VCE Geography school-assessed coursework report 2016–2021

School-assessed Coursework report

This report is provided for the first year of implementation of this study and is based on the coursework audit and VCAA statistical data.

Unit 3

General comments

It was clear from responses submitted through the coursework audit that schools are using the correct specification and support documentation for the 2016–2021 course including the Advice for Teachers and Frequently Asked Questions. Forms of assessment and assessment weighting were appropriate, and an understanding of content relevant to the two Areas of Study was evident. There were isolated examples of the persistence of terminology from the previous study design, but these had no impact on student achievement.

There was considerable variation in the selection of sites and case studies for the fieldwork report and structured questions for Area of Study 1, the majority of which suited the requirements of the area of study. In relatively few instances, demonstrably changed land use at fieldwork sites could have been more clearly evident.

Approaches to the analysis of the data task for Area of Study 2 were very consistent across schools with regard to the types of questions asked. There was, however, substantial variation in the length and detail of the analysis of data SACs. This area of study includes an overview and three case studies involved in land cover change. The latter has implications for student workload that should be considered in choosing the time allocation for assessment. Note that a range of assessments can be considered for an S or N result while the SAC, for scoring purposes, needs only sample a range of key knowledge and skills commensurate with the outcome. Some schools allocated hundreds of minutes of SAC time to assess all three case studies in great detail.

Further evidence was sought from all schools in the audit following the completion of the coursework audit survey. This provided an opportunity to gain a fuller understanding of the varying approaches schools took to Unit 3 outcomes in the first year of the revised study. In providing appropriate detail, survey responses generally avoided merely repeating key knowledge and skills and often provided useful illustrative examples. Schools are encouraged to make their reasons for case-study selection as clear as possible. It should be clear to students how case studies will allow them to meet the full range of key knowledge and key skills.

Specific information

Area of Study 1: Land use change

Outcome 1

In this area of study students select an area at a local scale and use appropriate fieldwork techniques and secondary sources to investigate the processes and impacts of land use change. This change may have recently occurred, be underway or be planned for the near future.

On completion of this unit the student should be able to analyse, describe and explain land use change and assess its impacts.

There are two assessment types for this outcome: fieldwork report and structured questions.

Fieldwork report

The fieldwork and its report provided the greatest variation in approach across schools in Unit 3 SAC tasks. All schools used the prescribed fieldwork report format given in the cross-study specifications.

A variety of examples of land use change were evident through chosen fieldwork sites. These included:

* residential development on previously agricultural or industrial land
* previously reserved water catchments opened to recreational uses
* redevelopment of port or industrial facilities for residential and commercial purposes
* clear change from one form of agriculture to another
* re-naturalisation of wetlands from agricultural and water storage uses.

There was some variation in time scales used when examining land use change. The introduction to the area of study states ‘change may have recently occurred, is underway or is planned for the near future’. It is noteworthy that ‘recent’ in terms of change, is not defined. Some schools placed recent land use change in a broad historical context, even going back to pre-European settlement, though importantly, this was not the main focus of the report in such cases, but was used, for example as a reference point to discuss the re-naturalisation of wetlands. There were some schools that chose sites for which land use change occurred wholly in the past. In this situation, the primary determinant of case study suitability should be that, as the task is fieldwork-based, relevant data should be able to be observable and collected in the field, rather than being reliant on historical primary or secondary sources. Subsequently, fieldwork case-study selection must provide students with the opportunity to address key knowledge and key skill requirements to the highest level.

The size and extent of the fieldwork sites chosen by schools also varied. Some chose sites with clear, relatively limited boundaries, for example, a former quarry developed as a residential subdivision. Other case studies involved larger areas, including whole suburbs, that involved specific, individual sites (as fieldwork stops) within the wider region. Both approaches are suitable. Docklands proved to be a popular example.

Schools are advised to give careful consideration to fieldwork site selection. Land use change that is recent, ongoing or planned is a safer option for schools, as opposed to that which is largely or wholly historical. Definite land use change, or else a clear modification to an existing land use purpose, will allow students the best opportunity to meet the key knowledge and skills.

The development of hypotheses for land use change also saw different approaches. In most cases a single hypothesis was tested. Some schools provided a teacher-developed hypothesis, others worked as a class group under teacher guidance to agree on a hypothesis, and in some cases students were required to develop their hypothesis individually with teacher approval. Each is appropriate to requirements, with the key point that teachers have a role in ensuring the hypothesis is suitable and viable for testing on the basis of field-collected data.

Hypotheses most often called on students to make a qualitative determination of degrees of acceptance or rejection based on collected data. Some schools used the key knowledge point focusing on the impact of change on the environment as the basis for a more quantitative approach. Examples of the latter included testing water quality by a variety of measures up- and downstream of new residential developments. Some collection of data in the field concentrated on one key knowledge point while others covered more. Either approach was acceptable.

Overall, schools have demonstrated relatively limited uses of spatial technologies directly by students and more broadly. One school used mobile device-based spatial apps for geo-tagging images, while another used GPS to tag location-based data for later use in Google Earth. Many schools access satellite data via Google Earth, some of it time-series. Some touched on the use of spatial technologies in the context of planning and managing land use change through presentations by representatives of responsible local authorities that use, for example, Geographic Information Systems (GIS). Schools should give consideration to addressing the key knowledge application of spatial technologies in a wider and more genuine variety of contexts and applications.

Attention is drawn to the necessity to integrate the cross-study specifications’ concepts and skills throughout the unit, including in the fieldwork report. While these were evident in most cases, the key geographical concepts of place (the non-locational aspects) and sustainability, in particular, were under-utilised in the context of fieldwork.

Assessment sheets provided in further evidence indicate schools are using the suggested VCAA performance descriptors supplied in the Advice for Teachers. Mark weighting was commonly 30 marks (with the structured questions 20 giving a 50-mark Outcome 1 total), though this sometimes involved scaling from a larger total mark for each SAC. Information provided to students indicated schools required students to conform to the stipulated 1500-to-2000-word length.

Structured questions

The structured questions took an appropriate form in terms of design and duration in most cases, and assessed a good range of key knowledge and key skills overall.

The case study content of this SAC did vary between schools. Most schools included initial questions of a general nature on land use, such as definitions or general unseen data-based analysis questions (including the use of a data broadsheet in one case). This model is useful as students should develop a broader understanding of land use change through the key knowledge, beyond that which relates only to the site linked to their fieldwork. This, for example, helps to assess conceptual thinking more fully. The majority of schools then focused on questions derived from the school’s fieldwork case study. More than one school did not pose any questions relating to the location of their fieldwork, choosing instead to use data relating to another location. In one case, a school chose a site of agricultural to residential land use change near to the school – and possibly familiar to students – as a SAC case study, thought it was not visited formally as fieldwork.

One school utilised a commercially produced SAC (produced specifically for this outcome, this year) that had a focus on one country in South East Asia. While it addressed land use in part, questions also inappropriately ranged across land cover and other themes beyond the area of study and these kinds of questions did not produce evidence for the achievement of Outcome 1. Any commercial product or SAC obtained from a source such as colleagues, networks or subject association, should be carefully checked by the school against the study design and general assessment principles (the Advice for Teachers includes a range of assessment principles that could be used for this purpose). Schools are also reminded that commercial products often come with model answers that are in the public domain, and if used in an unmodified form, can potentially give rise to authentication issues. Similarly, future examination questions will be accompanied by examination reports in the public domain and the copy and paste of these within SACs is not recommended.

A small number of schools posed questions on spatial technologies, though these were mostly low-level questions that did not materially add to the rigour of the assessment. The development of meaningful structured questions involving spatial technologies is clearly an area for further thought and development. An example of a more meaningful approach could utilise a screen shot from a GIS – ideally one used by a local government or management authority – requiring interpretation and explanation as to the usefulness of the visible data layers; land zoning, buffer zones between land uses, areas of environmental significance or flooding/bushfire susceptibility, being examples.

The majority of key geographical concepts were utilised appropriately in structured questions, though as with the fieldwork report, more thought could be put into ways to apply the concepts of place and sustainability.

One school did require students to undertake a structured questions SAC well beyond the suggested duration. While not prohibited, this practice can add signficantly to student workload.

Overall, the structured questions were appropriate, though schools are encouraged to ensure that questions are rigorous and cover a range of cognitive demand through the use of analysis, skills and concept application. In some cases, there was a dominance of lower-order recall questions.

Assessment sheets provided in further evidence indicate schools are using the suggested VCAA performance descriptors supplied in the Advice for Teachers. Mark weighting was commonly 20 marks (with the fieldwork report 30 giving a 50-mark Outcome 1 total), though this sometimes involved scaling from a larger total mark for each SAC.

Area of Study 2: Land cover change

Outcome 2

In this area of study students undertake an overview of global land cover and changes that have occurred over time. They investigate three major processes that are changing land cover: deforestation, desertification and melting glaciers and ice sheets. They analyse these processes, explain their impacts on land cover and discuss responses to these land cover changes at three different locations in the world – one location for each process. They also evaluate three different global responses to the impacts of land cover change, one global response for each process. Analysis of geographic data is the assessment task type for this area of study.

Analysis of geographic data

The form of the analysis of geographic data task often included separate question and data booklets in many cases. The quality of questions was not uniform in standard across schools, and attention is drawn to the need for schools to ensure that questions cover a range of cognitive demand, including those of high order involving conceptual application.

The data provided was generally of a good range and standard; entirely suitable to providing a basis for analysing each of the three processes. There is some indication that geography networks collaborated on SAC data figures. With this said, examples of shared data figures did not translate to tasks with identical questions, thereby avoiding problems of authentication.

Two distinct approaches emerged across the schools in the audit. Approximately one-third of schools that were audited chose to divide the analysis of data into multiple parts, essentially one for each of the three mandatory land cover change processes, with some including a general section on the overview of land cover change. The remainder of schools designed a single SAC that covered all the required processes.

Regardless of which approach was followed, very few Outcome 2 SACs conformed to the suggested 50- to 60-minute time frame. It became apparent that schools felt a single SAC of the suggested duration would not offer the opportunity to sufficiently test the range of key knowledge and key skills across the land cover overview and all three processes. The total duration of most multi-part SACs was not particularly onerous in the majority of cases, though attention is drawn to the potential issue of student workload.

Many schools did include a section on land cover in overview, which addresses several of the key knowledge points in a way that would not necessarily be achieved if SACs focus exclusively on each of the three processes. Such an approach does allow for better coverage of the knowledge points and should be considered by schools.

Once again, the majority of key geographical concepts were covered through questions. While the location aspects of place were covered well, the specific richness of place itself was often lacking, as was attention to sustainability. Based on the audit sample, there is some scope for development of these concepts throughout Unit 3.

An area for consideration is the interpretation of responses to the impacts of change processes in terms of the scale of those responses. The response should reflect the geographical location and extent of the response, not the scale of the organisation involved in generating or administering the response. For example, a national government might subsidise an impact response at a single local level; this is a local response. If a national government implements such responses at many locations across a country, this is a co-ordinated national response.

An evolving aspect of the new course for schools is adequately addressing how organisations and governments use spatial technologies to assess and manage land cover change. This will require ongoing identification by schools of case studies involving GIS’s, often with satellite/aerial remotely sensed data. This outcome does not specifically require students to utilise spatial technologies, a point of difference with Outcome 1.

Assessment sheets provided in further evidence indicate schools used the suggested VCAA performance descriptors supplied in the Advice for Teachers. Mark weighting was commonly 50 marks, as specified, though this often involved scaling from a larger total mark for the SAC or SAC parts.

Overall, schools are to be commended for their efforts in working to meet the requirements of this outcome. The requirement to cover each of three land cover change processes does require careful preparation and time management.

Unit 4

**General comments**

Responses submitted during the coursework audit indicate that schools are referring consistently to the appropriate 2016–2021 study design. Reference was also made by schools to using the Frequently Asked Questions and Advice for Teachers.

Case studies selected by teachers for the two areas of study were generally suitable, with some similarity across schools, particularly for Area of Study 2 (ageing and growing populations). There was some variation in the number of case studies in total referred to for each area of study.

Unlike Unit 3, there was great consistency in the nature, and especially the duration, of School-assessed Coursework tasks. These tended to closely follow the suggestions within the study design for both areas of study. Appropriate data was often provided, though this was less the case for structured questions set for Area of Study 2, where student recall was more often called upon, rather than analysis and the application of relevant geographical skills.

When assessing each outcome, teachers should include SAC questions that assess students’ higher order thinking. Developing questions that require engagement with the Key Geographical Concepts is one way of achieving this. Where these kinds of questions were developed, however, they showed a general tendency to focus on more obvious and straightforward applications of the Key Geographical Concepts, rather than a more complex approach; for example, providing opportunities to relate concepts to each other in the response or to make links or comparisons between different scales.

In general, key knowledge points were merely reworded into a question, which raises an issue of potentially rehearsed responses and authentication difficulties.

The vast majority of SAC questions were in the low (2–3) mark range. Relatively few 8–10 mark questions, requiring more detail and student decisions on how to structure this detail, were observed. It is good practice to include a range of marks overall to enable discrimination between students and allow for demonstration of higher order thinking.

The audit process indicated that assessing spatial technology is an area that has been problematic for many teachers. There are two clear applications of spatial technologies required in Unit 4:

* as a skill students apply as appropriate, through practical tasks across both areas of study, which is specified in the cross-study specifications (study design p. 11)
* as they apply to specific case studies in the key knowledge and key skills points of Area of Study 2.

The latter involves the application and use of spatial technologies in response to population issues in the case study countries; questions on this were generally either absent or poorly worded. They should focus on assessing student understanding of the role and effectiveness of the spatial technologies studied.

It is apparent that the performance descriptors are being used to inform assessment. These cover all the key knowledge and skills for each outcome. As a general observation they are being used in an unmodified form. Teachers are reminded that it is possible to modify the performance descriptors in a given SAC. Not all key knowledge and key skills need to be assessed in a given SAC, provided each element of an outcome is assessed. SACs are scoring instruments. An S/N can be determined using a wider range of evidence, such as classwork.

At the time of the initial audit survey, it was clear that some schools had not finalised their course development. This resulted in gaps in the material provided or a lack of clarity, particularly around case study selection. In response to audit questions, schools are encouraged not to simply restate key knowledge and key skills as set out in the study design, but to concentrate on how these points are being addressed in the context of case studies. As such, providing a brief reasoning for case study selection is of benefit, with the relationship between case studies and the full range of the key knowledge and key skills points made clear.

Overall, schools are to be commended for their efforts in working to meet the requirements of the new unit. Attention to the areas raised in each area of study, as outlined in the following section, will certainly benefit students.

Specific information

Area of Study 1: Population dynamics

Outcome 1

In this area of study, students undertake an overview of world population distribution and growth before investigating the dynamics of population change over time and space. Through the study of population dynamics students investigate growth and decline in fertility and mortality, together with population movements. Students study forced and voluntary, and internal and external, population movements and how they can be long or short term. The study is supported with examples from within and between countries with different economic and political conditions and social structures that illustrate the dynamics of population. Students develop understanding of the Demographic Transition Model and its applications, and the Malthusian theory of population.

On completion of this unit the student should be able to analyse, describe and explain population dynamics on a global scale.

The assessment type for this outcome is an analysis of geographic data.

Analysis of geographic data

Area of study 1 has some similarity to the human population aspect of the global population unit of the previous 2006–2015 study design, with the fundamentals of population distribution and the various indicators of population dynamics – fertility, birth and death rates, and so on being common to both courses, in addition to the Demographic Transition Model and population structures (often represented in population pyramids). However Area of Study 1 in the revised study design includes considerably more depth, specifically on population, and covers a wider variety of the drivers of population change, such as voluntary and involuntary population movements. Malthusian theory was not present in the previous study design.

This being the case, careful consideration should be given by teachers to reusing data and other materials from the previous study design without revision of data booklets for currency, and modifications to questions and data booklets to suit the revised study design.

Country case-study selection was diverse. Though most schools still opted to focus on two or three countries, reference was often made to country examples that provided support for the examination, comparison and contrast of particular population indicators, in addition to support for a more general global overview and regional patterns. More than one school focused on a specific time period, as required, a common example being post-World War II Australia aligning with the knowledge point of population change since the 1950s.

The analysis of geographic data took an appropriate form in terms of design, and assessed the required range of key knowledge and key skills overall. The range of geographic data provided to students was generally of a high quality.

There was considerable variation in the quality of question construction. A general observation is that many SAC questions are direct adaptations of the key knowledge points. Better questions did not give the opportunity for rehearsed responses, for example inviting students to consider how they need to apply their understanding. Following are some examples that refer to Malthusian population theory. The study design specifies the following:

* Knowledge: ‘Malthusian theory and its explanation of population growth and sustainability’.
* Skill: ‘assess the relevance of Malthusian theory’.

Example questions relating to Malthus’ theory in SACs are as follows:

* School A: ‘Evaluate the relevance of Malthus’ ideas about population in today’s world (8 marks)’
* School B: ‘Assess the relevance of Malthus’ theory in relation to this [case study] population change. (4 marks)’
* School C: ‘To what extent do you agree with Malthusian’s theory of population sustainability? Provide evidence from the data book or from previous content to support your position. (3 marks)’
* School D: ‘Briefly outline the principles of Malthusian Theory. (3 marks); To what extent can Malthusian Theory be used to explain changes in population growth in the less developed country [named] in recent decades. (5 marks)’

School A has reworded the key skill point. As an eight-mark question, this provides little guidance as to what might be required and, overtly, requires opinion and recall of arguments, rather than application to data. The marking scheme also did not provide guidance to students. Schools B and C, though for fewer marks than School A, add the application of case study or evidence to essentially the same question. School C does require opinion and adds the sustainability concept explicitly. School D seeks students’ knowledge of the theory’s principles but then applies these to data for a specific country in a nominated time period. For a total of 8 marks, Schools A and D make an interesting comparison.

The following general suggestions can be made based on these examples:

* Rewording key knowledge points as questions often does not require much cognitive processing on the part of students.
* Consider the integration of appropriate key geographical concepts into question wording and/or marking schemes as well as selected geographical skills from the cross-study specifications.
* Consider question wording that requires, or at least implies, that students should be employing key geographical concepts to craft higher-order responses.
* Ensure question mark values reflect the rigour and complexity of the question, or a specified number of points/examples to be covered.
* Specific requirements to relate responses to case studies or data, especially sight unseen, are valuable.

One school utilised a commercially produced SAC (produced specifically for this outcome, this year). Schools are reminded that any commercial product or SAC obtained from a source such as colleagues, networks or subject association, should be carefully checked by the school against the study design and general assessment principles (the Advice for Teachers includes a range of assessment principles that could be used for this purpose). Schools are also reminded that commercial products often come with model answers that are in the public domain, and if used in an unmodified form, can potentially give rise to authentication issues. Similarly, future examination questions will be accompanied by examination reports in the public domain and the copy and paste of these within SACs is not recommended.

Though many key geographical concepts were utilised appropriately in SACs, more thought could be put into ways to apply the concepts of spatial association, place and sustainability. The concepts of distribution, scale, change and movement were prominent in this area of study.

Assessment sheets provided in further evidence indicate schools are using the suggested VCAA performance descriptors supplied in the Advice for Teachers. Mark weighting was at the required 40 marks, though SACs were scaled back from a larger total mark value.

Area of Study 2: Population issues and challenges

Outcome 2

In this area of study students undertake investigations into two significant population trends that have developed in different parts of the world: a growing population of one country and an ageing population of another country.

Students place these trends and resulting issues and challenges in their world regional context. Issues resulting from these population trends include, among others, meeting healthcare and social service needs. Students investigate issues arising from each population trend, the challenges that arise in coping with the issues, and their interconnection with population dynamics. They evaluate the effectiveness of strategies in response to these issues and challenges. Strategies can be selected from government and/or non-government organisations. Comparison of strategies is undertaken within each selected country.

On completion of this unit the student should be able to analyse, describe and explain the nature of significant population issues and challenges in selected locations and evaluate responses.

The assessment type for this outcome is structured questions.

Structured questions

There is considerable scope for case study selection. The study design, for example, is silent on a particular threshold for population growth. The fact is that the vast majority of the world’s countries are experiencing growing populations. According to the United Nations 2010–2015 population change data, both Bangladesh (1.2%) and China (0.52%) – which were the two most popular case studies observed – experience significantly less population growth as a percentage of population, than Australia (1.57%). With that said, the large populations of Bangladesh and China mean their absolute population growth is significant, with consequent issues emerging.

Saudi Arabia (2.32%) and the United Arab Emirates (1.89%) were popular growth case studies also. In these cases, however, the clear issue revolved around foreign remittance workers.

For ageing populations – with example figures for percentages of the population aged over 65 years – the most popular case studies were Japan (26.3%), Italy (22.4%), Germany (21.2%) and Australia (14.7%). Although Australia’s population does not have a proportion over age 65 as high as the others, it has the advantage of being the country with which students are most familiar, and the proportion has risen from 11.8% in 20 years, with a trend of continued increase. Again, as there are no thresholds specified in the study design on what constitutes ageing, these choices are legitimate, and the focus is on the issues arising from change.

Although Australia, for example, is legitimately both growing and ageing, no school in the sample used the same country for both categories, which is explicitly ruled out in the study design; ‘…a growing population of one country and an ageing population of *another* country’.

Very appropriately, given the nature of the geography and the key skills, the structured questions often included separate question and data booklets, or in many cases, embedded data figures. Some SACs were observed to rely more on students’ ability to recall, in that little data was provided with questions. While the latter is permissible, it could be argued that it did disadvantage students, and it narrowed the scope of questions that might be posed. Data that was provided was generally clear, of a good range and standard, and was suitable for the related questions. It should be noted that the geographical skills in the cross-study specifications can assist in selection of suitable data.

As has been noted in Area of Study 1, the quality of questions was not uniform across schools – often based around rewording key knowledge and key skills points – and attention is drawn to the need for schools to ensure that questions cover a range of cognitive demand. High-order responses will most often involve rigorous and thoughtful conceptual application and draw on a range of geographical skills. It is also notable that most SAC questions required relatively brief responses, often worth 2–3 marks. While there were examples of questions requiring longer responses (e.g. 8–10 marks), these were uncommon, and often took the very open-ended form ‘with reference to a country you have studied, discuss…’, and seldom gave significant guidance as to any required structure or key points that needed to be covered in a quality response.

Based on sample responses, teachers should give consideration to better preparing students for high-mark questions in terms of:

* ensuring there is guidance on what points need to be covered in a response and that the nature of the question clearly sustains the higher mark value
* providing practice for logically structuring extended responses to improve coherence
* guiding students in contextualising key geographical concepts in responses to highlight the geographical orientation of the response.

Sampled Outcome 2 SACs for Unit 4 mostly conformed to the suggested 100-minute time frame. The majority of schools opted for single tasks of that duration, while a few opted for multiple – generally two – SACs, and in many cases, these were each on an hour. The 120-minute total duration did not appear to add excessively to student workload for the unit, though attention is drawn to this consideration.

The key geographical concepts most often covered through questions were distribution, change and movement. While the location aspects of place were covered well, the specific richness of place itself was often lacking, as was attention to sustainability. These concepts throughout Unit 3 could be better developed, based on the audit sample.

Attention is drawn to interpretation and assessment relating to spatial technology use in responding to issues. The key knowledge point is ‘the role and effectiveness of spatial technologies for the development and implementation of strategies in response to population issues’ for each selected country, with the corresponding key skill point adding the word ‘explain’ with reference to the above.

In further evidence, schools were frequently requested to explain how they were addressing spatial technologies in this context as it was unclear from the audit questionnaire. It has been observed that schools often avoided or superficially addressed spatial technologies in this area of study as it applies to the key knowledge and key skills. In many instances, responses from schools indicated the work being done was focused primarily on spatial technologies as a skill in the cross-study specifications (study design p. 11).

It is acknowledged that assessing the ‘effectiveness’ of spatial technologies in addressing issues in countries is often difficult, though country case studies provide more concrete examples of how this is undertaken. In many cases, it has been considered sufficient to ascertain how spatial technologies are being used by governments and NGOs to address population issues, and where that country is seen to be improving in its efforts, to infer that spatial technology application is effective.

Spatial technologies have become a more prominent feature of VCE Geography, with a view to better informing and preparing students for a ‘spatially enabled’ future, as well as alerting them to potential careers in the field. It is important that teachers gain in confidence and competence in this area themselves, over time, as this constitutes a clear and distinctive aspect to the geography curriculum.

Assessment sheets provided in further evidence indicate schools used the suggested VCAA performance descriptors supplied in the Advice for Teachers. Mark weighting was commonly 60 marks, as specified, though this often involved scaling from a larger total mark for the SAC or SAC parts. The point of not being required to use performance descriptors ‘as is’, has been made earlier. Teachers can also write their own marking schemes, including descriptors.