

Geography

Victorian Certificate of Education Study Design

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Latoya BARTON
The sunset (detail)
from a series of twenty-four
9.0 x 9.0 cm each, oil on board



Tarkan ERTURK
Visage (detail)
201.0 x 170.0 cm
synthetic polymer paint, on cotton duck



Liana RASCHILLA
Teapot from the *Crazy Alice* set
19.0 x 22.0 x 22.0 cm
earthenware, clear glaze, lustres



Nigel BROWN
Untitled physics (detail)
90.0 x 440.0 x 70.0 cm
composition board, steel, loudspeakers,
CD player, amplifier, glass



Kate WOOLLEY
Sarah (detail)
76.0 x 101.5 cm, oil on canvas



Chris ELLIS
Tranquility (detail)
35.0 x 22.5 cm
gelatin silver photograph



Christian HART
Within without (detail)
digital film, 6 minutes



Kristian LUCAS
Me, myself, I and you (detail)
56.0 x 102.0 cm
oil on canvas



Merryn ALLEN
Japanese illusions (detail)
centre back: 74.0 cm, waist (flat): 42.0 cm
polyester cotton



Ping (Irene) VINCENT
Boxes (detail)
colour photograph



James ATKINS
Light cascades (detail)
three works, 32.0 x 32.0 x 5.0 cm each
glass, fluorescent light, metal



Tim JOINER
14 seconds (detail)
digital film, 1.30 minutes



Lucy McNAMARA
Precariously (detail)
156.0 x 61.0 x 61.0 cm
painted wood, oil paint, egg shells, glue, stainless steel wire

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IMPORTANT INFORMATION

Accreditation period

Units 1–4: 2006–2009

The accreditation period commences on 1 January 2006.

Other sources of information

The *VCAA Bulletin* is the only official source of changes to regulations and accredited studies. The *VCAA Bulletin*, including supplements, also regularly includes advice on VCE studies. It is the responsibility of each VCE teacher to refer to each issue of the *VCAA Bulletin*. The *VCAA Bulletin* is sent in hard copy to all VCE providers. It is available on the Victorian Curriculum and Assessment Authority's website at www.vcaa.vic.edu.au

To assist teachers in assessing school-assessed coursework in Units 3 and 4, the Victorian Curriculum and Assessment Authority publishes an assessment handbook that includes advice on the assessment tasks and performance descriptors for assessment.

The current year's *VCE and VCAL Administrative Handbook* contains essential information on assessment and other procedures.

VCE providers

Throughout this study design the term 'school' is intended to include both schools and other VCE providers.

Photocopying

VCE schools only may photocopy parts of this study design for use by teachers.

Introduction

RATIONALE

Geography is the study of where geographical features are located and why they are there, and what makes one place different from another, and how and why these differences matter. It looks at the interaction between human activities and natural processes, and develops understanding of the distribution of human and natural phenomena on or near the surface of the Earth from a spatial perspective.

The purpose of this study is to develop in students an ability to see meaning in the arrangement of natural and human phenomena in space; to see and understand the interrelationships between people, places and environments; and to use geographic skills and apply spatial perspectives to describe and interpret patterns on the surface of the Earth and the processes that created them.

This study investigates a diversity of themes, environments and places at different scales (local, regional, national, international and global) and in different contexts, particularly in Australia. It explores the patterns and processes of physical geography and their interaction with aspects of human geography. Geographers use a number of spatial concepts as tools to help them to investigate, interpret and explain these patterns. The spatial concepts provide a unique conceptual structure and framework of ideas for geographic investigations of phenomena.

This study design focuses on the following spatial concepts: location, scale, distance, distribution, region and movement, spatial change over time, spatial association and spatial interaction. These spatial concepts are all interconnected and to some degree overlap.

The study of Geography addresses the following questions: What is there? Where is it? Why is it there? What are the effects of it being there? How is it changing over time? Should it be like this? What will it be like in the future.

Through studying Geography, students develop knowledge and skills that enable them to understand the complex interactions of their world from a spatial perspective. They learn to participate effectively as global citizens in the sustainable use and management of the world's resources.

AIMS

This study is designed to enable students to:

- develop a geographic perspective;
- understand and apply spatial concepts of location, scale, distance, distribution, region, movement, spatial change over time, spatial association, and spatial interaction;
- acquire knowledge of the interaction and interdependence of natural processes and human activities, including attitudes and values that influence decision making in relation to geographical issues and questions;
- develop knowledge of the Earth and, in particular, Australia;
- develop and apply skills of observation, data collection, analysis, explanation, synthesis and evaluation from both primary and secondary sources;
- acquire and apply the skills and techniques needed to conduct geographic study and enquiry: mapwork, including digital maps; fieldwork; information and communications technology (ICT), including geo-spatial technologies;
- communicate information effectively and as appropriate to the task and audience, in a variety of ways, including orally and/or in writing, accompanied by maps (including digitally-generated visualisations), diagrams, photographs, graphs and tables.

STRUCTURE

The study is made up of four units:

Unit 1: Natural environments

Unit 2: Human environments

Unit 3: Regional resources

Unit 4: Global perspectives

Each unit deals with specific content and is designed to enable students to achieve a set of outcomes. Each outcome is described in terms of key knowledge and skills.

ENTRY

There are no prerequisites for entry to Units 1, 2 and 3. Students must undertake Unit 3 prior to undertaking Unit 4. Units 1 to 4 are designed to a standard equivalent to the final two years of secondary education. All VCE studies are benchmarked against comparable national and international curriculum.

DURATION

Each unit involves at least 50 hours of scheduled classroom instruction. A minimum of four hours must be spent on **fieldwork** in each of Units 1, 2 and 3.

CHANGES TO THE STUDY DESIGN

During its period of accreditation minor changes to the study will be notified in the *VCAA Bulletin*. The *VCAA Bulletin* is the only source of changes to regulations and accredited studies and it is the responsibility of each VCE teacher to monitor changes or advice about VCE studies published in the *VCAA Bulletin*.

MONITORING FOR QUALITY

As part of ongoing monitoring and quality assurance, the Victorian Curriculum and Assessment Authority will periodically undertake an audit of Geography to ensure the study is being taught and assessed as accredited. The details of the audit procedures and requirements are published annually in the *VCE and VCAL Administrative Handbook*. Schools will be notified during the teaching year of schools and studies to be audited and the required material for submission.

SAFETY

This study may involve the handling of potentially hazardous substances and/or the use of potentially hazardous equipment. It is the responsibility of the school to ensure that duty of care is exercised in relation to the health and safety of all students undertaking the study.

USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY

In designing courses for this study teachers should incorporate information and communications technology where appropriate and applicable to the teaching and learning activities. The Advice for Teachers section provides specific examples of how information and communications technology can be used in this study.

KEY COMPETENCIES AND EMPLOYABILITY SKILLS

This study offers a number of opportunities for students to develop key competencies and employability skills. The Advice for Teachers section provides specific examples of how students can demonstrate key competencies during learning activities and assessment tasks.

LEGISLATIVE COMPLIANCE

When collecting and using information, the provisions of privacy and copyright legislation, such as the Victorian *Information Privacy Act 2000* and *Health Records Act 2001*, and the federal *Privacy Act 1988* and *Copyright Act 1968* must be met.

Assessment and reporting

SATISFACTORY COMPLETION

The award of satisfactory completion for a unit is based on a decision that the student has demonstrated achievement of the set of outcomes specified for the unit. This decision will be based on the teacher's assessment of the student's performance on assessment tasks designated for the unit. Designated assessment tasks are provided in the details for each unit. The Victorian Curriculum and Assessment Authority publishes an assessment handbook that includes advice on the assessment tasks and performance descriptors for assessment for Units 3 and 4.

Teachers must develop courses that provide opportunities for students to demonstrate achievement of outcomes. Examples of learning activities are provided in the Advice for Teachers section.

Schools will report a result for each unit to the Victorian Curriculum and Assessment Authority as S (Satisfactory) or N (Not Satisfactory).

Completion of a unit will be reported on the Statement of Results issued by the Victorian Curriculum and Assessment Authority as S (Satisfactory) or N (Not Satisfactory). Schools may report additional information on levels of achievement.

AUTHENTICATION

Work related to the outcomes will be accepted only if the teacher can attest that, to the best of their knowledge, all unacknowledged work is the student's own. Teachers need to refer to the current year's *VCE and VCAL Administrative Handbook* for authentication procedures.

LEVELS OF ACHIEVEMENT

Units 1 and 2

Procedures for the assessment of levels of achievement in Units 1 and 2 are a matter for school decision. Assessment of levels of achievement for these units will not be reported to the Victorian Curriculum and Assessment Authority. Schools may choose to report levels of achievement using grades, descriptive statements or other indicators.

Units 3 and 4

The Victorian Curriculum and Assessment Authority will supervise the assessment of all students undertaking Units 3 and 4.

In Geography the student's level of achievement will be determined by school-assessed coursework and an end-of-year examination. The Victorian Curriculum and Assessment Authority will report the student's level of performance on each assessment component as a grade from A+ to E or UG (ungraded). To receive a study score, students must achieve two or more graded assessments and receive S for both Units 3 and 4. The study score is reported on a scale of 0–50. It is a measure of how well the student performed in relation to all others who took the study. Teachers should refer to the current year's *VCE and VCAL Administrative Handbook* for details on graded assessment and calculation of the study score. Percentage contributions to the study score in Geography are as follows:

- Unit 3 school-assessed coursework: 25 per cent
- Unit 4 school-assessed coursework: 25 per cent
- End-of-year examination: 50 per cent

Details of the assessment program are described in the sections on Units 3 and 4 in this study design.

Unit 1: Natural environments

This unit investigates the geographic characteristics of natural environments and landforms and the natural processes that shape and change the Earth's surface. It investigates how the interactions between natural processes and human activities can also change natural environments.

The world's physical environments are composed of four natural systems: atmosphere, biosphere, lithosphere, hydrosphere, which are fundamental to the operation of all interactions within the environment. There are few places in the world where only natural processes operate.

Human activities interact with natural processes, each affecting the other. The nature of change caused by the interaction between natural processes and human activities varies at a range of scales, over space and over time.

Students must investigate **at least two** natural environments in each area of study. The natural environments selected for investigation may be the same in each area of study. Each environment selected for investigation must focus on physical geography at two different scales.

AREA OF STUDY 1

Characteristics of natural environments

This area of study focuses on natural environments at two different scales, comparing and contrasting their geographic characteristics, for example location, climate, soils, drainage, natural vegetation and topography. It identifies natural features from different kinds of imagery, topographic maps and fieldwork activities. It investigates the natural processes, including extreme natural events, that create and change landforms, landscapes and environments. Suitable topics for study may include coasts, mountains, deserts, rivers, volcanoes, glaciers, oceans and tropical rainforests.

Outcome 1

On completion of this unit the student should be able to describe the geographic characteristics of at least two natural environments and explain how they are developed by natural processes, including extreme natural events.

To achieve this outcome the student will draw on knowledge and related skills outlined in area of study 1.

Key knowledge

This knowledge includes

- the Earth's four natural systems and the ways in which they are dynamic and interactive;
- landforms that make up selected landscapes and environments;
- geographic characteristics of natural environments;
- natural processes and factors that create natural environments;
- distribution of selected types of predominantly natural environments at two different scales.

Key skills

These skills include the ability to

- conduct fieldwork at a local site and collect data;
- collect, sort, process and represent spatial data related to formation of natural environments using a range of geographic techniques and media, that may include fieldwork data;
- identify and describe the geographic characteristics of selected natural environments in different locations at two different scales;
- analyse and explain data about the geographic characteristics of natural environments produced by the interaction of natural processes;
- apply spatial concepts as appropriate.

AREA OF STUDY 2

Changes in natural environments

This area of study focuses on the dynamic nature of natural environments and the contribution of the various agents of change such as weathering, erosion, transportation and deposition as well as human activity. It explores the nature of change and the dimensions of change in different environments through different kinds of imagery, topographic maps and fieldwork activities. Suitable topics for investigation of changes caused mainly by human activities and their interaction with natural environments include deforestation, global warming, tourism, urban expansion, irrigation and drainage works, mining, pollution, conservation of important sites such as national parks and marine national parks.

Outcome 2

On completion of this unit the student should be able to analyse and explain the changes in natural environments due to natural processes and human activity.

To achieve this outcome the student will draw on knowledge and related skills outlined in area of study 2.

Key knowledge

This knowledge includes

- types of changes to natural environments produced by natural processes and by human activity;
- nature, rate and scale of interactions between natural environments and human activity;
- the impact of change on natural environments and on human activity;
- the importance of the interactions between natural processes and human activity in influencing changes to natural environments, including the management of change.

Key skills

These skills include the ability to

- conduct fieldwork at a local site and collect data;
- process and represent fieldwork data related to natural environments and change using a variety of geographic techniques and media;
- describe and analyse data about changes to natural environments produced by the interaction between natural processes and human activity;
- explain how natural processes and their interaction with human activity may alter natural environments at two different scales;
- apply spatial concepts as appropriate.

ASSESSMENT

The award of satisfactory completion for a unit is based on a decision that the student has demonstrated achievement of the set of outcomes specified for the unit. This decision will be based on the teacher's assessment of the student's overall performance on assessment tasks designated for the unit.

The key knowledge and skills listed for each outcome should be used as a guide to course design and the development of learning activities. The key knowledge and skills do not constitute a checklist and such an approach is not necessary or desirable for determining the achievement of outcomes. The elements of key knowledge and skills should not be assessed separately.

Assessment tasks must be a part of the regular teaching and learning program and must not unduly add to the workload associated with that program. They must be completed mainly in class and within a limited timeframe. Teachers should select a variety of assessment tasks for their assessment program to reflect the key knowledge and skills being assessed and to provide for different learning styles.

For this unit students are required to demonstrate achievement of two outcomes. As a set these outcomes encompass both areas of study.

Demonstration of achievement of Outcomes 1 and 2 must be based on the student's performance on a selection of assessment tasks. Where teachers allow students to choose between tasks they must ensure that the tasks they set are of comparable scope and demand. Assessment tasks for this unit are:

- recording and reporting on data collected in the field;
- data processing, analysis and presentation;
- multimedia presentations;
- oral presentations;
- short-answer questions;
- structured questions;
- research reports;
- written responses;
- role-plays;
- tests.

At least one of the assessment tasks must involve fieldwork.

Unit 2: Human environments

This unit investigates the characteristics of rural and urban environments which are developed by human activities and their interactions with natural environments. Rural and urban environments vary significantly from place to place and across a variety of scales. Rural and urban environments are significant because they are the locations where people live. Their presence creates settlements which vary in size and complexity from individual farm houses to small villages, regional towns, large metropolitan cities and mega cities.

Rural environments are those produced by human activities such as farming, forestry, tourism, mining, fishing and rural settlements. Urban environments are those produced by human activities created by housing, work and leisure pursuits. The nature of change in human environments varies across a range of scales over space and over time.

Rural and urban environments are dynamic. They can be changed in the long or short term by advances in technology, individual and organisational decisions, as well as by natural and human processes and events. Decisions that affect the management and the sustainability of rural and urban environments, and the distribution of rural and urban activities are made by governments, organisations and individuals.

Students must investigate at least two human environments in each area of study. The environments selected for investigation may be the same in each area of study, but one of the environments must be a rural environment and one an urban environment; one must be from Australia and one must be from another country. Each environment selected for investigation must focus on human geography at two different scales.

AREA OF STUDY 1

Characteristics of human environments

This area of study focuses on the geographic characteristics of selected rural and urban environments at a range of scales. These geographic characteristics could include locations, landscapes, climate, living conditions and environmental qualities. It identifies these characteristics from a range of sources including texts, photographs, topographic maps and fieldwork activities. It investigates the nature and type of human activities and their interaction with natural environments. Suitable topics for rural environments include farms, forests, mines, fishing areas and rural settlements. Suitable topics for urban environments include the central business district, inner urban areas, rural urban fringe areas, retail precincts and leisure areas.

Outcome 1

On completion of this unit the student should be able to describe and explain the geographic characteristics of different types of rural and urban environments.

To achieve this outcome the student will draw on knowledge and related skills outlined in area of study 1.

Key knowledge

This knowledge includes

- definition and classification of urban and rural environments;
- geographic characteristics of selected rural and urban environments; for example, environmental qualities, living conditions;
- processes and factors associated with different human activities that contribute to the distinctive geographic characteristics of selected rural and urban environments;
- nature and types of human activities that produce spatial variations in rural and urban environments.

Key skills

These skills include the ability to

- conduct fieldwork at a local site and collect data;
- collect, sort, process and represent spatial data, which may include fieldwork data, related to the formation of human environments using a range of geographic techniques and media;
- identify and describe the geographic characteristics of selected human environments in different locations at two different scales;
- describe and analyse data about changes in the geographic characteristics of human environments produced by the interaction of human processes;
- apply spatial concepts as appropriate.

AREA OF STUDY 2**Changes in human environments**

This area of study focuses on the dynamic nature of rural and urban environments and the factors contributing to change, such as population change, population movement, climate changes, government policies and globalisation. These factors affect the management and the sustainability of rural and urban environments at a range of scales. Suitable topics for investigation include changes in the size and function of human environments; the impact of population changes on human environments; changing the nature and location of industries and employment; movement within and between human environments; urban renewal; and sustainability of the human environment.

Outcome 2

On completion of this unit the student should be able to analyse and explain changes due to human activities in rural and urban environments.

To achieve this outcome the student will draw on knowledge and related skills outlined in area of study 2.

Key knowledge

This knowledge includes

- changes in the nature and distribution of rural and urban environments;
- the importance of human activities and human processes contributing to spatial changes in rural and urban environments;
- the role and influence of governments, organisations, communities and individuals in affecting and managing change in rural and urban environments at two different scales;
- the concept and practicality of sustainability in selected rural and urban environments.

Key skills

These skills include the ability to

- conduct fieldwork at a local site and collect data;
- process and represent fieldwork data related to human environments and change using a variety of geographic techniques and media;
- analyse data about changes to human environments produced by the interaction between human processes and activities;
- analyse and explain how human processes and human activities may alter human environments at two different scales;
- apply spatial concepts as appropriate.

ASSESSMENT

The award of satisfactory completion for a unit is based on a decision that the student has demonstrated achievement of the set of outcomes specified for the unit. This decision will be based on the teacher's assessment of the student's overall performance on assessment tasks designated for the unit.

The key knowledge and skills listed for each outcome should be used as a guide to course design and the development of learning activities. The key knowledge and skills do not constitute a checklist and such an approach is not necessary or desirable for determining the achievement of outcomes. The elements of key knowledge and skills should not be assessed separately.

Assessment tasks must be a part of the regular teaching and learning program and must not unduly add to the workload associated with that program. They must be completed mainly in class and within a limited timeframe. Teachers should select a variety of assessment tasks for their assessment program to reflect the key knowledge and skills being assessed and to provide for different learning styles.

For this unit students are required to demonstrate achievement of two outcomes. As a set these outcomes encompass both areas of study.

Demonstration of achievement of Outcomes 1 and 2 must be based on the student's performance on a selection of assessment tasks. Where teachers allow students to choose between tasks they must ensure that the tasks they set are of comparable scope and demand. Assessment tasks for this unit are:

- recording and reporting on data collected in the field;
- data processing, analysis and presentations;
- multimedia presentations;
- oral presentations;
- short-answer questions;
- structured questions;
- research reports;
- written responses;
- role-plays;
- tests.

At least one assessment task must involve fieldwork.

Unit 3: Regional resources

This unit investigates the characteristics of resources and the concept of region. A resource is anything which occurs naturally or is created by humans provided that people use it to satisfy a need or want. Resources found within regions mean different things to different people over place and time. A study of resources is about the processes and relationships operating in the past, in the present, and those which will operate in the future. Regions are areas of various scales that have characteristics and features that distinguish them from other areas according to the elements used to define them. The use and management of resources is dynamic and changes spatially over time in response to the interactions between human activities, natural processes and the legislative processes that humans put into place. Social, historical, environmental, economic and political factors can be used to predict and plan for future policies and strategies to ensure the sustainability of the available resources.

Governments and other organisations often use the concept of region for planning purposes when determining allocation of resources and development of policies. Although the process of globalisation is influencing the world at a rapid rate, a regional perspective may give identity and help to make sense of such processes.

The availability and utilisation of water resources influences settlement patterns, infrastructure development and decision making in many Australian regions. Problems of supply and debates about the water resources of rural and urban communities mirror processes that are happening elsewhere on the Earth. There are competing demands for water resources within and between regions at local, national and international scales.

Students must investigate a regional resource and a local resource in Australia. The regional resource will be water in the Murray-Darling Basin region. Students will use fieldwork to investigate a local resource.

AREA OF STUDY 1

Use and management of an Australian water resource

This area of study focuses on water as a resource in Australia, with specific application to the region of the Murray-Darling Basin. Water is a critical resource on the Earth's second driest continent. Students should understand the context of the debates over the variations in the supply, distribution and demand for water. In the regional context of the Murray-Darling Basin, the study focuses on the source, availability, distribution and utilisation of water (surface and/or ground water), and examines

the dynamic nature of relationships and interactions between natural processes and human activities. Students study a variety of management responses and evaluate strategies designed to achieve sustainable development.

The area of study provides students with the opportunity to develop an understanding of a significant resource and the concept of region, and to develop a regional perspective in determining the availability, utilisation and sustainability of a resource.

Outcome 1

On completion of this unit the student should be able to analyse the use and management of water within the Murray-Darling Basin region and evaluate its future sustainability.

To achieve this outcome the student will draw on knowledge and related skills outlined in area of study 1.

Key knowledge

This knowledge includes

- definition of a resource and a region;
- importance of water as a resource in Australia;
- geographic characteristics of the Murray-Darling Basin region;
- distribution of water resources in the Murray-Darling Basin region;
- factors affecting patterns of water use in the Murray-Darling Basin region;
- conflict over the use of water in the Murray-Darling Basin region;
- current management policies and strategies to implement these policies;
- possible future patterns including sustainability of water use in the Murray-Darling Basin region.

Key skills

These skills include the ability to

- identify and classify selected resources and regions;
- describe the importance of water in Australia;
- describe the geographic characteristics and water resources of the Murray-Darling Basin region;
- analyse factors which affect the patterns of water usage and management;
- evaluate the effectiveness of water management policies and strategies in terms of its current use and its future sustainability;
- process and represent data using a range of geographic techniques and media;
- apply spatial concepts as appropriate.

AREA OF STUDY 2

Use and management of local resources

This area of study focuses on the use and management of a significant resource in the local region such as shopping centres, urban renewal sites such as the Docklands, a farm, a factory, conservation parks including national and marine parks, and ski fields such as Mount Stirling. Students study the importance of a local resource, how it is managed and its future sustainability. The local resource is placed in a regional context; for example, a study of a local shopping strip could be understood in the context of a hierarchy of shopping centres across the wider region. This resource is the focus for fieldwork.

Outcome 2

On completion of this unit the student should be able to describe characteristics of a local resource and justify a policy for its future use and management using data collected in the field.

To achieve this outcome the student will draw on knowledge and related skills outlined in area of study 2.

Key knowledge

This knowledge includes

- the nature of the resource;
- geographic characteristics of the resource;
- distribution of a similar resource at a regional scale;
- positive and negative impacts of resource use on people and their environment at the local scale;
- the concept and practicality of sustainable policies related to the selected resource.

Key skills

These skills include the ability to

- conduct fieldwork at a local site to observe and record data on the geographic characteristics of a resource;
- process and represent fieldwork data using a range of geographic techniques and media;
- interpret processed fieldwork data;
- synthesise fieldwork data to justify a future policy for sustainable resource use;
- understand the resource in its regional context;
- apply spatial concepts as appropriate.

ASSESSMENT

The award of satisfactory completion for a unit is based on a decision that the student has demonstrated achievement of the set of outcomes specified for the unit. This decision will be based on the teacher's assessment of the student's overall performance on assessment tasks designated for the unit. The Victorian Curriculum and Assessment Authority publishes an assessment handbook that includes advice on the assessment tasks and performance descriptors for assessment.

The key knowledge and skills listed for each outcome should be used as a guide to course design and the development of learning activities. The key knowledge and skills do not constitute a checklist and such an approach is not necessary or desirable for determining the achievement of outcomes. The elements of key knowledge and skills should not be assessed separately.

Assessment of levels of achievement

The student's level of achievement in Unit 3 will be determined by school-assessed coursework and an end-of-year examination.

Contribution to final assessment

School-assessed coursework for Unit 3 will contribute 25 per cent to the study score.

The level of achievement for Units 3 and 4 is also assessed by an end-of-year examination, which will contribute 50 per cent to the study score.

School-assessed coursework

Teachers will provide to the Victorian Curriculum and Assessment Authority a score representing an assessment of the student's level of achievement.

The score must be based on the teacher's rating of performance of each student on the tasks set out in the following table and in accordance with an assessment handbook published by the Victorian Curriculum and Assessment Authority. The assessment handbook also includes advice on the assessment tasks and performance descriptors for assessment.

Assessment tasks must be a part of the regular teaching and learning program and must not unduly add to the workload associated with that program. They must be completed mainly in class and within a limited timeframe. Where optional assessment tasks are used, teachers must ensure that they are comparable in scope and demand. Teachers should select a variety of assessment tasks for their program to reflect the key knowledge and skills being assessed and to provide for different learning styles.

Outcomes	Marks allocated*	Assessment tasks
Outcome 1 Analyse the use and management of water within the Murray-Darling Basin region and evaluate its future sustainability.	50	Any one or a combination of the following formats: <ul style="list-style-type: none"> • a data analysis • a case study • a multimedia presentation • a structured essay • a report • structured questions • short-answer questions • a test.
Outcome 2 Describe characteristics of a local resource and justify a policy for its future use and management using data collected in the field.	50	A written fieldwork report
Total marks	100	

*School-assessed coursework for Unit 3 contributes 25 per cent to the study score.

Unit 4: Global perspectives

This unit investigates the geographic characteristics of global phenomena and responses to them. Global phenomena are major natural or human events, processes or activities. Such phenomena are distributed globally and possess the capacity to affect the globe or significant parts of the globe and require more than a local or national response.

Human population studies are significant to understanding the challenges facing our globalised world. Spatial variations in the distribution, composition and growth of human populations are related to the nature of places. A global perspective is a viewpoint or policy designed to guide future action by people or organisations to address the effects of global phenomena. Phenomena such as El Nino, migration, rapid communications technology, Earthquake damage, genetically modified crops or globally changing patterns of investment and industrialisation, shared ocean and atmosphere resources, pandemics and other 'borderless' phenomena play important roles in shaping community, environments and landscape change.

Governments, organisations, groups and individuals respond to global phenomena in different ways. The type of response is affected by social, economic, historical and political considerations, resource access and distribution, and the nature and scale of the event or process. Policy developed to deal with a global phenomena and its effects results in the formation of a global perspective. This unit investigates the distribution patterns of selected global phenomena. It considers the causes, dimensions and impact of global changes and analyses policies and strategies, including those that promote sustainability, to enable a better world in the future.

Students must investigate two global phenomena in each area of study, one of which must be human population.

AREA OF STUDY 1

Global phenomena

This area of study focuses on an analysis, explanation and evaluation of the factors primarily responsible for generating global phenomena. The study of the human population examines the geographic distribution, structure and composition as well as the dynamics of population in time and space, including growth and decline in fertility and mortality. The other global phenomenon may include major natural processes and/or human activities and their interactions that are distributed globally. Students investigate the impact on people and natural systems caused by human populations and another global phenomenon. Suitable topics for study include climate change, fishing, migration tourism, desertification and wetlands.

Outcome 1

On completion of this unit the student should be able to evaluate the relative importance of factors that affect changes in human population and one other selected global phenomenon.

To achieve this outcome the student will draw on knowledge and related skills outlined in area of study 1.

Key knowledge

This knowledge includes

- definition and classification of global phenomena;
- distribution and composition of the human population and the distribution of one other global phenomenon;
- interaction of natural processes and human activities which affect the human population and one other global phenomenon;
- positive and negative impact of changes in the human population and one other global phenomenon on people and environments;
- future patterns of the human population and one other global phenomenon;
- the relative importance of factors which affect changes in the human population and one other global phenomenon.

Key skills

These skills include the ability to

- analyse and explain the geographic characteristics of the human population and one other global phenomenon;
- identify, locate and extract spatial data from a range of information sources about the human population and one other global phenomenon;
- evaluate the relative importance of factors contributing to the changes in the human population and one other global phenomenon;
- sort, process and represent spatial data using a range of geographic techniques and media;
- describe and analyse data either manually and/or using information and communications technology;
- apply spatial concepts as appropriate.

AREA OF STUDY 2**Global responses**

This area of study focuses on the ways in which people and organisations respond to the global impact of two phenomena, including human population at a range of scales. It investigates how people's responses to the phenomena have changed in the short and the long term. It identifies the positive and negative effects of these responses from government and non government organisations or groups. It analyses and evaluates policies and strategies including those that promote sustainability.

Outcome 2

On completion of this unit the student should be able to compare and evaluate the effectiveness of responses and policies to manage a global phenomenon from a global perspective.

To achieve this outcome the student will draw on knowledge and related skills outlined in area of study 2.

Key knowledge

This knowledge includes

- positive and negative impacts of global phenomena on people and environments;
- people's responses to the human population and one other global phenomenon in the short and long term;
- government and non-government organisations' responses to the human population and one other global phenomenon in the short and long term;
- global perspectives and the management of the effects of the human population and one other global phenomenon at a range of scales;
- the effectiveness of the strategies outlined in the global perspectives in responding to the human population and one other global phenomenon;
- factors which affect the future development of the human population and one other global phenomenon.

Key skills

These skills include the ability to

- identify, locate and extract data from print and electronic sources about global perspectives on the human population and one other global phenomenon;
- process and represent spatial data about global perspectives on the human population and one other global phenomenon, using various geographic techniques and media;
- evaluate and synthesise data about global perspectives;
- apply, as appropriate, criteria to evaluate responses to the human population and one other global phenomenon from a global perspective;
- apply spatial concepts as appropriate.

ASSESSMENT

The award of satisfactory completion for a unit is based on a decision that the student has demonstrated achievement of the set of outcomes specified for the unit. This decision will be based on the teacher's assessment of the student's overall performance on assessment tasks designated for the unit. The Victorian Curriculum and Assessment Authority publishes an assessment handbook that includes advice on the assessment tasks and performance descriptors for assessment.

The key knowledge and skills listed for each outcome should be used as a guide to course design and the development of learning activities. The key knowledge and skills do not constitute a checklist and such an approach is not necessary or desirable for determining the achievement of outcomes. The elements of key knowledge and skills should not be assessed separately.

Assessment of levels of achievement

The student's level of achievement for Unit 4 will be determined by school-assessed coursework and an end-of-year examination.

Contribution to final assessment

School-assessed coursework for Unit 4 will contribute 25 per cent to the study score.

The level of achievement for Units 3 and 4 is also assessed by an end-of-year examination, which will contribute 50 per cent to the study score.

School-assessed coursework

Teachers will provide to the Victorian Curriculum and Assessment Authority a score representing an assessment of the student's level of achievement.

The score must be based on the teacher's rating of performance of each student on the tasks set out in the following table and in accordance with an assessment handbook published by the Victorian Curriculum and Assessment Authority. The assessment handbook also includes advice on the assessment tasks and performance descriptors for assessment.

Assessment tasks must be a part of the regular teaching and learning program and must not unduly add to the workload associated with that program. They must be completed mainly in class and within a limited timeframe. Where optional assessment tasks are used, teachers must ensure that they are comparable in scope and demand. Teachers should select a variety of assessment tasks for their program to reflect the key knowledge and skills being assessed and to provide for different learning styles.

Outcomes	Marks allocated*	Assessment tasks
<p>Outcome 1 Evaluate the relative importance of factors that affect changes in human population and one other selected global phenomenon.</p>	50	<p>For each outcome, any one or a combination of the following formats:</p> <ul style="list-style-type: none"> • a data analysis • a case study • a multimedia presentation • a structured essay • a report • structured questions • short-answer questions • a test.
<p>Outcome 2 Compare and evaluate the effectiveness of responses and policies to manage a global phenomenon from a global perspective.</p>	50	
Total marks	100	

*School-assessed coursework for Unit 4 contributes 25 per cent to the study score.

End-of-year examination

Description

All outcomes in Units 3 and 4 will be examined.

All of the key knowledge and skills that underpin the outcomes in Units 3 and 4 are examinable.

The examination will be set by a panel appointed by the Victorian Curriculum and Assessment Authority.

Conditions

The examination will be completed under the following conditions:

- Duration: two hours.
- Date: end-of-year, on a date to be published annually by the Victorian Curriculum and Assessment Authority.
- Victorian Curriculum and Assessment Authority examination rules will apply. Details of these rules are published annually in the *VCE and VCAL Administrative Handbook*.
- The examination will be marked by a panel appointed by the Victorian Curriculum and Assessment Authority.

Contribution to final assessment

The examination will contribute 50 per cent to the study score.

Advice for teachers

DEVELOPING A COURSE

A course outlines the nature and sequence of teaching and learning necessary for students to demonstrate achievement of the set of outcomes for a unit. The areas of study broadly describe the learning context and the knowledge required for the demonstration of each outcome. Outcomes are introduced by summary statements and are followed by the key knowledge and skills which relate to the outcomes.

Teachers must develop courses that include appropriate learning activities to enable students to develop the knowledge and skills identified in the outcome statements in each unit.

For Units 1 and 2, teachers must select assessment tasks from the list provided. Tasks should provide a variety and the mix of tasks should reflect the fact that different types of tasks suit different knowledge and skills and different learning styles. Tasks do not have to be lengthy to make a decision about student demonstration of achievement of an outcome.

In Units 3 and 4, assessment is more structured. For some outcomes, or aspects of an outcome, the assessment tasks are prescribed. The contribution that each outcome makes to the total score for school-assessed coursework is also stipulated.

USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY

In designing courses and developing learning activities for Geography, teachers should make use of applications of information and communications technology and new learning technologies, such as computer-based learning, multimedia and the World Wide Web where appropriate and applicable to teaching and learning activities.

In designing courses for this study teachers are encouraged to incorporate information and communications technology in teaching and learning activities. The development of these skills refer to:

- interpretation of aerial photographs and satellite images (including their digital versions);
- use of databases such as census and population data;
- use of the Internet for research, for example to investigate case studies;
- extraction of information from CD-ROMs, DVDs, video, and TV programs;
- application of word processing, data presentation and analysis techniques for presentation of course work;
- use of spreadsheets for data handling;
- application of Geographic Information Systems (GIS) as appropriate.

GLOSSARY

The glossary is a guide for teachers in preparing courses across Units 1 to 4. Through the study design reference is made to terminology included in this glossary. The examples are included to provide a broad and flexible understanding for the study. References to other words in the glossary are shown in bold.

Classification

Geographers classify data, observations and processes into a systematic arrangement in groups or categories or hierarchies according to criteria that are established for the purpose. Examples of classifications used by geographers are coasts, climate, vegetation, clouds, soils, landscapes and towns.

Component

Components are parts of a natural system and physical environment. They comprise the material things that combine to build a natural system. Examples include **atmosphere, biosphere, lithosphere** and **hydrosphere**.

Dynamic nature

Dynamic nature implies that the components of an environment are likely to change with the alteration of any component within the environment and/or by human activities.

Environments

The surroundings within which people, animals and plants live. The environment is the complex of geographic factors – social, historical, economic, environmental, physical and political – that influence the life of an individual or community.

Human environment

A human environment is characterised by activities that are conducted by humans and features that are formed and modified by humans.

Natural environment

Natural environments incorporate areas that have largely retained their form and characteristic due predominantly to **natural processes**. Although **human activities** have brought change, it has been minimal – either due to protection of the areas or to the resilience of the environment.

Physical environment

Physical environments are composed of four natural systems – the **atmosphere, biosphere, lithosphere** and **hydrosphere** – which are fundamental to **interactions** within the environment.

Rural environment

Rural environments are located beyond the boundaries of large urban centres, but may include the rural-urban fringe. For example, farming, forestry and settlements.

Urban environment

An urban environment comprises a large permanent settlement or built-up area, with a relatively dense population compared to the surrounding area, and is influenced significantly by economic activities of secondary and tertiary industries.

Environmental qualities

Environmental qualities are those aspects of the environment that are either pleasing or not to the individual or a group, according to their value systems.

Extreme natural event

Extreme natural events are those occurrences that are the product of physical changes in the environment. These changes do not occur with a regular pattern and have an impact significantly beyond the normal expectation. Examples may include cyclones, Earthquakes, avalanches, tsunamis, flash flooding, wildfires.

Fieldwork

Fieldwork is the application of knowledge and skills learnt in the classroom to environments outside the classroom.

Geographic characteristics

Geographic characteristics are those features and influences identified in the environment and described using appropriate **spatial concepts**. In addition, **geographic characteristics** may include such features as climate, topography, natural vegetation, and values. **Geographic characteristics** can be identified at a range of scales.

Geographic factors

Geographic factors are those factors that are responsible or partly responsible for determining the characteristics of particular **natural environments, human environments, regional resources** and **global phenomena**. The following are the most frequently used factors, but the list is not exhaustive:

Social

The features and values of particular societies such as political structures, ethnicity, religion, language, customs and values.

Historical

Past actions and thinking may influence current **geographic characteristics** of natural and **human environments, resource** use and **global phenomena**. For example, the nineteenth century gold rushes affected Victoria's natural and human environments, including its settlement and transport patterns.

Economic

Activities and decisions involving employment and income that impact on the **geographic characteristics** of **natural** and **human environments, resource** use and global **phenomena**. Examples include the impact of supermarkets on traditional shopping centres, and the impact that offshore companies have on Australian industries and employment.

Environmental

Include the physical factors listed below together with ecological and human influences. Environmental factors may be predominantly human, for example the buildings and roads of the Central Business District of a city.

Physical

The natural characteristics of an environment including the shape of the land, vegetation, drainage, soils, climate.

Political

Political factors may influence **geographic characteristics** of **natural** and **human environments**, **resource** use and **global phenomena**. Views and actions of an individual, a group, a government or a supranational organisation that may be expressed in a formal sense as legislation, **policy** and **strategies** or as an individual viewpoint. For example, planning policies of successive State and local governments have influenced the nature and growth of urban Melbourne.

Technological

The use and management of **natural** and **human environments**, **resource** use and **global phenomena** is influenced by the level of technology in such fields as transport, industry, agriculture, mining and communications.

Geographic region

A **region** is an area at various scales that has one or more **geographic characteristics** or features that distinguishes it from another area according to the elements used to define the **region**. Examples of regions include sheep-wheat belt (agricultural), Murray-Darling Basin (river catchment), Mediterranean (climate and vegetation), Metropolitan Melbourne (urban), Western Volcanic Plains (geological) and ASEAN nations (political).

Geographic technique

Geographers use data that they collect themselves or obtain from secondary sources. Geographic techniques are any means of showing this data that does not solely comprise text in sentences and paragraphs. All geographic techniques need to be fully labelled. Examples include maps, graphs, field sketches, labelled photographs, tables and matrices. Geographic techniques may be hand- or computer-drawn including use of Geographic Information Systems technology.

Global perspective

A global perspective is a viewpoint or **policy** designed to guide future action by people or organisations to address the effects of **global phenomena**. For example, the work of the United Nations through its many agencies such as the World Bank and UNESCO.

Global phenomena

Global phenomena are major natural or human events, processes or activities. Such phenomena are distributed globally or over a large proportion of the Earth and possess the capacity to affect the globe or significant parts of the globe and require more than a local or national response. Examples may include urbanisation, tectonic activity, population movements, diseases such as cholera, and wetland loss.

Globalisation

Globalisation describes the way in which the lives of the world's people have become increasingly linked. Communications, movement of people, economic and financial activities, and cultural diversity exemplify the development of the globalised world.

Human geography

That branch of geography that particularly studies people and their activities.

Landform

A landform is a natural feature of the Earth's surface shaped by **natural processes**; for example, plains and mountains.

Living conditions

Living conditions are the **natural** and **human environments** in which people go about their daily activities. Particular features of living conditions can be described quantitatively using development indicators and/or qualitatively using writing. Either approach permits comparisons. Indicators can vary from place to place, over time and between people. For example, household heating is important in Canada, but not in Indonesia; provision of health services are less significant to the young, but of greater significance to the older person; the poverty line is defined differently in Australia and the Philippines.

Management

The administration of a particular enterprise or area either directly or indirectly by individuals and/or groups. Management decisions may include the development and implementation of:

Policy

An aim or general statement of intent by an organisation to develop and modify a particular set of circumstances.

An example of a policy is 'to have halted and begun to reverse the world-wide incidence of malaria by 2015'.

Strategy

The means to achieve a **policy**. This is the break down of activities that ensure the development and implementation of the **policy**.

An example of a strategy is 'to have increased the number of doctors to provide vaccination programs against malaria'.

Management response

A management response is a reaction by an authority trusted with the **policy** implementation of an organisation such as the management of Food and Agriculture Organisation assisting with food crises in Africa. Responses can be either to monitor and try and predict events or to reduce the effect of events by preparing people and their environments.

Natural processes

The means by which matter or energy is moved into, around and out of a **natural system**. These processes help to change places and give each place a unique identity. Examples include weathering, erosion, transportation and deposition of materials by the actions of wind or water as well as Earth movements. Processes can operate over a long period of time or in the short term through the occurrence of extreme natural events.

Natural systems

Natural systems comprise **components** that interact to produce distinctive geographic characteristics. These **components** are:

<i>Atmosphere</i>	The envelope of air surrounding the Earth consisting of a mixture of gases and a quantity of water vapour.
<i>Biosphere</i>	The zone where lithosphere and hydrosphere meet the atmosphere and so create conditions in which living things can exist and function.
<i>Hydrosphere</i>	Includes all the water component of the Earth as liquid, ice and water vapour. It is the water in the oceans, lakes and river systems, groundwater, ice and water vapour in the atmosphere.
<i>Lithosphere</i>	The solid crust of the Earth consisting of the thin, loose layer of soil and the mass of hard rock upon which the soil sits.

Perspective

A viewpoint or **policy** by people or organisations.

<i>Geographic perspective</i>	Situations seen through the eyes of a geographer who applies spatial concepts and terminology to understand those events and processes.
<i>Global perspective</i>	A global perspective is a viewpoint or policy by people or organisations to address the effects of global phenomena .
<i>Regional perspective</i>	Events and processes are seen in the context of a region , as defined by the geographer, who applies spatial concepts and terminology to understand those events and processes that occur within the boundaries of the region .

Physical geography

That branch of geography that is particularly concerned with the study of the **atmosphere, biosphere, hydrosphere** and **lithosphere**.

Range of scales

See the scales listed under **spatial concepts**.

Resource

A resource is anything that occurs naturally or is created by humans. It becomes a resource only when people see that it can be used to satisfy a need or want. Resources are different things to different people over time and show variations in their use over place and time.

Spatial concepts

Spatial concepts are the organising concepts common to all branches of geography. Although there are many organising concepts, there are nine commonly recognised concepts:

Location

Is where natural and built phenomena are found on the surface of the Earth. A place has an absolute location measured accurately by co-ordinates, and a relative location measured by distance and direction from one place to another.

Scale

The term **scale** includes two uses.

1. The map scale shows the relationship between measurements on a map and the actual measurements on the ground. Map scales are expressed in words, by a line scale, or as a representative fraction. A large scale map covers a small area with detail; a small scale map will cover a larger area with less detail.
2. The observational scale refers to the size of an area being studied. A range of scales includes the following:

Local scale involves the smallest area and is immediate to wherever the study is taking place. Fieldwork is conducted at the local scale.

Regional scale covers a larger area than the local scale. The study of the Murray-Darling Basin is at a regional scale.

National scale focuses study on a nation. For example, the Australian government's response to a **global phenomena**.

International scale considers two or more nations. The combined **efforts** of African nations would be an example.

Global scale considers a significant proportion of the Earth. For example, the **distribution** of feature film production.

Distance

The space between different locations on Earth. The absolute or linear distance is measured in units such as metres and kilometres. The relative distance is the length of time it takes to travel from one location to another, cost involved and the convenience of the journey.

<i>Distribution</i>	Arrangement of things at or near the Earth's surface viewed at a range of scales.
<i>Region</i>	Is a definable area of the Earth's surface which contains one or more common characteristics that distinguish it from other areas. Regions are different for different groups of people. For example, Oakleigh South (local), Gippsland (regional), Australia (national), Sub Saharan Africa (international).
<i>Spatial change over time</i>	Refers to the degree to which an area has changed its geographic characteristics , features or patterns of use over a period of time. Change occurs at varying rates at different times and may be considered at different scales. For example, the redevelopment of the Melbourne docklands since the 1990s would look at distribution, spatial association between things, movement and spatial interaction.
<i>Movement</i>	Involves the change in location of one or more things across the Earth's surface. Movement includes direction, method, rate, nature and volume.
<i>Spatial association</i>	Is the degree to which things are similarly arranged over space. Spatial association compares distribution patterns. A strong spatial association occurs where two distributions are similar. Weak association describes little similarity. No association occurs when two distributions are dissimilar.
<i>Spatial interaction</i>	Describes the strengths of the relationships between phenomena and places in the environment, and the degree to which they influence or interact with each other over space. Over time, the impact of people on the environment changes and the environment in turn changes people.

Sustainability

Sustainability is a concept that suggests that development can proceed as long as the rate of use of natural **resources** does not exceed the rate at which the **resources** can be replaced nor does it affect the quality of other aspects of the **natural** and **human environment** and so compromise the needs of future generations.

Range of scales

See the scales listed under **spatial concepts**.


KEY COMPETENCIES AND EMPLOYABILITY SKILLS

Students undertaking the following types of assessment, in addition to demonstrating their understanding and mastery of the content of the study, typically demonstrate the following key competencies and employability skills.

Assessment task	Key competencies and employability skills
Data analysis	Problem-solving
A case study	Planning and organisation, (written) communication
Multimedia presentation	Use of information and communications technology, self management, planning and organisation, (written) communication, initiative and enterprise (teamwork)
Structured essay	Planning and organisation, (written) communication
Report	Problem solving, planning and organisation, (written) communication, self management
Structured questions	Problem solving, planning and organisation
Short-answer questions	Problem solving
Test	Problem solving, planning and organisation, (written) communication, self management
Fieldwork report	Problem solving, planning and organisation, (written) communication, self management

In completing work for this study, students may also demonstrate other key competencies and employability skills, such as working with others and in teams, and using mathematical ideas and techniques.

LEARNING ACTIVITIES

Examples of learning activities for each unit are provided in the following sections. Examples highlighted by a shaded box are explained in detail in accompanying boxes. The examples that make use of information and communications technology are identified by this icon .

Unit 1: Natural environments

AREA OF STUDY 1: Characteristics of natural environments

Outcome 1

Describe the geographic characteristics of at least two natural environments and explain how they are developed by natural processes, including extreme natural events.

Examples of learning activities

define and describe through research using geographic texts the Earth's four natural systems (lithosphere, hydrosphere, atmosphere, biosphere) and the ways in which they are dynamic and interactive; prepare a written report

introduce the systems model as a method for investigating natural environments, determining what is meant by inputs, outputs, processes and components, and describing the range of components that can comprise a natural system

identify types and location of natural environments that exist on a global scale, for example deserts, rivers, volcanoes, glaciers; contrast similar natural environments at different scales, for example two deserts such as the Atacama and Kalahari

identify and classify the components that make up a specified natural environment, for example glacial environments, from a range of different media



describe the geographic characteristics of a volcanic environment from photos, maps, slides or by using a Geographic Information System (GIS), as appropriate, and use presentation software to describe the features of a specific natural landscape such as Mt St Helens

discuss how geographic characteristics of natural environments can vary in different places and at different times with reference to a natural landscape; present an annotated visual display that reflects the differences

compare the similarities and differences existing between a specified natural environment at different scales and in different places through an annotated map

introduce the range of processes that may operate in any natural environment, such as erosion, weathering, photosynthesis, infiltration; examine how the processes contribute to the distinct appearance of a chosen natural environment; design a flow chart to explain the formation of natural landforms in natural environments

investigate how processes contributing to the formation of all natural environments can change over time

discuss ways in which natural systems can interact over time



identify how interactions in a natural system can lead to change in the appearance of natural environments; research, using the library and the Internet, an extreme natural event that can lead to natural landscape change, for example a cyclone, Earthquake or bushfire



conduct fieldwork to collect a variety of data on a natural environment such as a forest, creek, coast, mountain in order to describe the geographic characteristics and the natural processes that created the environment; present collected fieldwork data as an oral presentation or using a multimedia technique

Detailed example**VOLCANIC ENVIRONMENTS****Background/Introductory exercises**

1. Introduce volcanic environments as a natural system emphasising the interaction existing between lithosphere, hydrosphere, atmosphere and biosphere.
2. Describe and map the global distribution of active volcanoes and correlate with the distribution of crustal plate boundaries. Note exceptions to the pattern such as Hawaii. This task can be completed as an overlay map.
3. Look at the type of landforms commonly associated with volcanic landscapes, such as cones, craters, fissures, maars, lava flows, tumuli, caves and describe the events and/or processes that have led to their formation. This can be attempted as a small group activity with students collecting information on a specific volcanic landform and reporting back to the rest of the group.
4. Explain using diagrams or photos why certain types of eruptions such as pyroclastic flows can be related to the type of plate boundary where they are located, for example violent eruptions on destructive plate margins as compared to the relatively gentle ones on constructive margins.

Multimedia presentation

5. Using specific websites, monitor the changes to a natural landscape, for example Mt St Helens, and present research on change to a natural landscape using presentation software.

Some starting points for websites include:

www.learner.org/exhibits/volcanoes/

www.agso.gov.au/urban/factsheets/volcanoes.jsp

www.fs.fed.us/gpnf/volcanocams/msh/

vulcan.wr.usgs.gov/Volcanoes/MSH/framework.html

Fieldwork activities

6. Conduct fieldwork at a site or sites where volcanoes have had a major role in the formation of a particular landscape. In western Victoria there are many locations where fieldwork could be conducted. For example, Tower Hill is an example of a nested maar, Mt Eccles is an example of a fissure eruption, Mt Napier is a scoria cone and the lava flow from this volcano created the Byaduk caves.

Prepare a written report on the geographic characteristics and natural processes and factors that create the volcanic environment.

AREA OF STUDY 2: Changes in natural environments

Outcome 2

Analyse and explain the changes in natural environments due to natural processes and human activity.

Examples of learning activities

discuss concepts such as natural processes, human activities (social and economic activity) nature of change, rate of change, scale of change, spatial change over time



use a video or other media to identify the types of natural processes and human activities which can cause change over time to the geographic characteristics of different locations

identify locations of at least two natural environments with common geographic characteristics and investigate whether the factors causing change are similar in nature, rate and scale

test the hypothesis that 'the changes and factors will vary in type, rate and scale for places of similar geographic characteristics in different locations' through contrasting two natural environments; for example, the Amazon rainforest, Brazil and the Daintree Rainforest in Far North Queensland

describe the natural processes causing change to natural environments such as weathering, erosion, transportation and deposition; create a series of diagrams or sketches that show the impact of the factors at a variety of stages in the development of landforms, through data collected during fieldwork; for example, the landforms created on a coastline where erosional processes dominate

describe the human processes causing change to natural environments such as deforestation, tourism, pollution and the designation of national parks; develop a role-play to show the interaction of the human activity with the natural environment

construct a concept map to show how different factors cause change to a specific environment; from the concept map, identify the interactions between the natural processes and human activities



research, using the Internet, the management policies of natural environments at two different scales; create a table to compare the significant factors evident in the major policies

debate the importance of the management of the environment as a factor influencing change to natural environments; for example, does the conservation listing of an important site bring change to the natural processes occurring and human activities undertaken in that natural environment

present a written report for a specific environment that shows the dynamic and interactive nature of the natural processes and human activities that may alter the environment



investigate using fieldwork, and Geographic Information Systems (GIS) as appropriate, an environment and show how it is changed by natural processes and by human activity at a local scale

Detailed example**RIVER ENVIRONMENTS**

Select one stream that has a variety of natural features and varying land use along its course.

Establish the GIS map

Access the Land Victoria website: <http://services.land.vic.gov.au/landchannel/content/productCatalogue> which provides data sets for educational purposes. Identify the format, for example ESRI shape files, MapInfo.tab files and the recommended projection (GDA 94 or AGD 66). Cadastral boundaries, transport, elevation and water courses are available on this site. The hydro data is available at a scale of 1:25,000 from <http://services.land.vic.gov.au/landchannel/content/vicmapdata?productID=4>.

Specify your locality and place an order. Data is provided in a zipped format and a program such as WinZip will be required to unzip the data. An email address is essential although large files may be difficult to receive via email at school. It is recommended that you request the data on a CD.

Using the GIS

Display the map using the GIS software. Enter the location of the sites to be sampled and create the database fields (water quality, channel characteristics, vegetation and land use) ready for data entry following the sampling program.

Aim of field study

To investigate the natural and human changes to river systems and to represent the findings using a Geographic Information System.

Data collection

1. Observe each site visited and discuss the original geographic characteristics.
2. Describe the present characteristics of each site.
3. Design a sampling program that assigns values to the quality of the environment at each site. Indicators to assess the change are:

- water quality (observation or pH, conductivity, turbidity etc.)

- stream characteristics and channel processes (erosion, deposition, pools and riffles, meanders, billabongs, waterfalls)
- bank, verge, instream vegetation, indigenous or exotic vegetation
- land use in vicinity.

Assign a value for each indicator. High values indicate sites that are largely natural and lower values are assigned to sites that have significant human alteration.

4. Following discussion at each site, attempt to quantify the time scale for the change from the original to the present conditions.

Data presentation

Use the GIS to store, retrieve and present the results for each indicator as proportional symbols at each site. Overlay these maps to gain a picture of change along the river. The results may also be represented using the GIS graphing function or Excel.

Analysis of results

With the aid of observations, data collected during the field study and knowledge of fluvial processes, analyse the data collected to respond to one of the statements below:

- The river is more natural in its upper course.
- Rivers are changed by their passage through an urban environment.
- Attempts are being made to make the river more natural as it moves downstream.
- Human impact on a river system can be both negative and positive.

Present the report

Present the findings of the study in a variety of formats; for example, either as a research report with integrated GIS maps; as an oral presentation for a TV news item reporting on the water quality and the natural environment along the chosen river; as a written response in the form of a letter to a newspaper describing the impact of human settlement and change along the river; or as a written response entitled 'How does human settlement impact on river systems?'.

Unit 2: Human environments

AREA OF STUDY 1: Characteristics of human environments

Outcome 1

Describe and explain the geographic characteristics of different types of rural and urban environments.

Examples of learning activities

discuss concepts such as region, central place, hinterland, natural and human categories, defining criteria, distribution in order to clarify definitions of rural and urban environments



develop a class definition of rural and urban environments through research at the library and on the Internet



use the Internet to investigate the criteria for defining rural and urban regions of a selected continent/sub-continent

describe the distribution of places created by human activity using a map of a region within Victoria and indicate possible reasons for this pattern

use a range of defined regions within Victoria, such as Education Department regions, telephone regions, Federal and State electorates, Local Government Areas (LGAs) to explore the relationship between population density and purpose of the region

classify a selection of landscape photographs into groupings created by both natural and human activities, identifying the geographic characteristics of each selected human environment

describe the distribution of regions created mainly by human activities (forestry, farming, mining, fishing, agriculture, irrigation) on a map of a selected continent, and define the distinguishing criteria for each region and the boundary points

develop an annotated visual display of the processes and factors associated with different human activities that contribute to the distinctive geographic characteristic of a region by comparing and contrasting two regions; for example, wine growing in the United States or France compared to the Yarra or Barossa Valley, living conditions in New York, Rome, Hong Kong compared to Ballarat, Mildura or Melbourne (two selected suburbs within Melbourne)

conduct fieldwork to collect data that compares and contrasts two selected suburbs of Melbourne; investigate the processes and factors associated with different human activities that contribute to the distinctive geographic characteristic of a region

use the spatial concept of change over time to show how the nature and types of human activities produce spatial variation in rural environments, for example investigate one of the following:

- the impact of railways in assisting the move from subsistence (family provision) to local commercial farming (local markets) to competitive advantage farming and consequent change in farm size
- the impact of road transport and irrigation on the relocation of dairy farming and the reduction and change in the nature of processing plants
- the impact of road transport on the change in size and location of sawmills in forestry areas



use the Internet to investigate the planning scheme of an LGA and create overlays to identify particular characteristics, for example, settlements, historical features, environmental features; in groups discuss whether the LGA is a region or part of a region

conduct fieldwork, using a range of geographic techniques, to define a region and regional boundaries; for example, Princes highway and the railway between Hallam and Drouin



use data from the Federal election (the successful party for each seat) (see www.aec.gov.au) to create a choropleth map of both urban and rural areas of Victoria; use the dominant economic activity of each seat to establish if there is a spatial association between economic activity and voting patterns, that is, regions of political alliance

Detailed example

GOULBURN VALLEY – RURAL ENVIRONMENT

Access the website for a selected non-urban LGA (for example, Shepparton) and use the planning scheme links to download data and maps. Do this for adjacent LGAs.

(Victorian LGAs can be located at www.doi.vic.gov.au/doi/internet/localgov.nsf/headingspagesdisplay/victorian+local+governments Shepparton can be located at www.shepparton.vic.gov.au/home)

Use a copy of the LGA profile and the planning scheme to identify rural land uses through the criteria of permissible and non-permissible land uses.

As a group activity, create a composite map of the Goulburn Valley, identifying settlements, transport links and land uses from a variety of map references.

Define the boundaries of the Goulburn Valley by selecting appropriate physical features – human (road, railway) or natural (rivers, topography, catchment, boundaries) and justify the selection of criteria.

Research and explain the changes over time in land uses in the Goulburn Valley and identify factors employed to accentuate comparative advantage for this region.

Given the influence of global warming on present climatic patterns and the environmental issues within the Goulburn Valley, develop a matrix with reference to social, economic, historical, environmental and political factors to explain and justify the likely future of the region.

Present your report using presentation software, a written response as a documentary script or a newspaper report.

AREA OF STUDY 2: Changes in human environments

Outcome 2

Analyse and explain changes due to human activities in rural and urban environments.

Examples of learning activities



investigate the definition of sustainability by undertaking research using print and electronic resources; define sustainability in terms of economics, environment, social and political aspects; prepare a written report that defines sustainability



use a video or other media to identify the types of changes over time to the geographic characteristics of rural and urban environments; examples from other countries may include the Mekong River Delta, Vietnam and the city of Curitiba, Brazil

identify and map locations with common geographic characteristics and establish whether factors contributing to change are similar; for example, two suburbs of Melbourne experiencing change such as Richmond and Docklands, or, Caroline Springs and Yarraville; prepare an annotated visual display comparing the suburbs

produce maps that show the distribution of the selected rural and urban environments; for example, compare maps showing the distribution of Victoria's rural population over two time periods; present a written analysis of the distribution



undertake research using the Internet and other resources to identify the human processes and activities that have altered a specific urban environment; analyse data to determine the reasons for change in the environment

prepare a table or matrix to summarise the human activities and natural processes that lead to changes in human environments; use this table to consider the importance of the human activities and natural processes in the changes to rural and urban environments



access websites and CD-ROMs to identify and evaluate how change is managed by individuals, groups and organisations; for example, in a rural environment how a farmer responds to management change, a group like Landcare, and organisations such as the Farmers' Federation

debate or role-play management of change, for example, how will the planning document *Melbourne 2030* influence the city's size in a rural or urban environment

discuss the sustainability of management techniques employed by individuals, groups or organisations; develop a futures wheel to show how the current ideas might bring change over time

evaluate the sustainability of changing rural and urban environments, for example forestry regions

create a concept map to summarise what factors and human activities have contributed to changes to rural and urban environments



conduct fieldwork at a local site, either rural or urban, using a variety of geographic techniques including interviews, surveys, observation, taking photos, annotating maps, and land use surveys

record data collected in the field that demonstrates how the chosen human environment has undergone change



use a spreadsheet to present data collected in the field in the form of graphs, tables as well as using fieldwork data, with Geographic Information Systems (GIS) as appropriate, to map characteristics of the chosen local site

Detailed example**DOCKLANDS – URBAN ENVIRONMENT**

Access the Docklands website www.docklands.com
This site is useful for gaining an overview of the history and development of the Docklands in Melbourne over time.

Students begin by preparing a map that will be annotated with additional information throughout the activity. Provide a base map (A3) with significant blank space around it for annotations.

- On the map students locate and mark the perimeter of the Docklands precinct.
- Students create a timeline highlighting the changes in the development and use of the Docklands precinct over time. Alongside each period in its history, students identify the human processes and activities that have led to the changes in its use and development over time and add this to their timeline.
- This timeline is extended into the future outlining what stages of change will be implemented over the next 15 years, including any additional human processes and activities that will facilitate this.
- Revisiting the map, students label the heritage sites that remain preserved for future generations on the base map and annotate with key information about their historical significance.

- Students identify and annotate the multitude of transport options available within and to/from Docklands as well as:
 - i. how these options have changed with recent developments
 - ii. how these facilitate spatial interaction between this precinct and other areas of Melbourne, Australia and the world.
- Students can further annotate their map with additional characteristics that describe the geography of this urban environment including:
 - i. Precincts within Docklands and their individual characteristics
 - ii. Urban art
 - iii. Open spaces etc.

The Ecologically Sustainable Development (ESD) Mission is part of an overall plan to manage the changes occurring at Docklands and an attempt to ensure sustainability of this urban environment into the future. Students complete a detailed analysis of the Ecologically Sustainable Development (ESD) Mission, together with a visit to this Melbourne precinct, to assess the ESD performance to date.

Unit 3: Regional resources


AREA OF STUDY 1: Use and management of an Australian water resource

Outcome 1


Analyse the use and management of water within the Murray-Darling Basin region and evaluate its future sustainability.


Examples of learning activities


classify water as a resource and define a region, catchment, and sustainability; define the resource of water within the Murray-Darling Basin region by mapping the flow of water from the Murray River and Darling River

 investigate the importance of water as a resource in Australia through conducting research into the use and management of water, using the Internet and the library

compare the water resources of Australia and the other six continents and compare the water resources in the main catchments within Australia; create an annotated visual display through group work

 compare one other catchment with the Murray-Darling Basin; use the website www.deh.gov.au/water/basins/index.html to create a table comparing the geographic characteristics of the Lake Eyre and Murray-Darling Basins; consider whether the Murray-Darling Basin is the most important catchment in Australia

 in groups, describe the geographic characteristics of the Murray-Darling Basin region by mapping the location of the Murray-Darling Basin within Australia and its main geographic features such as topography, climatic zones, including temperature and rainfall, distribution of agriculture, location of population and main urban centres, industry, main water resources such as major rivers and location of sub-catchments

 describe the distribution of water resources in the Murray-Darling Basin region through research on the Internet using sites such as the Murray-Darling Basin Commission (www.mdbc.gov.au) as a starting point


develop maps and graphs that describe the distribution of water resources in the Murray-Darling Basin region

comment on the distribution of urban centres in the Murray-Darling Basin and compare this with other characteristics such as location and distribution of agriculture

investigate the history of Murray-Darling Basin and use aerial photographs to analyse spatial change over time for a local region in the Murray-Darling Basin by considering seasonal changes

analyse the factors which affect the patterns of water usage and management in the Murray-Darling Basin region through data analysis of the distribution of water resources in the Murray-Darling Basin region

develop a class role-play that describes conflict over the use of water in the Murray-Darling Basin region

 investigate the issue of water-flows to the rivers of the Murray-Darling Basin and the different perspectives of various user groups, such as farmers in different parts of the catchment and in different states; produce a PowerPoint presentation outlining one view on the issue

outline the impact of different user groups, such as irrigation farmers, on the environment of the Murray-Darling Basin; investigate one of these, such as salinity, in detail



through research using library texts and the Internet, describe current water management policies of the Murray-Darling Basin region; describe strategies various groups have taken to implement these policies



research using the Internet the definition of sustainability and how the term may be applied to water use and management in the Murray-Darling Basin; present findings as an oral report to the class

as a class, debate the effectiveness of water management policies and strategies in terms of the Murray-Darling Basin's current use and its future sustainability

write a structured essay that describes possible future patterns including sustainability of water use in the Murray-Darling Basin region; a variety of case studies should be utilised to illustrate the response, such as Adelaide and the Snowy Mountains Scheme

write an extended response essay that evaluates the effectiveness of water management policies and strategies in terms of its current use and its future sustainability

Detailed example

MURRAY-DARLING BASIN REGION

Using the Australian Government Department of Agriculture, Fisheries and Forestry website at www.affa.gov.au/, click on the Natural Resources button. Click on the Water link and then onto the Murray-Darling Basin policies and programs link. Explain what the following policies are:

- The Murray-Darling Basin Initiative
- The Living Murray Initiative
- The Integrated Catchment Policy statement
- The Murray-Darling Basin Fish Rehab Program

Evaluate these policies and strategies. Define the criteria and identify their role in making judgments and decisions on the relative strengths and weaknesses, or the overall effects, of each aspect being discussed.

Visit a river catchment authority and write a report on the work that they do in managing an aspect or region of the Murray-Darling Basin. What are the impacts of using water for agriculture and industry? Is the management achieved in a sustainable manner?

Investigate the policy of Total Catchment Management. Evaluate the case studies utilised in class to determine the sustainability of the program.

Investigate as a case study a catchment region of the Murray-Darling Basin such as the Murrumbidgee River catchment or your local catchment. How are salinity and water erosion best managed?

Investigate and evaluate a number of policies and programs currently in use at a local or regional scale in the Murray-Darling Basin.

AREA OF STUDY 2: Use and management of local resources

Outcome 2

Describe characteristics of a local resource and justify a policy for its future use and management using data collected in the field.

Examples of learning activities

This outcome requires the completion of a fieldwork report

Prior to the field investigation

discuss the concepts of the geographic characteristics of a resource, for example location, size, and the distribution of natural features and the provision of human facilities

brainstorm and identify the variety of resources that are located in a specific region; this could be done from a map of the region or from personal experience, depending upon the region selected

on a map of the selected region, plot the distribution of a variety of resources and describe this distribution map; classify these resources and identify those that are similar in their characteristics

select one type of resource for further study in the field; list ways in which this resource might be used

suggest the possible effects (both positive and negative) that could arise from people using this resource


categorise these effects according to how they might have an impact on people or the natural or built environment

discuss the concept and purpose of management and suggest various management techniques that could be employed to manage the resource; suggest why these techniques might be appropriate for this resource

identify the groups and organisations responsible for the management of this resource

discuss the various ways in which data could be collected in the field to identify the use and management of a resource, for example surveys, observation, interviews, field sketches, photographs, land transect, mapping, counting; from this list, select the most effective and appropriate ways in which data could be collected for this particular resource

identify the spatial concepts that are most appropriate in this field investigation

 research background information on the resource, including existing management policies and practices and special uses or events that may occur before or after the fieldwork investigation period; this information could be obtained from the websites of the relevant councils or bodies controlling this resource

During the field investigation

visit the selected resource and at least one other similar resource within this region

collect the data identified as relevant during class, using a variety of methods

identify and quantify the uses of the resources, and map the distribution of these uses within and around the resource

identify and map various types, direction and volume of movement within the resource

identify the effects of use on the resource and map the distribution of these effects; classify the nature of these effects according to their severity and duration

identify and describe the spatial association between the use of the resource and the effects of these uses

identify the management strategies used to manage the resource

identify areas of the resource where management could be improved in order to ensure sustainable use into the future

After the field investigation

collate the data collected in the field and present this data using appropriate geographic techniques

describe the patterns and effects of use and management within and around the resource

identify areas of the resource where the effects of use may impact adversely so that future sustainable use may be jeopardised

using the data that you have collected, present and justify a plan for the future management of this resource, either all or part of it; emphasise the way in which this resource could continue to be used in a sustainable manner in the future; a timeframe for your policy implementation could be included

examine similarities and differences between your selected resource and similar resources within the region; examine ways in which they may be linked and may complement one another

undertake a field study focusing on parks as a resource; for example, parks in the Eltham-Templestowe region

Detailed example**ELTHAM-TEMPLESTOWE REGION**

When choosing the resource that the class is going to study, you need to select a region and then identify the variety of different resources that may exist within that region. Examples could include: parks, libraries, beaches, bike paths, golf courses, sporting grounds, medical centres, schools, gymnasiums/health and fitness centres. You also need to examine how the resource that you have chosen relates to similar resources in that region.

This example examines three parks that are located in the Eltham/Templestowe region which is north-east of Melbourne. While these parks have features in common, they differ in their scale, their patterns of use and the provision of facilities. These parks – Alistair Knox Park, Eltham Lower Park and Westerfolds Park – are important recreation and environmental resources, not just for the people of this region, but for people from a much wider area. They are relatively close to one another, so access during a field investigation would be relatively easy.

Alistair Knox Park (Melway Reference: Map 21, J6)

Located on the edge of Eltham township along the banks of the Diamond Creek, this park is 4.8 hectares in size. It is the site of a former tip and has been replanted with indigenous species. It contains among other features, a small lake, playground and picnic area and is part of the Heidelberg School of Artists' Trail. The park is also adjacent to the Eltham Library and the Eltham Football Ground and is managed by the Nillumbik Shire Council.

Eltham Lower Park (Melway Reference: Map 21, H10)

Located at the junction of the Diamond Creek and Yarra River, Eltham Lower Park provides the opportunity for horse-riding activities, sporting events, picnics and riding the miniature railway. The park, which has been in existence since 1877, covers 23.5 hectares and is easily accessed from Main Road. It is very close to the Monsalvat Artists' Colony and is also managed by the Nillumbik Shire Council.

Westerfolds Park (Melway Reference: Map 21, H12)

Westerfolds Park is part of the Yarra Valley Parklands, managed by Parks Victoria, and covers 123 hectares. It is located on the banks of the Yarra River. It provides for a wide variety of activities including nature trails, a café and Aboriginal gallery and canoeing on the Yarra. One of its main attractions is the bicycle path that continues to Melbourne 40 kilometres away.

Further information about these parks can be found at:

Nillumbik Shire Council Home Page
www.nillumbik.vic.gov.au/

Parks Victoria: Westerfolds Park page
www.parkweb.vic.gov.au/

Note: One of these parks should be chosen as the main resource for study and then compared to one or both of the other parks in the region. A detailed study is best undertaken at a smaller site.

Data collected during the field investigation could be summarised and presented in a table. This would allow a comparison of the parks to be made.

Possible headings for the table could include:

- Location, including map reference
- Geographic characteristics
- Facilities provided (comparison could be made between those that are common and those that are unique to each park)
- Body responsible for managing each park
- Management techniques used in each park (comparison could be made between those that are common and those that are unique to each park)
- Uses of each park
- Effects of use within and around each park
- Periods of greatest use
- Characteristics of the users (age/sex)
- Special events held within each park.

Unit 4: Global perspectives

AREA OF STUDY 1: Global phenomena

Outcome 1


Evaluate the relative importance of factors that affect changes in human population and one other selected global phenomenon.

Examples of learning activities

discuss as a class concepts such as global phenomena, distribution, spatial association, natural processes, human activities


classify, using a table, selected phenomena as being distinctly global and justify why certain examples are global rather than regional phenomena


discuss as a class concepts linked to human population as a global phenomena, such as distribution, structure, composition, urbanisation, fertility/mortality rates

 access CD-ROMs, websites, GIS programs or other information sources of spatial data to identify population characteristics and those of the other selected global phenomena; classify the information in terms of natural processes and human activities that generate the global phenomena

map data to show the location and distribution of global phenomena, including human population


compare data showing the location and distribution of the global phenomenon of population growth using the concept of spatial change over time

 use a spreadsheet to prepare a summary table of relevant statistics to population growth at a variety of scales

 prepare graphs, either manually or by computer, to show the distribution or change over time of various human populations and one other global phenomenon

describe the patterns (from maps, tables, graphs prepared) observed in terms of location, distribution, scale and spatial change over time for the global phenomenon

brainstorm reasons for particular human population characteristics and the characteristics of the other selected global phenomenon

 use video and/or other media to gather information on human population, and one other global phenomenon


describe the natural processes which affect human population and one other global phenomenon, for example weather extremes and Earthquakes

research case studies to explain the geographic characteristics of global phenomena at a variety of scales, and the positive and negative impacts of the global phenomena on people and environments

analyse 'whether the impact of the selected global phenomenon are greater on people or places', through a class debate in which students on either side have researched their response

present a table or matrix based on criteria to analyse and rank the relative importance of factors which affect human populations and one other global phenomenon; apply the criteria to justify this ranking

evaluate the relative importance of factors responsible for changes in human populations and the other selected global phenomenon through class discussion and a written report

 predict and map future patterns of the global phenomenon, clearly justifying opinions using a multimedia presentation

Detailed example

GLOBAL POPULATION GROWTH RATES

1. Define the following terms: fertility, mortality, birth and death rates, natural increase, population structure, infant mortality, dependency ratio, replacement level.
2. Use a map showing the annual rate of population increase for countries around the world to produce a choropleth map distinguishing high, medium and low rates of population change.
3. Describe the regional patterns of the annual rate of population increase. Suggest reasons to account for the differences observed. Test these hypotheses using other data such as atlas maps or statistics to determine any spatial associations.
4. Refer to a map showing the global distribution of the fertility rates. Determine if there is a spatial association between the global population growth rates and the fertility rates.
5. Compare current patterns of population growth with past data. How have patterns of global population growth changed over time?
6. Use population data for selected countries to graph a population pyramid for countries with different rates of population growth (or alternatively, use one already provided in an atlas or other source). To what extent does a population pyramid reflect past events in a particular country? How does it help project future population trends in individual countries?
7. Use case studies from both developed and developing countries to identify factors responsible – social, historic, economic, political – for variation in population growth rates. Evaluate the relative importance of these factors; examine the positive and negative impacts of their population growth levels.
8. Using the information gathered from the case studies, make predictions about the future patterns of population growth.

AREA OF STUDY 2: Global responses

Outcome 2

Compare and evaluate the effectiveness of responses and policies to manage a global phenomenon from a global perspective.

Examples of learning activities

discuss concepts such as a global perspective, policy strategy, sustainability as a class

research a global phenomenon to investigate the positive and negative impacts of the phenomenon on places at a local, regional, national and global scale, for example, desertification

prepare a table to classify the responses to global phenomenon (for example, social, economic, political) in the short and long term

create a matrix to compare the ways in which people and organisations (government and non-government) respond to the impacts of a global phenomenon; for example, the effects of tourism on Cape Byron



describe the management of the effects of a global phenomenon at a local, regional, national and global scale; for example, use the Internet to research and evaluate documented policies that have evolved to meet the challenges on the global phenomenon of tourism, such as Sudden Acute Respiratory Syndrome (SARS)

use a set of criteria, which includes the promotion of sustainability, to prepare a matrix which ranks the effectiveness of different responses to manage the effects of a global phenomenon

evaluate the effectiveness of documented policies and strategies at a local, regional, national and global scale to manage a global phenomenon

identify significant factors involved in the evolution and future development of a global phenomenon

Detailed example**A LOCAL RESPONSE TO TOURISM**

1. Using the Internet conduct research on Cape Byron. Create a table to identify the ways in which both the Cape Byron trust (www.nationalparks.nsw.gov.au/PDFs/pom_final_capebyron.pdf) and the Tourism and Transport forum of Australia (www.ttf.org.au/pdf/report/nationalparks/NP_Exec_Summary.pdf) has responded to the impact of tourism. Classify these responses as either long term or short term.
2. Create a matrix to classify these responses to tourism at Cape Byron as social, historical, economic, environmental or political.
3. What factors could increase tourism at Cape Byron? Rank these factors in order from most significant to least significant and justify your method of ranking.
4. Research the following websites, Your Guide to Byron Bay www.byron-bay.com and Looking After Byron: tourism caring for our environment www.lookingafterbyron.org.au, and identify people's responses to tourism at Cape Byron in both the short and long term.
5. Refer to the Cape Byron trust website (www.nationalparks.nsw.gov.au/PDFs/pom_final_capebyron.pdf) to make a list that identifies the positive and negative effects of the spatial interaction between tourism and natural processes within the region of Byron Bay.
6. Create a second list that identifies the positive and negative effects of the spatial interaction between tourism and human activities within the region of Byron Bay.
7. Using a set of criteria which includes the promotion of sustainability, prepare a matrix which ranks the effectiveness of the responses to manage the effects of tourism at Cape Byron.
8. Predict a management strategy for Cape Byron that responds to the future impact of tourism in this region. This strategy must promote the cultural and environmental sustainability of the region and consider aspects such as planning, resource management and visitor management.

SCHOOL-ASSESSED COURSEWORK

In Units 3 and 4 teachers must select appropriate tasks from the assessment table provided for each unit. Advice on the assessment tasks and performance descriptors to assist teachers in designing and marking assessment tasks will be published by the Victorian Curriculum and Assessment Authority in an assessment handbook. The following is an example of a teacher's assessment program using a selection of the tasks from the Units 3 and 4 assessment tables.

Outcomes	Marks allocated	Assessment tasks
Unit 3		
Outcome 1 Analyse the use and management of water within the Murray-Darling Basin region and evaluate its future sustainability.	50	A data analysis of geographical data including maps, aerial photographs, case studies and management policies related to the use and management of water in the Murray-Darling Basin to evaluate its future sustainability.
Outcome 2 Describe characteristics of a local resource and justify a policy for its future use and management using data collected in the field.	50	A written fieldwork report (including graphic representations) to describe the characteristics and justify a policy for the future use and management of a shopping precinct.
Total marks for Unit 3	100	
Unit 4		
Outcome 1 Evaluate the relative importance of factors that affect changes in human population and one other selected global phenomenon.	50	A PowerPoint presentation including maps, images and case study notes to evaluate the relative importance of factors that contribute to changes in the growth and decline of fertility and mortality rates of human population.
Outcome 2 Compare and evaluate the effectiveness of responses and policies to manage a global phenomenon from a global perspective.	50	A structured essay, based on student research notes, which compares and evaluates the effectiveness of responses and policies to manage the global phenomenon of desertification at a range of scales.
Total marks for Unit 4	100	

SUITABLE RESOURCES

Some of the print resources listed in this section may be out of print. They have been included because they may still be available from libraries, bookshops and private collections.

At the time of publication the URLs (website addresses) cited were checked for accuracy and appropriateness of content. However, due to the transient nature of material placed on the web, their continuing accuracy cannot be verified. Teachers are strongly advised to prepare their own indexes of sites that are suitable and applicable to the courses they teach, and to check these addresses prior to allowing student access.

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www.abc.net.au

WEBSITES

Geography and geographical education organisations

American Geographical Society
www.amergeog.org

Association of American Geographers
www.aag.org

Australian Geography Teachers' Association Ltd
www.agta.asn.au

Geographical Association (UK)
www.geography.org.uk

Geography Teachers' Association of Victoria
www.gtav.asn.au

The GTAV's Orbis Library also receives many current periodicals. For a list, consult the GTAV website.

Institute of Australian Geographers Inc.
www.iag.org.au/

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www.igu-net.org

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www.ncge.org

New Zealand Geographical Society
www.nzgs.co.nz

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Libraries

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www.nla.gov.au

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www.vicnet.net.au/government/localgovt

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Australian Government Website
www.Australia.gov.au

Victoria
www.vic.gov.au

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Australian Heritage Council
www.ahc.gov.au

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www.abs.gov.au

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www.bom.gov.au

CSIRO
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Geoscience Australia
www.ga.gov.au

Great Barrier Marine Park Authority
www.gbrmpa.gov.au

Landcare Victoria
www.land.vic.gov.au

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www.mdbc.gov.au

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www.landcare.gov.au

International

European Union
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