



Government of **Western Australia**  
School Curriculum and Standards Authority

# GEOGRAPHY

ATAR COURSE

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Year 11 syllabus

## **IMPORTANT INFORMATION**

This syllabus is effective from 1 January 2015.

Users of this syllabus are responsible for checking its currency.

Syllabuses are formally reviewed by the School Curriculum and Standards Authority on a cyclical basis, typically every five years.

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## Rationale

The study of geography draws on students' curiosity about the diversity of the world's places and their peoples, cultures and environments. It enables them to appreciate the complexity of our world and the diversity of its environments, economies and cultures and use this knowledge to promote a more sustainable way of life and awareness of social and spatial inequalities.

In the senior secondary years, the Geography ATAR course provides a structured, disciplinary framework to investigate and analyse a range of challenges and associated opportunities facing Australia and the global community. These challenges include rapid change in biophysical environments, the sustainability of places, dealing with environmental risks, and the consequences of international integration.

Geography addresses questions about the interaction of natural and human environments within various natural and social systems. It examines the factors that impact upon decisions about sustainability, the conflicting values between individuals and groups over sustainability and the degree of commitment towards sustainable development.

Geography as a discipline values imagination, creativity and speculation as modes of thought. It provides a systematic, integrative way of exploring, analysing and applying the concepts of place, space, environment, interconnection, sustainability, scale and change. These principal geographical concepts are applied and explored in depth through unit topics to provide a deeper knowledge and understanding of the complex processes shaping our world. Taken together, the ability of students to apply conceptual knowledge in the context of an inquiry, and the application of skills, constitute 'thinking geographically' – a uniquely powerful way of viewing the world.

The course builds students' knowledge and understanding of the uniqueness of places and an appreciation that place matters in explanations of economic, social and environmental phenomena and processes. It also develops students' knowledge about the interconnections between places. Nothing exists in isolation. Consequently, the subject considers the significance of location, distance and proximity.

Through the study of geography, students develop the ability to investigate the arrangement of biophysical and human phenomena across space in order to understand the interconnections between people, places and environments. As a subject of the humanities and social sciences, geography studies spatial aspects of human culture using inquiry methods that are analytical, critical and speculative. In doing so, it values imagination and creativity. As a science, geography develops an appreciation of the role of the biophysical environment in human life, and an understanding of the effects human activities can have on environments. As a result, it develops students' ability to identify, evaluate and justify appropriate and sustainable approaches to the future by thinking holistically and spatially in seeking answers to questions. Students are encouraged to investigate geographical issues and phenomena from a range of perspectives, including those of Aboriginal and Torres Strait Islander Peoples.

In the Geography ATAR course, students investigate geographical issues and phenomena at a variety of scales and contexts. This may include: comparative studies at the same scale; studying the same issue or phenomenon at a range of scales; or seeking explanations at a different scale to the one being studied. The ability to perform multiscale and hierarchical analysis is developed further in this syllabus.

Students learn how to collect information from primary and secondary sources, such as field observation and data collection, mapping, monitoring, remote sensing, case studies and reports. Fieldwork, in all its various forms, is central to geographical inquiries as it enables students to develop their understanding of the world through direct experience.

Students develop a range of skills that help them to understand the physical world, interpret the past, scrutinise the present, and explore sustainable strategies for the future care of places. They are able to understand recent and future developments, such as urban planning, climate change, cultural diffusion, environments at risk, sustainable development practices, and the unequal distribution of resources throughout the world.

The Geography ATAR course promotes students' communication abilities by building their skills of spatial and visual representation and interpretation through the use of cartographic, diagrammatic, graphical, photographic and multimodal forms. In addition, students communicate their conclusions by written and oral means.

## Aims

The Geography ATAR course aims to develop students’:

- knowledge and understanding of the nature, causes and consequences of natural and ecological hazards, international integration in a range of spatial contexts, land cover transformations, and the challenges affecting the sustainability of places
- understanding and application of the concepts of place, space, environment, interconnection, sustainability, scale and change through inquiries into geographical phenomena and issues
- ability to critically use geographical inquiry methods and skills, and to think and communicate geographically
- ability to identify, evaluate and justify alternative responses to the geographical challenges facing humanity, and propose and justify actions, taking into account environmental, social and economic factors
- understandings, skills, knowledge and values to ensure they are well placed for tertiary study and/or employment.

## Organisation

This course is organised into a Year 11 syllabus and a Year 12 syllabus. The cognitive complexity of the syllabus content increases from Year 11 to Year 12.

### Structure of the syllabus

The Year 11 syllabus is divided into two units, each of one semester duration, which are typically delivered as a pair. The notional time for each unit is 55 class contact hours.

#### Unit 1 – Natural and ecological hazards

In this unit, students explore the management of hazards and the risk they pose to people and environments. Risk management is defined in terms of preparedness, mitigation and/or prevention.

#### Unit 2 – Global networks and interconnections

In this unit, students explore the economic and cultural transformations taking place in the world – the spatial outcomes of these processes and their social and geopolitical consequences – that will enable them to better understand the dynamic nature of the world in which they live.

Each unit includes:

- a unit description – a short description of the focus of the unit
- learning outcomes – a set of statements describing the learning expected as a result of studying the unit
- unit content – the content to be taught and learned.

The content in each unit is divided into an overview and one or more depth studies. The content descriptions associated with the overview are designed to be taught at a broad level and in a short timeframe. The content descriptions associated with the depth study are designed to be taught in a more focused and detailed way, and therefore to take more time to teach.

## Organisation of content

The Geography ATAR course has two interrelated strands: Geographical Knowledge and Understanding, and Geographical Inquiry and Skills. This strand organisation provides an opportunity to integrate content in flexible and meaningful ways.

### Geographical Knowledge and Understanding

Geographical knowledge refers to the facts, generalisations, principles, theories and models developed in the Geography ATAR course. This knowledge is dynamic and its interpretation can be contested. Opinions and conclusions must be supported by evidence and logical argument.

Geographical understanding is the ability to see the relationships between items of knowledge and construct explanatory frameworks to illustrate these relationships. It is also the ability to apply this knowledge to new situations or to solve new problems.



## Geographical Inquiry and Skills

This strand is about the skills required to conduct a geographical inquiry and the geographical skills needed to find and communicate information and data. It contains two sub-strands: Geographical Inquiry Skills and Geographical Skills.

Geographical Inquiry is a process undertaken by individual students or groups to investigate geographical questions, information, data, problems or issues to deepen their understanding. This process requires students to apply the following geographical inquiry skills:

- observing, questioning and planning
- collecting, recording, evaluating and representing
- interpreting, analysing and concluding
- communicating
- reflecting and responding

Inquiries may vary in scale and geographic context.

When using geographical information and data and communicating, students develop the following geographical skills:

- mapping skills (use of maps and atlases)
- remote sensing skills (use of remote sensing products, such as ground level photographs, aerial photographs, radar imagery and satellite imagery)
- geographical and statistical data skills (use of geographical and statistical data in formats such as tables, graphs, maps and diagrams)
- skills in the use of information and communication technology (ICT) and geographical information systems (GIS) in a geographical context
- fieldwork skills (use of fieldwork observations and measurements)

## Relationships between the strands

The two strands are interrelated and the content has been written in a way that enables integration of the strands in the development of a teaching and learning program. The Geographical Knowledge and Understanding strand provides the contexts through which particular inquiries and skills are to be developed. The same set of geographical skills has been included in each of the units to provide a common focus for the teaching and learning of content in the Geographical Knowledge and Understanding strand.

## Progression from the Year 7–10 curriculum

This syllabus continues to develop student understanding and skills developed from the Year 7–10 Geography curriculum. It uses the same strands of the Year 7–10 curriculum to further develop students' ability to explore, analyse and apply the concepts of place, space, environment, interconnection, sustainability, scale and change. It does, however, feature a wider range of geographical concepts and contexts and introduces students to a more diverse, and increasingly sophisticated, range of geographical tools and skills.

## Representation of the general capabilities

The general capabilities encompass the knowledge, skills, behaviours and dispositions that will assist students to live and work successfully in the twenty-first century. Teachers may find opportunities to incorporate the capabilities into the teaching and learning program for the Geography ATAR course. The general capabilities are not assessed unless they are identified within the specified unit content.

### Literacy

In the Geography ATAR course, students use literacy skills to explore, interpret and evaluate geographical phenomena and issues and communicate geographically. Students work with oral, print, visual and digital texts to gather, synthesise and analyse information from a range of sources, and present and justify ideas, conclusions and opinions within a broad range of geographical contexts. They understand how language is used and modified for specific purposes, and question attitudes and assumptions embedded in texts.

Geography students also develop visual literacy skills as they make meaning of information communicated through maps, graphs, cartoons and other images.

### Numeracy

In the Geography ATAR course, students use numeracy skills to identify and describe a wide range of patterns and relationships, including those that can be visually represented on a graph or map. Geography students also apply numeracy skills to interpret and manipulate data. These skills help students to realise and describe change as it occurs over time. Students demonstrate numeracy capability by making connections between apparently diverse facts and suggesting solutions to problems in a range of circumstances, for example, the relationship between weather patterns and the likelihood of natural hazards, such as, drought or landslides.

### Information and communication technology capability

In the Geography ATAR course, students use Information and communication technology (ICT) to develop geographical understanding and to support the application of geographical skills. They use digital tools, including spatial technologies, to support their inquiries into geographical phenomena and issues. They also use these tools to collect and analyse data, represent it in digital form, access and manipulate databases, and model conceptual constructs. In addition, students critically analyse the quality of digital information and sources of information. They also create multimodal and multifaceted reports and presentations to represent and communicate the results of geographical inquiry.

Students recognise the relative possibilities, limitations and consequences of using different forms of digital information and methods of distributing this information, and apply sophisticated understandings of social and ethical practices in the use of digital information and communications. In particular, they consider how geographical and demographic data may be used and the ethics involved.

## Critical and creative thinking

Critical and creative thinking processes and skills are used by students when examining diverse interactions between people, perspectives, interpretations, phenomena and environments. Through multifaceted problem posing and solving, they explore the interconnections, uncertainty and consequences of these relationships.

Thinking laterally, visualising possibilities, testing options using criteria, and making judgements are essential skills for conducting geographical investigations connected with the environment, space, sustainability, scale and change. When seeking answers to questions, students think holistically and spatially, using skills such as analysis, interpretation, extrapolation from trends, synthesis of relationships and exploration of anomalies evident in patterns.

Through developing dispositions such as intellectual openness, curiosity and showing initiative, students investigate biophysical and human phenomena. As independent and autonomous thinkers who seek explanations and value discovery, they turn creativity and innovation into action, apply new knowledge to identified gaps, and justify their actions.

## Personal and social capability

Personal and social capability involves students taking responsible personal, social and environmental action against, or in support of, decisions by organisations, governments or other bodies. Through the study of geography, students are provided with learning opportunities to assist them to develop, rehearse and refine their skills in listening to, respecting and acknowledging diverse perspectives and opinions. Students participate in collaborative investigative group work to make ethical, rational social decisions and solve problems that relate to their social and environmental contexts. Developing these personal and social capabilities positions them to advocate for opportunities and methods for change in a democratic society. Personal and social capability occurs when responsible social and environmental actions and participation are promoted, and this should be a logical outcome of many geographical investigations.

## Ethical understanding

Ethical understanding plays an important role in geographical inquiry. Students uncover and assess ethical considerations, such as the links between human rights and responsibilities and the ways diverse perspectives, values and cultures impact on geographical issues. Through geographical inquiry, students have the opportunity to analyse, qualify and test their own attitudes, values and beliefs and explore how people's knowledge, attitudes and values affect judgements, decisions and actions as they apply to their interaction with environments. They become aware of the need for social responsibility when confronted with alternative opinions and when seeking to resolve problems. Students apply ethical standards to guide their use of digital representations of phenomena and statistics associated with biophysical and environmental factors and relationships.

## Intercultural understanding

Students deepen their intercultural understanding as they examine geographical issues in a broad range of cultural contexts. This involves students in developing their understanding of the complexity and diversity of the world's cultures and evaluating alternative responses to the world's environments and challenges. It enables students to find interconnections and sustainable solutions in an internationally integrated world, and consider the implications of their responses from different cultural responses.

## **Representation of the cross-curriculum priorities**

The cross-curriculum priorities address contemporary issues which students face in a globalised world. Teachers may find opportunities to incorporate the priorities into the teaching and learning program for the Geography ATAR course. The cross-curriculum priorities are not assessed unless they are identified within the specified unit content.

### **Aboriginal and Torres Strait Islander histories and cultures**

In the Geography ATAR course, there is a range of opportunities to learn about Aboriginal and Torres Strait Islander histories and cultures. Students can, for example, investigate how Aboriginal and Torres Strait Islander Peoples may be unequally affected by natural and ecological hazards, are represented in the challenges faced by places and the process of international cultural integration. More broadly, students develop a range of capabilities that enable them to independently construct informed responses to the range of geographical issues involving Aboriginal and Torres Strait Islander Peoples.

### **Asia and Australia's engagement with Asia**

In the Geography ATAR course, students can investigate a wide range of contexts that draw on Asia and Australia's engagement with Asia. This priority can be addressed through: the study of natural and ecological hazards and how the risks associated with such occurrences can be managed to eliminate or minimise harm to people and the environment; and other transformations taking place as a result of economic and cultural integration.

### **Sustainability**

Students explicitly address sustainability in the Geography ATAR course through an investigation of the approaches to sustainability and through an evaluation of alternative responses to geographical issues and phenomena. In doing so, they use economic, social and environmental criteria to frame investigative questions and measure the capacity of something to be maintained indefinitely into the future.

# Unit 1 – Natural and ecological hazards

## Unit description

Natural and ecological hazards represent potential sources of harm to human life, health, income and property, and may affect elements of the biophysical, managed and constructed elements of environments.

This unit focuses on understanding how these hazards and their associated risks are perceived and managed at local, regional and global levels. Risk management, in this particular context, refers to prevention, mitigation and preparedness. Prevention is concerned with the long-term aspects of hazards, and focuses on avoiding the risks associated with their reoccurrence. Mitigation is about reducing or eliminating the impact if the hazard does happen. Preparedness refers to actions carried out prior to the advance notice of a hazard to create and maintain the capacity of communities to respond to, and recover from, natural disasters. Preparedness starts at the local community level, but may branch out to national and international levels through measures such as planning, community education, information management, communications and warning systems.

Building on their existing geographical knowledge and understandings, students explore natural hazards, including atmospheric, hydrological and geomorphic hazards, for example, storms, cyclones, tornadoes, frosts, droughts, bushfires, flooding, earthquakes, volcanoes and landslides. They will also explore ecological hazards, for example, environmental diseases/pandemics (toxin-based respiratory ailments, infectious diseases, animal-transmitted diseases and water-borne diseases) and plant and animal invasions.

Students develop an understanding about using and applying geographical inquiry tools, such as spatial technologies, and skills, to model, assess and forecast risk, and to investigate the risks associated with natural and ecological hazards. The potential for fieldwork depends on the hazard selected, such as a visit to the town of Meckering to study earthquakes, or the impact of a specific cyclone, flood or bushfire on a town or region.

## Learning outcomes

By the end of this unit, students:

- understand the nature and causes of natural and ecological hazards
- understand the nature of the risks to be managed, such as loss of property/life, effects on infrastructure, jobs, economy, and physical and mental health
- understand that places and environments are influenced by both natural and ecological hazards
- understand the complexity of human–environment interdependence in relation to natural and ecological hazards
- demonstrate a knowledge of the concept of risk management
- understand and apply key geographical concepts – including place, space, environment, interconnection, sustainability, scale and change – as part of a geographical inquiry
- apply geographical inquiry skills and a range of other geographical skills, including spatial technologies and fieldwork, to investigate natural and ecological hazards
- compare and evaluate Australian and international risk management policies, procedures and practices.

## Unit content

This unit includes the knowledge, understandings and skills described below.

### Geographical Knowledge and Understanding

#### Overview of natural and ecological hazards

- the nature of natural and ecological hazards with particular reference to:
  - the concept of hazard geography
  - classification of natural hazards (atmospheric, hydrological and geomorphic)
  - examples of natural hazards, including storms, cyclones, hurricanes, typhoons, tornadoes, frosts, droughts, bushfires, flooding, earthquakes, volcanoes and landslides
  - ecological hazards, including environmental diseases/pandemics (toxin-based respiratory ailments, infectious diseases, animal-transmitted diseases and water-borne diseases) and plant and animal invasions
- the concepts of risk and hazard management as applied to natural and ecological hazards
- the spatial and temporal distribution, magnitude, duration, frequency, probability and scale of spatial impact of natural and ecological hazards at a global scale
- the role of spatial technologies in the study of natural and ecological hazards

Students complete **two** depth studies, which are taught with the requisite geographical inquiry skills and additional geographical skills described as part of this unit.

#### Depth study one

Using fieldwork and/or secondary sources, students investigate **one** natural hazard and the means by which the risks associated with the hazard are being managed. The scale of study is determined by the nature of the natural hazard selected.

Students study the hazard in order to investigate:

- the nature and causes of the hazard
- the nature of the risks to be managed, such as:
  - loss of property/life
  - effects on infrastructure, jobs and the economy
  - the impact on physical and mental health
- the spatial and temporal distribution of the hazard and how an understanding of biophysical and human processes can be used to explain the patterns that are identified
- the magnitude, duration, frequency, probability and scale of spatial impact of the hazard
- the physical and human factors that explain why some places and people are more vulnerable to the hazard than others
- the means by which the activities of people can intensify the impacts of the hazard, such as:
  - land clearance and its impact on the intensity and frequency of flooding
  - removal of coastal dune barrier systems
  - building of settlements on low lying coastlines threatened by tsunamis
  - using construction techniques unable to withstand seismic activity

- the environmental, economic and social impacts of the hazard in a developed country such as Australia compared with those in at least one less developed country or region
- the stakeholders affected by the hazard and their values and viewpoints on recovery and adaptation to future hazards in terms of modifying:
  - human vulnerability (susceptibility to future loss)
  - loss burden (cost of loss mitigation and adaptation)
- the sustainability of risk management policies, procedures and practices designed to reduce the impacts of the hazard, in the short and long term, through prevention, mitigation and preparedness

### Depth study two

Using fieldwork and/or secondary sources, students investigate **one** ecological hazard and the means by which the risks associated with the hazard are being managed. The scale of study is determined by the nature of the ecological hazard selected.

Students study the hazard in order to investigate:

- the nature and causes of the hazard
- the nature of the risks to be managed, such as:
  - loss of property/life
  - effects on infrastructure, jobs and the economy
  - the impact on physical and mental health
- the spatial and temporal distribution of the hazard, and how an understanding of biophysical and human processes can be used to explain the patterns that are identified
- the magnitude, duration, frequency, probability and scale of spatial impact of the hazard
- the physical and human factors that explain why some places and people are more vulnerable to the hazard than others
- the means by which the activities of people can intensify the impacts of the hazard, such as:
  - deliberate or accidental introduction of foreign plant or animal species to natural ecosystems
  - global transport systems, human settlement and agriculture facilitating the spread of infectious diseases
- the environmental, economic and social impacts of the hazard in a developed country such as Australia compared with those in at least one less developed country or region
- the stakeholders affected by the hazard and their values and viewpoints on recovery and adaptation to future hazards in terms of modifying:
  - human vulnerability (susceptibility to future loss)
  - loss burden (cost of loss mitigation and adaptation)
- the sustainability of risk management policies, procedures and practices designed to reduce the impacts of the hazard, in the short and long term, through prevention, mitigation and preparedness

## Geographical Inquiry and Skills

All the following skills should be taught during this unit. Relevant skills will be emphasised for each depth study.

### Geographical inquiry skills

#### Observing, questioning and planning

- formulate geographical inquiry questions
- plan a geographical inquiry with clearly defined aims and appropriate methodology

#### Collecting, recording, evaluating and representing

- collect geographical information, incorporating ethical protocols, from a range of primary sources (interviews, questionnaires, student's own experiences, and field observations) and secondary sources (online maps, websites, spatial software applications, print resources and visual media)
- record observations in a range of graphic representations using spatial technologies and information and communication technologies
- evaluate the reliability, validity and usefulness of geographical sources and information
- acknowledge sources of information and use an approved referencing technique

#### Interpreting, analysing and concluding

- analyse geographical information and data from a range of primary and secondary sources, and a variety of perspectives, to draw reasoned conclusions and make generalisations
- identify and analyse relationships, spatial patterns and trends, and make predictions and inferences

#### Communicating

- communicate geographical information, ideas, issues and arguments using appropriate written and/or oral, cartographic, multimodal and graphic forms
- use geographical language in appropriate contexts to demonstrate geographical knowledge and understanding

#### Reflecting and responding

- apply generalisations to evaluate alternative responses to geographical issues at a variety of scales
- propose individual and collective action, taking into account environmental, social and economic factors, and predict the outcomes of the proposed action

### Geographical skills

The following geographical skills should be taught within the specified content of each unit.

#### Mapping skills (use of maps and atlases)

- identify and interpret a variety of topographic and thematic maps (physical, political, and social maps, synoptic charts and climate maps) at different scales (local, national and global)
- understand the significance of map projections (cylindrical, conical and azimuthal) for mapping the Earth



- interpret and apply data from different types of statistical maps (isopleth/isoline maps, choropleth maps, proportional circle maps, overlay and dot distribution maps)
- interpret marginal information represented on maps (title, conventional signs contained in the legend, north point, numerical and linear scale)
- establish position on a map using alphanumeric grid coordinates, eastings and northings, four figure area references, six figure grid references, and latitude and longitude expressed in degrees and minutes
- establish direction on a map using general compass directions (16 points) and bearings
- interpret and express scale in written, linear and ratio (representative fraction) formats, and convert scale from one format to another
- apply the map scale to basic calculations to determine time, speed, distance and area
- interpret relief on a map using contours and height information (spot heights), to describe the steepness and shape of a slope (concave, convex and uniform), and calculate the average gradient
- identify different relief features (landforms, including hills, valleys, plains, spurs, ridges, escarpments, saddles, cliffs), types of natural vegetation cover and hydrological features (land subject to inundation, perennial and intermittent water bodies)
- interpret, construct and annotate cross sections to show natural and cultural features on the landscape
- construct simple annotated sketch maps using map conventions (border, title, legend, north point and approximate scale)
- identify and interpret natural features and cultural features on a map
- describe the site and situation of places
- identify, describe and interpret spatial patterns (including land use, settlement and transport), and spatial relationships between natural and cultural features on maps
- interpret and describe changing patterns and relationships that have taken place over time

**Remote sensing skills** (use of remote sensing products, such as ground level photographs, aerial photographs, radar imagery and satellite imagery)

- identify and describe natural and cultural features and their patterns on the Earth's surface using ground level photographs, aerial photographs (vertical and oblique), radar imagery and satellite imagery (Landsat, weather satellites and Google Earth)
- compare the different types of information available from remote sensing products with the information depicted on a topographic map
- use remote sensing products as an aid to interpreting natural and cultural features shown on topographic maps
- determine direction on remote sensing products
- apply scale to the calculation of distance on remote sensing products
- interpret the difference in scale between a photograph and a topographic map of the same place
- use combinations of remote sensing products and topographic maps to provide information based on change over time

**Geographical and statistical data skills** (use of geographical and statistical data in formats such as tables, graphs, maps and diagrams)

- calculate and interpret descriptive statistics, including central tendency (arithmetic mean, median, mode), variation (maximum, minimum and range) and frequency
- interpret indexes
- identify correlations between variables
- interpret and apply data from different types of statistical maps (isopleth/isoline maps, choropleth maps, proportional circle maps, overlay and dot distribution maps)
- interpret and construct tables and graphs, including: picture graphs; line, bar and compound graphs; histograms; scattergrams; climatic graphs; pie graphs; flowcharts and population pyramids
- use systems and flow diagrams to organise thinking about relationships
- understand that statistical or spatial association does not prove a causal relationship
- extrapolate trends over time to forecast future conditions

**Skills in the use of information and communications technology and geographical information systems** (in a geographic context)

- use the internet as a tool for geographical research
- use simple applications, software and online resources (including Google Earth and Google Maps) to access atlases and remote sensing products (photographs, radar imagery and satellite imagery) for the purpose of describing and interpreting spatial patterns and relationships
- access databases, such as Australian Bureau of Statistics, and Bureau of Meteorology, for spatial and statistical information
- use geospatial technologies, including global positioning systems (GPS), to collect and map spatial data

**Fieldwork skills** (use of field observations and measurements)

- collect primary data using field techniques, including: surveys and interviews, observing and recording, listening, questioning, sketching and annotating, measuring and counting, photographing and note-taking
- collate primary data using techniques, including: listing, tabulating, report writing, graphing, constructing diagrams and mapping
- analyse and interpret primary data

## Unit 2 – Global networks and interconnections

### Unit description

This unit focuses on the process of international integration (globalisation) and is based on the reality that we live in an increasingly interconnected world. It provides students with an understanding of the economic and cultural transformations taking place in the world today, the spatial outcomes of these processes, and their political and social consequences. This is a world in which advances in transport and telecommunications technologies have not only transformed global patterns of production and consumption but also facilitated the diffusion of ideas and elements of cultures. The unit explains how these advances in transport and communication technology have lessened the friction of distance and have impacted at a range of local, national and global scales. Cultural groups that may have been isolated in the early twentieth century are now linked across an interconnected world in which there is a ‘shrinking’ of time and space. Of particular interest are the ways in which people adapt and respond to these changes.

Students have the opportunity to explore the ideas developed in the unit through an investigation of the changes taking place in the spatial distribution of the production and consumption of a selected commodity, good or service and the study of an example of cultural diffusion, adoption and adaptation. They also investigate the ways people embrace, adapt to, or resist the forces of international integration.

While the scale of the study in this unit begins with the global, locally based examples can be used to enhance students’ conceptual understanding. The scale of the study for both depth studies, unless specified, can range from local to global, as appropriate.

Students develop an understanding about using and applying geographical inquiry methods, tools (such as spatial technologies), and skills to investigate the transformations taking place throughout the world.

### Learning outcomes

By the end of this unit, students:

- understand the nature and causes of international integration and its spatial, economic, political and social consequences
- understand the ways people embrace, adapt to and resist the forces of international integration
- understand and apply key geographical concepts – including place, space, environment, interconnection, sustainability, scale and change – as part of a geographical inquiry
- think geographically, based on an understanding of the complexities of an increasingly interdependent world
- apply geographical inquiry skills and a range of other geographical skills, including spatial technologies and fieldwork, to investigate the complexity of the integrated world
- evaluate the sustainability of alternative futures, drawing on an understanding of an integrated global society.

## Unit content

This unit includes the knowledge, understandings and skills described below.

### Geographical Knowledge and Understanding

#### Overview of international integration

- the application of the concept of sustainability when considering the outcomes of increased globalisation
- the process of international integration, especially as it relates to the transformations taking place in the spatial distribution of the production and consumption of commodities, goods and services, and the diffusion and adaptation of ideas, meanings and values that continuously transform and renew cultures.
- advances in transport and telecommunications technologies as a facilitator of international integration, including their role in the expansion of world trade, the emergence of global financial markets, and the dissemination of ideas and elements of culture
- the economic and cultural importance of world cities in the integrated global economy and their emergence as centres of cultural innovation, transmission and integration of new ideas about the plurality of life throughout the world
- the concept of global shifts with the re-emergence of Asia, particularly China and India, as global economic and cultural powers, and the relative economic decline, but sustained cultural authority, of the United States of America and Europe

Students complete **two** depth studies which are taught with the requisite geographical inquiry skills and additional geographical skills described as part of this unit.

#### Depth study one

Using fieldwork and/or secondary sources students investigate the reasons for, and consequences of, the changing spatial distribution of production and consumption (and, where appropriate, reuse) of **at least one** commodity, good or service from **one** of the following groups:

- a mineral ore or fossil-based energy resource – iron ore, coal, bauxite, natural gas or oil

**OR**

- a food or fibre-based good – wheat, timber, wine, rice, sugar, beef, seafood, cotton or wool

**OR**

- a complex manufactured good – consumer electronics, automobiles, engineered wood products, a clothing brand, soft drink/food production

**OR**

- tourism – business, eco-tourism or recreational

For the selected commodity, good or service, investigate, where applicable:

- the nature of the commodity, good or service
- the process of diffusion of the commodity, good or service and its spatial outcomes

- the changes occurring in the spatial distribution of the production and consumption of the commodity, good or service in Australia and overseas, and the geographical factors responsible for these changes
- the role played by technological advances in transport and/or telecommunications in facilitating these changes in the spatial distribution
- the role played by governments and enterprises in the internationalisation of the production and consumption of the commodity, good or service, such as the reduction or elimination of the barriers to movement between countries
- implications of the changes in the nature and spatial distribution of the production and distribution of the commodity, good or service for people, places and the biophysical environment at a variety of scales, including the local
- likely future changes in the nature and spatial distribution of the production and consumption of the commodity, good or service
- the impact of these changes on less developed countries (LDC) in terms of sustainability
- the ways people and places embrace, adapt to, or resist the forces of international economic integration, and the spatial, economic, social and geopolitical consequences of these responses

### **Depth study two**

Using fieldwork and/or secondary sources, students investigate the diffusion, adoption and adaptation of **at least one** of the following elements of culture (this list is not exhaustive):

- fashion  
**OR**
- a sport or leisure activity  
**OR**
- music  
**OR**
- religion  
**OR**
- language  
**OR**
- architecture  
**OR**
- political/social ideas.

For the selected element(s) of culture, investigate, where applicable:

- the process of diffusion of the element of culture and its spatial outcomes
- the role played by technological advances in transport and/or telecommunications in the diffusion of the element of culture

- the role played by transnational institutions and/or corporations in the dispersion of the element of culture
- the role played by media and emerging technologies in the generation and dispersion of the element of culture
- implications of the changes in the nature and spatial distribution of the element of culture for peoples and places at a range of scales, including the local
- likely future changes in the nature and spatial distribution of the element of culture
- the ways people embrace, adapt to, or resist the forces of international cultural integration
- the role of the media and new technologies in shaping people's perceptions of place and events through the images and information presented
- the impact of the breaking up of multinational states as a result of a rise in specific nationalism
- the likely future changes to the sustainability of indigenous cultures in an increasingly integrated world
- the spatial, economic, social and geopolitical consequences of changes to the cultural element

### **Geographical Inquiry and Skills**

All the following skills should be taught during this unit. Relevant skills will be emphasised for each depth study.

#### **Geographical inquiry skills**

##### **Observing, questioning and planning**

- formulate geographical inquiry questions
- plan a geographical inquiry with clearly defined aims and appropriate methodology

##### **Collecting, recording, evaluating and representing**

- collect geographical information, incorporating ethical protocols, from a range of primary sources (interviews, questionnaires, student's own experiences, and field observations) and secondary sources (online maps, websites, spatial software applications, print resources and visual media)
- record observations in a range of graphic representations using spatial technologies and information and communication technologies
- evaluate the reliability, validity and usefulness of geographical sources and information
- acknowledge sources of information and use an approved referencing technique

##### **Interpreting, analysing and concluding**

- analyse geographical information and data from a range of primary and secondary sources, and a variety of perspectives, to draw reasoned conclusions and make generalisations
- identify and analyse relationships, spatial patterns and trends, and make predictions and inferences

### Communicating

- communicate geographical information, ideas, issues and arguments using appropriate written and/or oral, cartographic, multimodal and graphic forms
- use geographical language in appropriate contexts to demonstrate geographical knowledge and understanding

### Reflecting and responding

- apply generalisations to evaluate alternative responses to geographical issues at a variety of scales
- propose individual and collective action, taking into account environmental, social and economic factors, and predict the outcomes of the proposed action

### Geographical skills

The following geographical skills should be taught within the specified content of each unit.

#### Mapping skills (use of maps and atlases)

- identify and interpret a variety of topographic and thematic maps (physical, political, and social maps, synoptic charts and climate maps) at different scales (local, national and global)
- understand the significance of map projections (cylindrical, conical and azimuthal) for mapping the Earth
- interpret and apply data from different types of statistical maps (isopleth/isoline maps, choropleth maps, proportional circle maps, overlay and dot distribution maps)
- interpret marginal information represented on maps (title, conventional signs contained in the legend, north point, numerical and linear scale)
- establish position on a map using alphanumeric grid coordinates, eastings and northings, four figure area references, six figure grid references, and latitude and longitude expressed in degrees and minutes
- establish direction on a map using general compass directions (16 points) and bearings
- interpret and express scale in written, linear and ratio (representative fraction) formats, and convert scale from one format to another
- apply the map scale to basic calculations to determine time, speed, distance and area
- interpret relief on a map using contours and height information (spot heights), to describe the steepness and shape of a slope (concave, convex and uniform), and calculate the average gradient
- identify different relief features (landforms, including hills, valleys, plains, spurs, ridges, escarpments, saddles, cliffs), types of natural vegetation cover and hydrological features (land subject to inundation, perennial and intermittent water bodies)
- interpret, construct and annotate cross sections to show natural and cultural features on the landscape
- construct simple annotated sketch maps using map conventions (border, title, legend, north point and approximate scale)
- identify and interpret natural features and cultural features on a map
- describe the site and situation of places

- identify, describe and interpret spatial patterns (including land use, settlement and transport), and spatial relationships between natural and cultural features on maps
- interpret and describe changing patterns and relationships that have taken place over time

**Remote sensing skills** (use of remote sensing products, such as ground level photographs, aerial photographs, radar imagery and satellite imagery)

- identify and describe natural and cultural features and their patterns on the Earth's surface using ground level photographs, aerial photographs (vertical and oblique), radar imagery and satellite imagery (Landsat, weather satellites and Google Earth)
- compare the different types of information available from remote sensing products with the information depicted on a topographic map
- use remote sensing products as an aid to interpreting natural and cultural features shown on topographic maps
- determine direction on remote sensing products
- apply scale to the calculation of distance on remote sensing products
- interpret the difference in scale between a photograph and a topographic map of the same place
- use combinations of remote sensing products and topographic maps to provide information based on change over time

**Geographical and statistical data skills** (use of geographical and statistical data in formats such as tables, graphs, maps and diagrams)

- calculate and interpret descriptive statistics, including central tendency (arithmetic mean, median, mode), variation (maximum, minimum and range) and frequency
- interpret indexes
- identify correlations between variables
- interpret and apply data from different types of statistical maps (isopleth/isoline maps, choropleth maps, proportional circle maps, overlay and dot distribution maps)
- interpret and construct tables and graphs, including: picture graphs; line, bar and compound graphs; histograms; scattergrams; climatic graphs; pie graphs; flowcharts and population pyramids
- use systems and flow diagrams to organise thinking about relationships
- understand that statistical or spatial association does not prove a causal relationship
- extrapolate trends over time to forecast future conditions

**Skills in the use of information and communications technology and geographical information systems** (in a geographic context)

- use the internet as a tool for geographical research
- use simple applications, software and online resources (including Google Earth and Google Maps) to access atlases and remote sensing products (photographs, radar imagery and satellite imagery) for the purpose of describing and interpreting spatial patterns and relationships



- access databases, such as Australian Bureau of Statistics, and Bureau of Meteorology, for spatial and statistical information
- use geospatial technologies, including GPS, to collect and map spatial data

**Fieldwork skills** (use of field observations and measurements)

- collect primary data using field techniques, including: surveys and interviews, observing and recording, listening, questioning, sketching and annotating, measuring and counting, photographing and note-taking
- collate primary data using techniques, including: listing, tabulating, report writing, graphing, constructing diagrams and mapping
- analyse and interpret primary data

## School-based assessment

The Western Australian Certificate of Education (WACE) Manual contains essential information on principles, policies and procedures for school-based assessment that needs to be read in conjunction with this syllabus.

Teachers design school-based assessment tasks to meet the needs of students. The table below provides details of the assessment types for the Geography ATAR Year 11 syllabus and the weighting for each assessment type.

### Assessment table – Year 11

Type of assessment	Weighting
<p><b>Geographical inquiry</b></p> <p>Students plan and conduct investigations, process and translate information, and communicate findings following ethical protocols and procedures.</p> <p>Both primary and secondary information sources are used.</p> <p>Formats can include: investigation, assignment, report and/or an oral or multimedia presentation.</p>	20%
<p><b>Fieldwork/practical skills</b></p> <p>Fieldwork involves students actively engaged in collecting primary data.</p> <p>Practical skills involve the collection and interpretation of data from a number of sources.</p> <p>Formats can include: excursions, map interpretation, and/or data analysis.</p>	20%
<p><b>Short and extended response</b></p> <p>Questions can require students to respond to stimulus material.</p> <p>Formats can include: multiple-choice questions, short responses, sectionalised extended responses, extended responses, and/or a combination of these.</p> <p>Typically these tasks are administered under test conditions.</p>	30%
<p><b>Examination</b></p> <p>Typically conducted at the end of each semester and/or unit. In preparation for Unit 3 and Unit 4, the examination should reflect the examination design brief included in the ATAR Year 12 syllabus for this course.</p>	30%

Teachers are required to use the assessment table to develop an assessment outline for the pair of units (or for a single unit where only one is being studied).

The assessment outline must:

- include a set of assessment tasks
- include a general description of each task
- indicate the unit content to be assessed
- indicate a weighting for each task and each assessment type
- include the approximate timing of each task (for example, the week the task is conducted, or the issue and submission dates for an extended task).

In the assessment outline for the pair of units, each assessment type must be included at least twice. In the assessment outline where a single unit is being studied, each assessment type must be included at least once.

The set of assessment tasks must provide a representative sampling of the content for Unit 1 and Unit 2.

Assessment tasks not administered under test/controlled conditions require appropriate validation/authentication processes. This validation can involve a task (for example, short closed and/or open questions requiring the analysis of data or an extended response) which is completed in class after the final presentation has been submitted.

## Grading

Schools report student achievement in terms of the following grades:

Grade	Interpretation
A	Excellent achievement
B	High achievement
C	Satisfactory achievement
D	Limited achievement
E	Very low achievement

The teacher prepares a ranked list and assigns the student a grade for the pair of units (or for a unit where only one unit is being studied). The grade is based on the student's overall performance as judged by reference to a set of pre-determined standards. These standards are defined by grade descriptions and annotated work samples. The grade descriptions for the Geography ATAR Year 11 syllabus are provided in Appendix 1. They can also be accessed, together with annotated work samples, through the Guide to Grades link on the course page of the Authority website at [www.scsa.wa.edu.au](http://www.scsa.wa.edu.au)

To be assigned a grade, a student must have had the opportunity to complete the education program, including the assessment program (unless the school accepts that there are exceptional and justifiable circumstances).

Refer to the WACE Manual for further information about the use of a ranked list in the process of assigning grades.

## Appendix 1 – Grade descriptions Year 11

<b>A</b>	<p><b>Geographical knowledge and understandings</b> Presents comprehensive and accurate discussions providing detailed information about features, activities, spatial patterns and associations, processes, relationships and/or factors. Makes detailed and relevant references to geographical concepts and/or theories.</p>
	<p><b>Geographical terminology and concepts</b> Uses geographical terminology accurately and applies related geographical concepts to develop cohesive and relevant responses.</p>
	<p><b>Geographical skills</b> Applies appropriate geographical thinking, skills and processes, and clearly shows links between them. Accurately analyses and applies mapping and/or diagrammatic skills and processes in a wide variety of contexts to enhance responses. Presents detailed effective responses, including extended responses with well-developed sentences and paragraphs.</p>
	<p><b>Use of supporting evidence</b> Selects and correctly applies a wide range of appropriate supporting evidence, including examples, quotations, sources, statistics, data, maps and/or sketches, when developing responses.</p>
<b>B</b>	<p><b>Geographical knowledge and understandings</b> Presents detailed discussions providing information about features, activities, spatial patterns and associations, processes, relationships and/or factors. Makes relevant references to geographical concepts and/or theories.</p>
	<p><b>Geographical terminology and concepts</b> Uses geographical terminology accurately and applies related geographical concepts to develop relevant responses.</p>
	<p><b>Geographical skills</b> Applies appropriate geographical thinking, skills and processes, and shows the links between them. Applies mapping and/or diagrammatic skills and processes in a range of contexts to develop responses. Presents responses, including extended responses containing well-developed sentences and paragraphs.</p>
	<p><b>Use of supporting evidence</b> Selects and applies a range of appropriate supporting evidence, including examples, quotations, sources, statistics, data, maps and/or sketches, when developing responses.</p>
<b>C</b>	<p><b>Geographical knowledge and understandings</b> Presents generalised brief discussions providing information about features, activities, spatial patterns and associations, processes, relationships and/or factors. Makes general references to geographical concepts and/or theories.</p>
	<p><b>Geographical terminology and concepts</b> Uses geographical terminology and concepts to develop responses.</p>
	<p><b>Geographical skills</b> Applies geographical thinking, skills and processes that are mainly appropriate. Applies mapping and/or diagrammatic skills and processes to support responses. Presents responses, including extended answers with mostly appropriate sentences and paragraphs.</p>
	<p><b>Use of supporting evidence</b> Selects and applies some supporting evidence, including examples, quotations, sources, statistics, maps and/or sketches, when developing responses.</p>

<b>D</b>	<b>Geographical knowledge and understandings</b> Presents basic discussions with limited detail. Makes limited references to geographical concepts and/or theories.
	<b>Geographical terminology and concepts</b> Makes limited use of geographical terminology and concepts.
	<b>Geographical skills</b> Applies limited geographical thinking, skills and processes. Makes limited use of mapping skills and/or processes. Presents responses showing poor literacy skills, making them difficult to understand.
	<b>Use of supporting evidence</b> Makes limited use of evidence to support statements and generalisations.
<b>E</b>	Does not meet the requirements of a D grade and/or has completed insufficient assessment tasks to be assigned a higher grade.

## Appendix 2 – Glossary

This glossary is provided to enable a common understanding of the key terms in this syllabus.

<b>Adaptation</b>	Alteration or adjustment in response to a changed environment.
<b>Biophysical processes</b>	The atmospheric, biological, chemical and physical processes that take place in the lithosphere, hydrosphere, atmosphere and biosphere. They can be further broken down, for example, soil forming processes, mass wasting, cloud forming processes, fluvial processes, marine processes, glacial processes and biogeochemical cycling.
<b>Change</b>	The concept of change involves both time and space. Geographical phenomena are constantly changing, and can often be best understood by investigating how they have developed over time periods ranging from a few years to thousands. This is important in helping students to understand what is happening around them and seeing their world as dynamic.
<b>Cultural internationalisation</b>	The increasing integration of the different cultures found throughout the world and the diffusion of a dominant 'global culture'. It can be argued that the hybridisation of culture is an outcome of the process.
<b>Diffusion</b>	The transfer or dispersal of cultural elements from one group of people to other groups of people.
<b>Ecological hazard</b>	A biological or chemical hazard that has the potential to impact adversely on the wellbeing of people or on the environment more generally. Ecological hazards involve both biological and chemical agents. Biological factors lead to infectious diseases. While many of these diseases have proven difficult to eradicate, enough is known about them to mount interventions that drastically reduce their incidence. Chemical hazards can cause immediate, dangerous health effects and can also contribute to chronic, or long-term, problems. In contrast to infectious diseases, our understanding of the consequences of chemical exposure for people's health, especially very low level exposures typically found in the environment, remains incomplete.
<b>Economic integration</b>	An outcome of the reduction or elimination of the barriers to the flow of goods, services and factors of production between nations. The stated aims of economic integration are a reduction in the costs incurred by both consumers and producers, as well as to increase trade between countries.
<b>Economic restructuring</b>	Significant and enduring changes to the nature and structure of an economy.
<b>Ecosystem</b>	A community of plants and animals in a non-living environment.
<b>Environment</b>	The term 'environment', where unqualified, means the living and non-living elements of the Earth's surface and atmosphere. It includes human changes to the Earth's surface, for example, croplands, planted forests, buildings and roads.
<b>Fieldwork</b>	Fieldwork is an integral part of geographical learning. It provides a planned opportunity for students to engage with the environment – to observe and investigate in the 'real world' the geographical phenomena, issues and processes studied in the classroom. It also enables students to explore different perspectives or points of view on important geographical issues. There are multiple approaches to fieldwork ranging from the observational to the fully participatory. Fieldwork can be undertaken in a range of settings, including the school grounds. It includes 'virtual fieldwork' – the use of the internet to virtually visit a site and engage in a guided geographical inquiry. A virtual field trip provides students with the opportunity to investigate geographical phenomena not normally accessible due to distance or cost.

<b>Geographical inquiry methodologies</b>	An approach to the study focused on the development of a wide variety of skills, such as observing, reading, gathering, organising, preparing, presenting, analysing, interpreting and synthesising geographic information from a variety of sources, including spatial technologies and fieldwork. In short, it involves the skills needed to formulate questions and initiate, plan and implement an inquiry relevant to a geographical issue, process or phenomenon.
<b>Geographical processes</b>	The combination of physical and human forces that form and transform our world.
<b>Global distribution</b>	The spatial distribution of geographical phenomena throughout the world, for example, megacities, earthquake hazards, deforestation and fashion design.
<b>Globalisation</b>	The increased interconnectedness and interdependence of people and countries resulting from the expanding integration of trade, finance, people, and ideas in one global marketplace. Advancements in technology, communication, science, transport and industry have accelerated the pace of this integration over the past few decades.
<b>Hazards</b>	Phenomena that occur when the forces of nature combine to become destructive and have potential to damage the environment and endanger communities.
<b>Hybridisation of cultures</b>	The process by which cultures around the world adopt a certain degree of homogenised global culture while clinging to aspects of their own traditional cultures.
<b>Interconnection</b>	The concept of interconnection emphasises that no object of geographical study can be viewed in isolation. It is about the ways in which geographical phenomena are connected to each other through environmental processes, the movement of people, flows of trade and investment, the purchase of goods and services, cultural influences, the exchange of ideas and information, political power and international agreements. Interconnections can be complex, reciprocal or interdependent, and have a strong influence on the characteristics of places. An understanding of the significance of interconnection leads to holistic thinking and helps students to see the various aspects of geography as connected rather than separate bodies of knowledge.
<b>International integration</b>	A process whereby the nature of the relationship among economic and cultural entities changes in ways that erode the autonomy or uniqueness of individual nation states and makes them part of a larger aggregation.
<b>Liveability</b>	The quality of space and the built environment. The concept of liveability has been linked to a range of factors, for example, quality of life, health, sense of safety, access to services, cost of living, comfortable living standards, mobility and transport, air quality and social participation.
<b>Mitigation</b>	The ability to moderate the severity of a hazard or similarly adverse occurrence.
<b>Natural hazard</b>	Atmospheric, hydrological and geomorphic processes and events in our environment that have the potential to affect people adversely.
<b>Natural system</b>	A set of naturally occurring interrelated parts with distinct inputs, throughputs and outputs.
<b>Perspective</b>	A way of viewing the world, the people in it, their relationships to each other and their relationships to communities and environments.

<b>Place</b>	Places play a fundamental role in human life. The world is made up of places, from those with largely natural features, for example, an area of rainforest, to those with largely constructed features, such as the centre of a large city. They are where we live and grow up. Our most common relationships are likely to be with people in the same place. The environmental and human qualities of places influence our lives and life opportunities. Places are, therefore, cultural constructs. They are sites of biodiversity, locations for economic activity, centres of decision making and administration, sites for the transmission and exchange of knowledge and ideas, meeting places for social interaction, sources of identity, belonging and enjoyment, and areas of natural beauty and wonder. They are where major events occur, from natural disasters and financial crises to sporting events. Places can also be laboratories for the comparative study of the relationships between processes and phenomena, because the uniqueness of each place means that similar processes and influences can produce different outcomes in different places. The importance of Country/Place to Aboriginal and Torres Strait Islander Peoples is an example of the interaction between culture and identity, and shows how places can be invested with spiritual and other significance.
<b>Resilience</b>	The ability to recover or adjust in response to a changed situation.
<b>Risk management</b>	In this curriculum it is defined in terms of preparedness, mitigation and/or prevention of a natural or ecological hazard. Preparedness involves planning the interventions required to prevent or mitigate the effects of a hazard. Mitigation involves the implementation of the strategies to eliminate or minimise the effects of these hazards. Adaptation involves adjusting to the changed environmental circumstances.
<b>Scale</b>	The concept of scale is used to analyse phenomena and look for explanations at different spatial levels, from the personal to the local, regional, national and global. Different factors can be involved in explaining phenomena at different scales, for example, in studies of vegetation, climate is the main factor at the global scale but soil and drainage may be the main factors at the local scale. Deciding on the appropriate scale for an inquiry is therefore important. Scale is also involved when geographers look for explanations or outcomes at different levels. Local events can have global outcomes, for example, the effects of local actions such as permanent vegetation removal on global climate. National and regional changes can also have local outcomes, as in the effects of economic policies on local economies. Scale, however, may be perceived differently by diverse groups of people and organisations, and can be used to elevate or diminish the significance of an issue, for example, by labelling it as local or global.
<b>Social exclusion</b>	The processes by which individuals and even entire communities are systematically blocked from rights, opportunities and resources, for example, housing, employment, healthcare, civic engagement, democratic participation and due process that are normally available to members of society, and which are key to social integration.
<b>Social justice</b>	The concept that all people have the right to fair treatment and equal access to the benefits of society.
<b>Socio-spatial inequality</b>	Social and economic inequalities across space. This includes unequal access to essential goods and services depending on the area or location in which a person lives.



<b>Space</b>	<p>The concept of space includes location, spatial distribution and the organisation of space. Location plays an important role in determining the environmental characteristics of a place, the viability of an economic activity or the opportunities open to an individual, but the effects of location on human activities also depend on the infrastructure and the technologies that link places, and the ways in which these are managed by businesses and governments.</p> <p>Spatial distribution, the second element in the concept of space, underlies much geographical study. The geographical characteristics of places have distributions across space that form patterns, and the analysis of these patterns contributes to an understanding of the causes of these characteristics and of the forms they take in particular places. Spatial distributions also have significant environmental, economic, social and political consequences. Students learn to identify and evaluate these consequences and the policies that could be adopted to respond to them.</p> <p>The organisation of space concerns how it is perceived, structured, organised and managed by people within specific cultural contexts, and how this creates particular types of spaces.</p>
<b>Spatial association</b>	The relationship between the distribution patterns of different phenomena on the Earth's surface.
<b>Spatial distribution</b>	The arrangement of geographical phenomena or activities across the Earth's surface.
<b>Spatial interaction</b>	The effects of movement or flows of air, water, material, life forms, people, goods or information between different locations on the Earth's surface.
<b>Spatial technologies</b>	<p>Any software or hardware that interacts with real-world locations. The use of spatial technologies forms the basis of many geographers' work practice. Global positioning systems (GPS), Google Earth, geographic information systems (GIS) and the use of satellite images are the most commonly used spatial technologies to visualise, manipulate, analyse, display and record spatial data.</p> <p>The use of spatial technologies is integral to the inquiry and skills process. The spatial technology application links geographic locations to information about them in order to:</p> <ul style="list-style-type: none"> <li>• find information about places across the globe or locally</li> <li>• analyse relationships between locations</li> <li>• make decisions on the location of facilities</li> <li>• map the demographics of target markets</li> <li>• integrate maps with information from a variety of sources.</li> </ul>
<b>Sustainability</b>	Meeting the needs of current and future generations through simultaneous environmental, social and economic adaptation and improvement.
<b>Temporal distribution</b>	The distribution of geographical phenomena over time.
<b>Thinking geographically</b>	To think geographically involves the application of the discipline's organising concepts to investigation of geographical issues and phenomena. It is conceptual knowledge- the ideas we use to enhance our knowledge and understanding of the world. The organising concepts in senior secondary geography are place, space, environment, interconnection, sustainability, scale and change.
<b>Variety of scales</b>	The geographical view of processes and phenomena at different levels on a continuum from the local to the international and global scales. It may include: comparative studies at the same scale; studying the same issue and phenomenon at a range of scales; or seeking explanations at a different scale to the one being studied.

<b>Vulnerability</b>	The susceptibility to harm or change.
<b>World city</b>	World cities (sometimes referred to as global cities) are centres of global economic and cultural authority. They are the places where the world's most important financial and corporate institutions are based and where decisions that 'drive' the global economy are made. They also play a globally significant role in the production and dissemination of knowledge (i.e. news, entertainment) and art. They are the centres of research and innovation.