VCE Geography 2022–2026

School-based Assessment report

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

Unit 3

General comments

It was clear from responses submitted through the school-based assessment audit that schools are using the specified VCE Geography Study Design 2022–2026 and support materials, including the Advice for Teachers and VCAA implementation webinars. Types of School-assessed Coursework (SAC) tasks were mostly appropriate, and there was an evident understanding of content pertaining to the two areas of study. There were isolated examples of the use of assessment types from the VCE Geography Study Design 2019–2022, but these had no impact on student achievement. It is important that schools design learning programs to suit the particular needs of their students and school context. Consequently, there is no specific or preferred order for outcomes in Unit 3.

Area of Study 1: Land cover change

Approaches to the analysis of the geographic data were very consistent across schools with regard to the types of questions asked in this component of school-assessed coursework. However, there was substantial variation in the length and detail of the analysis of geographic data, and some schools used data that students had previously seen. This task should require analysis of unseen geographic data.

This area of study requires an overview of global land cover change and two appropriate case studies, one for each type of land cover change: deforestation and melting ice sheets and glaciers. Schools should consider the reduction in student and teacher workload from previous VCE Geography study designs when planning their teaching and learning program. Assessment tasks should ensure sufficient time is allocated to allow for appropriate depth of analysis of the chosen case studies.Schools should also note that a range of assessments can be considered for an S or N result, while the school-assessed coursework required for assessment needs to consist only of an appropriate sample range of key knowledge and key skills commensurate with Outcome 1.

Schools using clear and structured scaffolds for students were able to direct the research report, case study or multimedia tasks effectively. They are encouraged to thoroughly consider the selection for case study, research report or multimedia presentation. It should be clear to students how the chosen locations of land cover change will allow them to demonstrate the full range of key knowledge and key skills in Outcome 1. Some schools effectively assessed student achievement by designing the school-assesed coursework to incorporate work undertaken both outside and within the classroom, while still addressing the requirement of authentication of student work.

Area of Study 2: Land use change

In Area of Study 2 there was considerable variation in the selection of sites for the fieldwork report and structured questions, the majority of which suited the requirements of this area of study. In some instances, the land use change at the fieldwork sites could have been more clearly evident. Schools need to select a site where there is clear land use change that has either occurred recently, is underway or is planned for the near future.

A number of schools retained their previous land use change site, which in some cases led to students not being able to address the required key knowledge and key skills for Outcome 2, such as the positive and negative impacts of the land use change on the environment. For some sites it was impossible for students to observe and collect appropriate primary data due to the land use change being so far in the past,.

Schools are also encouraged to rotate through a variety of sites across year groups to ensure the authentication of student work. There is also an identified need for schools to change the focus of the research question each year as an additional way to ensure the authentification of student work. The research question of the fieldwork investigation must be clearly evident in students’ fieldwork report.

Further evidence was sought from all schools following the completion of the Unit 3 survey.This provided an opportunity to assess evidence of the varying approaches schools took in designing their VCE Unit 3 Geography teaching and learning programs, and more specifically the assessment in the first year of the implementation of the VCE Geography Study Design 2022–2026. Submissions from schools indicated widespread use of the VCAA Performance Descriptors. Schools are reminded that the use of the VCAA Performance Descriptors is not mandatory.

Overall, schools are to be commended for their efforts in working to meet the requirements of the VCE Geography Study Design 2022–2026, particularly in the choice of appropriate illustrative material to support and assess student learning.

Specific information

Area of Study 1: Land cover change

Outcome 1

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

On completion of this unit students should be able to analyse the processes of land cover change and evaluate the impacts and responses resulting from these changes.

Analysis of geographic data

In many instances, the form of the ‘Analysis of geographic data’ task appropriately included separate question and data booklets. Schools need to ensure that questions cover a range of cognitive demands, including those of high order involving conceptual application.

The geographic data provided was generally of a range and quality suitable for analysing the two processes of land cover change: deforestation and melting ice sheets and glaciers. Schools are reminded that the geographic data in this SAC task should be previously unseen by students to allow both the required depth of analysis and authentication of student work.

Many schools assessed the two land cover changes separately, while others designed a single SAC task that covered all the required processes. Schools are asked to note that separate assessment of the two land cover changes has the potential to lead to students being over-assessed and does not easily allow for the assessment of generic questions on land cover and global land cover change. The total duration of multi-part SAC tasks was not excessive in the majority of cases, though attention is drawn to the potential issue of student workload.

Most of the key geographical concepts were covered in the school-assessed coursework. While the location aspects of place were covered well, the specific characteristics of place itself was often lacking. Based on the Unit 3 school-based assessment audit sample, there is scope for schools to enhance the application of key geographical concepts in their development of school-assessed coursework, particularly interconnection and spatial association

An area for consideration is the interpretation of responses to the impacts of land cover change in terms of the scale of those responses. The selected response should reflect the geographical location and geographic scale 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 national response.

The VCE Geography Study Design 2022–2026 requires schools, as a mandatory component, to identify relevant locations involving the use of appropriate geospatial technologies such as GNSS, GIS and remote sensing to assess and manage land cover change. These geospatial technologies must be specifically linked to the selected locations.

Research report, Case study and/or Multimedia presentations

The sample from the school-based assessment audit indicated that most schools chose the option of completing a research report or a case study for Outcome 1. Schools need to address the needs of their students when choosing the option for this component of the outcome.

Schools using clear and structured scaffolds for students were able to direct the research report, case study or multimedia tasks effectively. It should be clear to students how the chosen locations will allow them to demonstrate the full range of key knowledge and key skills in Outcome 1.

Some schools effectively assessed student achievement by designing the SAC tasks to incorporate work undertaken both inside and outside the classroom, while still addressing the requirement of authentication of student work. An effective element of the design and structure of such SAC tasks was the incorporation of components such as a research folio that was undertaken both inside and outside the classroom, combined with a component undertaken solely in class under time constraints and test conditions. Schools are to be commended for combining different elements and conditions under which school-based assessment occurs, allowing for all students to demonstrate their highest level of performance of the key knowledge and key skills in Outcome 1.

This outcome does not specifically require students to use geospatial technologies, a point of difference from Outcome 2.

Examples of SAC tasks provided by schools indicate the very common use of the VCAA Performance Descriptors supplied in the support materials. Schools are reminded that the use of such is not mandatory.

Overall, schools are to be commended for their efforts in working to meet the requirements of this outcome. The requirement to cover each of the two land cover change processes allows for a deep understanding and analysis of the processes of the land cover change.

Area of Study 2: Land use change

Outcome 2

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

On completion of this unit students should be able to analyse land use change and evaluate its impacts.

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

Fieldwork report

The fieldwork and resulting fieldwork report provided the greatest variation in approach across schools in Unit 3 SAC tasks. All schools used the prescribed fieldwork report format stipulated in the ‘Characteristics of the study’ section in the VCE Geography Study Design 2022–2026.

The chosen fieldwork sites included a variety of examples of land use change:

* 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/or commercial purposes
* re-naturalisation of wetlands from agricultural and water storage uses
* industrial land on previously agricultural land.

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 ‘recently’ is not defined. Some schools chose sites for which the land use change had occurred wholly in the past, while others chose sites where the land use change is to occur some time in the future. The primary determinant of suitability of the site of land use change should be that the task is fieldwork-based with relevant primary data that is observable and collectable in the field, and that secondary sources of data are also available. The selected site of land use change must provide all students with the opportunity to address the key knowledge and key skill requirements of Outcome 2 to the highest level.

The size and extent of the fieldwork sites chosen by schools was appropriately varied, with the majority of schools assigning fieldwork that is relevant and addresses the needs of their students. Some chose sites with clear, relatively limited boundaries, such as a former quarry developed as a residential subdivision. Other sites involved larger areas, including whole suburbs, that involved specific individual sites (as specific fieldwork locations) within the wider region. Both approaches are suitable.

The development of a research question and consequent hypothesis incorporating land use change allows for schools to adopt different approaches. In most cases schools chose a single hypothesis. Some schools provided a teacher-developed hypothesis; others worked as a class group with 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 of the VCE Geography Study Design 2022–2026, with the key element being that schools have an important role in ensuring the hypothesis is suitable and viable for testing on the basis of primary data collected in the field as well as data from appropriate secondary sources.

Hypotheses most often required students to make a qualitative determination of degrees of acceptance or rejection based on collected fieldwork data and secondary sources. Some schools used the key knowledge point focusing on the positive and negative impacts of change on the environment as the basis for a more quantitative approach. Such examples included testing water quality by a variety of measures up- and down-stream of new residential developments, and traffic counts at various times of the day and week. Some collection of data in the field concentrated on one key knowledge point while others covered more. Either approach is acceptable. All schools included some form of survey in the fieldwork data collection and often incorporated the use of the geospatial technology ArcGIS Survey123, which is readliy accessible to all students.

Overall, schools have demonstrated increasingly sophisticated use of geospatial technologies directly by students and more broadly. Some schools used mobile device-based spatial applications for geo-tagging images, while others used GPS to tag location-based data for later use in Google Earth. Many schools accessed satellite data via Google Earth, some of it time-series. Schools appropriately investigated the use of geospatial technologies in the context of planning and managing land use change. This was often addressed in presentations by representatives of responsible local government authorities that use GNSS, GIS and remote sensing to assess and manage land use change.

School are reminded of the need to integrate the characteristics of the study, key geographical concepts, geographical skills, geospatial technologies and the fieldwork report. While these were evident in most cases, the key geographical concepts of spatial association and sustainability were under-used in the fieldwork context. Similarly, the incorporation of geographical skills in the school-assessed coursework could be enhanced further.

All schools provided students with appropriate information in a timely manner, which enhancd the opportunity for students to effectively manage their workloads.

Structured questions

The structured questions component of the Outcome 2 school-assessed coursework indicated some variation between schools in terms of the key knowledge and key skills that were assessed. This is appropriate and within the requirements of the VCE Geography Study Design 2022–2026. Similarly, there was suitable variety in the timing of the task, with some schools opting to complete this component before the fieldwork component, while others chose to complete the structured questions upon the completion of Area of Study 2. Both options are appropriate.

The content of the Outcome 2 assessment varied between schools. Most schools included initial questions of a general nature on land use change, such as definition questions or general unseen data-based analysis questions. This model is beneficial because students should develop a broader understanding of land use change through the key knowledge, beyond that which only relates to their fieldwork site. This helps schools to assess conceptual thinking more deeply. The majority of schools then focused on questions directed to the school’s fieldwork. Some schools opted to use previously unseen data to focus on the assessment of the application of key skills of Outcome 1 in a broader context and to incorporate general geographic skills from the geographic skills component of the Characteristics of the study. Some schools also chose the option of assessing particular components of their fieldwork that were not assessed in the fieldwork report. All of these examples are appropriate and demonstrate the variety of tools used for school-based assessment.

It was noted that one school used a commercially produced SAC task for this outcome that had a focus on a specific international region that students would most likely not have seen previously. While it addressed land use change in general, some questions also included information beyond the scope of the area of study. Consequently, these questions resulted in inappropriate evidence to assess levels of achievement in Outcome 2. Any commercially designed product obtained from a source such as educational organisations, colleagues, networks or the subject association, should be thoroughly checked by the school against the VCE Geography Study Design 2022–2026 and the VCE Assessment Principles. Schools are also reminded that commercial products often consist of model answers that are in the public domain, which if used in an unmodified form, can potentially cause issues with the authentication of student work. Similarly, past VCAA examination questions are accompanied by VCAA External Assessment Reports that are in the public domain, and schools must modify these products so the SAC task is unique to that class, school and year.

Most schools followed the advice found in the previous School-assessed Coursework Report 2016–2021 regarding the potential use of an element of unseen data in combination with geospatial technologies by the use of a screenshot from a GIS, such as one used by a local government or management authority. This required interpretation, explanation and analysis as to the usefulness of the visible data layers such as land zoning, buffer zones between land uses, areas of environmental significance or flooding/bushfire susceptibility.

Overall, the type of structured questions was appropriate, although schools are encouraged to ensure that questions are rigorous and cover a range of cognitive demands through the use of analysis and the application of key geographical concepts and key skills.

All schools allowed students the appropriate amount of time to complete this component of school-assessed coursework.

Unit 4

General comments

Responses submitted during the school-based assessment audit indicate that schools are referring appropriately to the VCE Geography Study Design 2022–2026. Schools also made references to the support materials in the Advice for Teachers.

Case studies selected by schools for the two areas of study were generally suitable, with some similarity across schools, particularly for Area of Study 2: ageing and growing populations. A predominance of schools used Japan and Germany as case studies for ageing populations, while both Bangladesh and Niger were commonly selected as the growing populations under investigation. While all of these case studies are well-supported by the Geography Teachers’ Association of Victoria textbook, schools are reminded that there is a necessity for students to access contemporary popoulation data, which means that a broad base of research sources is required. Schools also need to check that material in their teaching and learning programs adheres to the VCE Geography Study Design 2022–2026.

In Unit 4 there is scope for a wide variety of assessment types, which allows for all students to demonstrate their highest level of understanding. This includes the key knowledge and key skills beyond just the recollection of case study material. This ensures that analysis of geographic data and application of key geographical concepts remain the focus of the teaching and learning program and SAC tasks.

When assessing each outcome, teachers should include tasks that assess students’ higher order thinking. Developing tasks that require engagement with the key geographical concepts is one way of achieving this. Students should be provided with opportunities to make links and interconnections between impacts and responses to population issues and challenges, at a range of scales.

The majority of SAC tasks required students to write a case study report, completed both within and outside class time, and then use this report to undertake structured questions under test conditions in class. In designing such tasks, teachers are reminded to avoid the over-assessment of students.

It is apparent that the VCAA Performance Descriptors as found in the support materials are being used to inform assessment. These cover all the key knowledge and key skills for each outcome. As a general observation, the VCAA Performance Descriptors were being used in an unmodified form. Schools are reminded that these need to be modified for use with any SAC tasks. Not all key knowledge and key skills are required to be assessed in a given SAC task, provided each element of an outcome is assessed. An S/N assessment can be determined using a wider range of evidence, such as classwork. Schools should als be mindful that school-assessed coursework should be unique to each school, class and year.

Some schools (understandably) had not finalised their teaching and learning program at the time of the initial audit survey,. This resulted in gaps in the material submitted for audit, or a lack of clarity, particularly around the method of assessment. In response to school-based assessment audit questions, schools are advised not to simply restate the relevant selected key knowledge and key skills as set out in the VCE Geography Study Design 2022–2026, but to concentrate on how these are being addressed in the context of the selected case studies. As such, providing a brief reasoning for the selection of the case study is beneficial, with the relationship between case studies and the chosen key knowledge and key skills points made clear in the evidence submitted in the school-based assessment audit.

Overall, schools are to be commended for their efforts in working to meet the requirements of this unit, but further profgress is required in moving away from structured question-type assessment tasks, and towards an appropriate use of designed assessment tools that align with the VCE Assessment Principles.

Attention to the areas raised in this report regarding each area of study, as outlined in the following section, will certainly inform the planning of the teaching and learning program and the appropriate assessment of student performance.

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 population movements, both forced and voluntary, and internal and external, in both the long and short term. The investigation is supported by examples from within and between countries with different population characteristics and dynamics, and different economic and political conditions and social stuctures. Students develop an understanding of the Demographic Transition Model and its applications, and the Malthusian theory of population growth.

On completion of this unit students should be able to analyse and discuss population dynamics on a global scale.

The assessment type for this outcome is an analysis of geographic data and any one or combination of a research report, case study or multimedia presentation

Analysis of geographic data

Area of Study 1 includes the aspect of the global population with the fundamentals of population distribution and the various indicators of population dynamics, such as fertility, birth and death rates, etc, in addition to the Demographic Transition Model and population structures. Area of Study 1 includes considerable depth, specifically on population dynamics, and covers a wide variety of the drivers of population change, such as agency of movement, push and pull factors and voluntary and involuntary population movements.

Encouragingly, the school-based assessment audit showed that schools selected a diverse range of country case studies, which suggests that schools are designing unique SAC tasks.

Most schools opted to list one example of each stage of the Demographic Transition Model and only a single example of migration. Some schools appear to have compounded Outcomes 1 and 2 and used this as the selected population movement. This needed to be given greater depth, particularly pertaining to internal and external migration factors.

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

The quality of assessment construction varied considerably between schools. In many cases, SAC tasks consisted of questions that were direct adaptations of the key knowledge points. Examples of higher-quality assessment invited students to apply their understanding of the key knowledge and key skills, and did not give students the opportunity to give prepared responses.

Many schools used the Demographic Transition Model as a basis for the analysis of geographic data. This has been a very commonly used format for a number of years, and as a consequence the authenticity and validity of this question type is becoming increasingly difficult to ensure. Better examples of school-assessed coursework involved geographic data provided for an unknown country and the assessment task requiring students to use this information to apply knowledge of current and future populations. Though many key geographical concepts were used appropriately in school-assessed coursework, more consideration of the inclusion of ways to apply the key geographical concepts of spatial association, place and sustainability should occur. Schools are reminded that sustainability includes economic, environmental and social sustainability and they should select appropriate case studes that cover all of these aspects. The key geographical concepts of distribution, scale, change and movement were prominent in this area of study.

Further evidence gathered from schools indicates that they are using unmodified VCAA Performance Descriptors. Schools are reminded that the VCAA Performance Descriptors need to be modified to ensure they align with the SAC tasks. Not all key knowledge and key skills are required to be assessed in a given SAC task, provided each element of an outcome is assessed. An S/N assessment can be determined using a wider range of evidence, such as classwork. Schools are also reminded that school-assessed coursework should be unique to each class,school and year.

Research report , case studies or multi-media presentation

For comments relating to these assessment tasks refer to the above comments made in Unit 3 Area of Study 1.

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 in one country and an ageing population in another country.

Students investigate issues arising from each population trend in their world regional context, the challenges that result from responding to these issues and their interconnection with population dynamics. Students should consider the economic, social, political, environmental and cultural factors contributing to the impacts of these issues on people and places. Schools are reminded to carefully consider these aspects when selecting case studies for ageing and growing populations.

Students are required to describe and evaluate the effectiveness of strategies in response to these population issues and challenges. These strategies can be selected from government and/or non-government organisations.

Students must also develop and apply appropriate criteria to evaluate the strategies developed in response to specific issues. They are then required to evaluate the role and effectiveness of geospatial technologies in the development and implementation of strategies in response to population issues. Again, all of these required aspects need to be carefully considered by schools when selecting appropriate country case studies for students to investigate.

On completion of this unit students should be able to analyse the nature of significant population issues and challenges in selected countries and evaluate strategies in response to these.

The school-assessed coursework type for this outcome is either a research report or case studies.

Research report or case studies

The VCE Geography Study Design 2022–2026 allows considerable scope for case study selection because it does not stipulate a particular threshold for population growth. This is because the great majority of 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 and challenges emerging. Saudi Arabia (2.32%) and the United Arab Emirates (1.89%) were also popular growth case studies. 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 the proportion of Australia’s population aged over 65 is not as as high as the other popular choices, 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, there are no thresholds specified for population growth in the VCE Geography Study Design 2022–2026, which allows considerable scope for case study selection. Because the VCE Geography Study Design 2022–2026 does not stipulate what constitutes ageing, these case study choices are legitimate and the focus is on the issues and challenges arising from that population trend.

The most successful assessment for this outcome allowed scope for both group and individual student work following the VCAA Assessment Principles.

As was noted for Unit 3 Area of Study 1, the quality of matrices and scaffolds varied across schools – often based around rewording key knowledge and key skills points. It is recommended that schools give consideration to:

* the provision of appropriate scaffolding of selected key knowledge and key skills
* guiding students in contextualising key geographical concepts in responses
* the use of appropriate geographic data to support student responses.

The school-based assessment audit indicated that schools are using various methods to develop and apply appropriate criteria to evaluate strategies developed in response to specific population issues. These range from ‘To what extent were the strategies successful in achieving their aims?’ to a number of relevant, more complex evaluatve criteria, including environmental, social and economic sustainability, and consideration of short- and long-term effectiveness. All of these methods are compliant with the requirements of the VCE Geography Study Design 2022–2026.

However, schools need to ensure that students are able to demonstrate an understanding of the evaluation of the role and effectiveness of geospatial technologies in the development and implementation of strategies in response to population issues. This indicated that schools are required to thoroughly check that the material in their teaching and learning program aligns with the VCE Geography Study Design 2022–2026.

Similarly to Unit 3 Outcome 1, some schools undertaking a case study, research report or multimedia presentation effectively assessed student performance by designing SAC tasks that incorporated work undertaken both inside and outside the classroom, while still addressing the requirement of authentication of student work. An effective element of the design and structure of such school-based assessment was to incorporate components such as a research folio that was undertaken both inside and outside the classroom, combined with a component undertaken solely in class under time constraint and test conditions. Schools are to be commended on combining different elements and conditions under which school-based assessment occurs, allowing for all students to demonstrate their highest level of understanding of the key knowledge and key skills in this outcome.

Again, schools are reminded that the VCAA Performance Descriptors need to be modified to ensure they align with the SAC tasks. Not all key knowledge and key skills are required to be assessed in a given SAC task, provided each element of an outcome is assessed. An S/N assessment can be determined using a wider range of evidence, such as classwork. Schools are also reminded that school-assessed coursework should be unique to each class,school and year.Overall, schools are to be commended for their appropriate selection of one country with an ageing population and another with a growing population. Evidence from the School-assesed Coursework audit concludes that students are investigating a variety of relevant and contemporary countries to address this outcome.