sheets for each assessment task it is easier to confirm a teacher’s assessment decisions.
* Teachers should ensure they include their assessment decisions against performance standards for the Fieldwork, Inquiry, and Folio for each student to justify the final grade allocated. Ideally, assessment decisions should be highlighted on a performance standards rubric.
* Teachers should provide information on how the grade for the folio has been determined for each task and as a whole (e.g. one individual task achieved 9/20 but the overall grade is A).
* Teachers should ensure that the correct performance standards are addressed for each Assessment Type. The subject outline presents this clearly.
* All Folio tasks for students whose work has been nominated for moderation must be submitted. A sample of tasks is not sufficient for moderation
* Teachers are reminded to ensure that the assessment results should match those submitted to the SACE Board. Clerical errors continue to be evident in the transfer of student results between assessment sheets submitted with moderation materials and results submitted to the SACE Board via *Schools Online*.
* Assessment Cover Sheets for the fieldwork and inquiry should identify the option topic addressed to assist with moderation. Alternatively, the option topic chould appear on the front page of the inquiry or fieldwork report.
* Teachers are encouraged to use moderation processes in school. Standardisation processes are very worthwhile where there is more than one class in a school or different schools have combined to form a single assessment group.
* Appendices containing completed surveys and other raw data should not be marked and do not need to be submitted for moderation.
* Teachers should ensure that folio assessment tasks address the assessment design criteria identified in the learning and assessment plan.
* Teachers are reminded to refer to the folio as a whole body of evidence when determining the grade for the folio.
* All student work should include the student’s SACE registration number for ease of identification.

## General Comments

Advice to teachers about the examination

* Teachers are encouraged to explicitly teach mapping skills and ensure students are exposed to a range of different types of maps at a variety of scales.
* It is also advisable for teachers to spend some time on examination skills, including strategies for longer responses. It is a good idea for students to be given the opportunity to practice planning and writing extended answers.
* Students will benefit from the opportunity to apply their knowledge in a general sense and in unfamiliar situations.
* Teachers should explicitly teach graph and data interpretation.
* Teachers are encouraged to advise students to attempt all questions marks are not deducted for incorrect answers.
* Students will benefit from exposure to a range of previous exam papers so that they can become familiar with the way in which questions are asked and the terminology used in questions.
* Geographical terms could be added to an ongoing glossary.
* Teachers may find it useful to provide students with a copy of this Chief Assessor’s report and indicate how the comments relate to the work students will be doing.
* Students should practice drawing diagrams/models to show and explain interrelationships within ecosystems and other geographical concepts.

Advice to students about the examination

* Read the question carefully and establish what the focus is, paying particular attention to directive terms such as calculate, explain, identify.
* Practice applying knowledge not just regurgitating facts.
* Take time to read graphs and data carefully to ensure you use accurate information. Double check any calculations.
* Know, and be able to explain basic terms like ‘dependency ratio’ and ‘natural increase’.
* Know the geographical terminology. Unless this is well understood, it is difficult to interpret a question correctly.
* Diagrams are useful when explaining geographical concepts.
* Use a ruler to read a graph; accuracy is important.
* Questions do not need to be re-written in an answer. In an extended answer, a definition of terms is useful.
* Where a question asks for examples “you have studied” make sure to refer to actual examples and do not provide only a general answer.

Geography

Chef Assessor