

Australians Need Geography



Through Geography's holistic approach, bringing together the natural and social sciences, students better understand important challenges facing our world

Summary

Australians need Geography

Geography is vital to the education of every young Australian in the 21st century. It is the study of places – their environments, populations, economies and communities – and how and why these places are changing. Geography gives students a holistic view of the world, combining the natural and social sciences. Students of Geography gain the understanding, knowledge and skills to make sense of complex issues such as climate change, drought, ageing populations, urban growth, ethnic conflicts and globalisation.

The study of Geography:

- builds a sense of our national identity and of Australia's place in the world; to understand Australia we need to understand its geography
- helps us make decisions about the big issues affecting the quality of our lives and landscapes
- nurtures our natural curiosity in, and appreciation of, the world's people and places, from the local neighbourhood to the region, the nation and beyond
- creates spatially literate students
- develops competencies essential in the work place and leads to careers in areas such as spatial sciences, resource management and urban planning
- is an excellent medium for education – it brings the rigour and depth of an academic discipline; develops an exceptional range of skills, e.g. literacy, numeracy, oracy, graphicacy, ICT, decision-making; caters for a variety of learning styles

The issue

There has been a sharp decrease in the number of students studying Geography in Australian schools. As an example, while the overall number of Year 12 students has increased by 7% in the past five years, the number of Year 12 students enrolled in Geography has decreased by 24% in that period. At the lower secondary level, the situation is even more serious in most states, where Geography has been absorbed into the generic subject Studies of Society and Environment, often not taught by trained Geography teachers. This in turn has led to a critical shortage of Australians with geographical understanding and skills and, ultimately, a community that is less able to make informed decisions about issues such as climate change and ageing populations.

The solution

1. Geography needs to be a compulsory part of every student's education up to Year 10, and a stand-alone subject in secondary schools.
2. In secondary schools it is essential that Geography be taught by qualified Geography teachers. Primary school teachers should at least have completed an introductory Geography course.
3. The Geography curriculum needs to include understandings and skills identified as core. Broadly, students should develop:
 - knowledge and understanding of the human and natural characteristics of places and the interactions between them, in Australian and international contexts, and of the central concepts of Geography
 - a range of intellectual and practical skills, both transferrable and specific to the discipline
 - informed attitudes and values related to environmental sustainability, a just society, and democratic processes.

Australians need Geography

Geography is vital to the education of every young Australian in the 21st century. For the reasons outlined in this document, the study of Geography is essential to the development of all young people, and to the economic, environmental and cultural future of Australia. Geography is as important, and of equal relevance in today's society, as English, Mathematics, Science and History.

Geography builds a sense of our national identity and of Australia's place in the world

We define ourselves through our cities, the bush, the outback. To understand Australia we need to understand its geography – our vast area and relatively few people, the diversity of our landscapes and climates, our natural resources, the movement of peoples to and within Australia, our distance from Europe and North America and our closeness to Asia. The implications flowing from these make Australia what it is today, governing the location of our population centres, our spread-out infrastructure, the viability of our primary industries, our trading patterns, the importance of our tourist industry, our connection with the land.

Geography helps us make decisions about the big issues affecting the quality of our lives and landscapes

It is impossible to read a newspaper without finding reports on current issues that are studied in Geography – climate change, water and land management, ageing populations, the globalised economy. In studying issues through the lens of Geography, students apply the knowledge, skills and values they have developed to understand the processes behind the issues and evaluate possible solutions.

Geography links the natural and social sciences, and its holistic approach to the study of people and their environments contrasts with the more selective study of elements that occurs in other subjects. This link between the physical and the human is a major strength in a subject that aims to make sense of the world around us, and can be a very sound basis for decision-making in a range of social and environmental areas.

In Geography students are able to examine some of the most important issues facing the future of our nation, including:

- the effects of human settlement on Australia's land, and the ways these effects are managed
- the management of water, drought, and coastal areas, where human pressures interact with physical processes to threaten some of Australia's favourite environments
- the sustainability of our use of regional, national and global environments
- why different cultural groups (e.g. indigenous, settler, immigrant) understand and engage with the environment differently, and how this can lead to land-use conflict
- why Australia's population is so highly centralised in a few cities, and how the problems resulting from the growth of these cities can be managed
- regional differences in economic and social well-being, and the implications of these differences for individuals, communities and governments
- the movement of Australians between regions, the causes of these movements, and their demographic, economic and social effects
- the changing nature of 'community' and 'identity' in Australia, as a result of greater mobility, international migration, the increased use of telecommunications, and social change

Australia needs its citizens to understand these issues, and its workforce to have the skills and knowledge to manage them.

Geography nurtures our natural curiosity in, and appreciation of, the world's people and places

Most students have an innate interest in the world around them (think of the popularity of documentaries on *National Geographic* and *Discovery*). Geography nurtures this interest, engaging students by dealing with the real world of the 21st century, from their local neighbourhood (e.g. development on a floodplain), to the national (e.g. drought and its effects on agriculture), to the global (e.g. potential pandemics). Geography provides the understandings that lead to a more informed appreciation of Australia's and the world's natural and social environments, and of the need to manage resources for the well-being of our own and other species. These resources range from mineral products, through the soil and water resources that are essential to agriculture, to 'environmental services' such as waste decomposition. The appreciation of environments in Australia and elsewhere contributes to students' valuing and caring for places.

Geography creates spatially literate students

Geography develops spatial literacy (the ability to understand and make effective use of spatial information) that has breadth, depth and scope. Students gain an in-depth understanding of essential geographical, and spatial, concepts such as location, distribution, scale, spatial association, spatial interaction and spatial interdependence. Spatial technologies, such as Geographical Information Systems (GIS), are being increasingly used in Geography classrooms. ANZLIC, the intergovernmental Spatial Information Council, has recognised that Australia's economic growth, and social and environmental interests are underpinned by spatially referenced information. ANZLIC and industry bodies are concerned at the growing shortage of people with spatial skills in Australia and that these skills shortages will limit the industry's growth and its ability to meet changing and growing demands in areas such as land markets, environmental management, disaster management, national security, community services and transportation.

Geography develops competencies essential in the work place and leads to careers in areas such as spatial sciences, resource management and urban planning

Geography gives students a solid grounding in specific areas of content and skills essential to a growing number of jobs – people/environment relationships, spatial perspectives, places and regions and the links between them. Geography develops key competencies valued in the workplace, that is, Geography students: collect, analyse and organise information; communicate ideas and information; plan and organise activities; use mathematical ideas and techniques; solve problems; and apply an understanding of cultures. Geography also builds competence in working with information and communication technologies (ICT) and working in teams.

Those who have studied Geography work in areas such as spatial sciences, urban planning, natural resource exploration, mapping and management, various levels of government and a variety of fields related to scientific investigation. Undertaking Geography as a field of tertiary study can lead to a number of fulfilling career prospects including:

- natural resource management, including atmospheric, coastal, river and catchment systems
- geographical information science
- environmental planning and management
- planning the delivery of services (e.g. health and infrastructure)
- national parks and wildlife conservation
- ecotourism
- environmental consultancy
- policy development
- disaster management
- community development

Geography is an excellent medium for education

Geography brings the rigour and depth of an academic discipline. Geography as a discipline-based field of study is distinguished by its key concepts and by its methods of enquiry and the questions guiding its research. Discipline-based study greatly enhances the student's capacity to explain, rather than simply describe. These skills of description and explanation are the essential bases for effective criticism, evaluation and action. Students need a structured grounding in skills and knowledge if enquiry learning is to be effective. Students value rigour and challenge in learning. The challenge is only defeating if they do not have the tools to meet it.

Geography develops an exceptional range of skills, e.g. literacy, numeracy, oracy, graphicacy, ICT, decision-making. An important feature of Geography is the emphasis placed on learning a wide range of transferable skills, possibly wider than any other subject.

Geography presents varied and stimulating opportunities to develop literacy and numeracy skills. The study of Geography is both qualitative and quantitative. Geography is therefore ideally placed to develop skills in both literacy and numeracy. Students undertake purposeful reading and writing tasks in a variety of forms, ranging from reports to poetry. Constructive spoken communication (oracy) is encouraged in role-plays, presentations, fieldwork interviews, etc. Numerical skills are developed in contexts which can be both extrinsically and intrinsically motivating since they are concerned with real life situations. For instance, students may collect numerical data in activities such as stream monitoring and traffic surveys. They then process the data and produce graphs and tables to present their findings. In using maps, students work with scale, distance and area.

Geography provides many opportunities to master information and communications technologies (ICT). ICT can be used in all phases of a geographical enquiry. Students might use GPS (Global Positioning System) in the field to identify a location, collect up-to-date information from the web, make observations using Google Earth or a webcam, record information in a spreadsheet. Students can use GIS (Geographical Information Systems) to help analyse and synthesise data. Students could present their findings by creating a website, or exchange information with a distant sister school electronically.

As well as spatial literacy (see previous page), Geography builds the skills of graphicacy through work with visual images such as maps, satellite images, photographs, diagrams. Geography also develops skills in data manipulation – transforming data from one form to another, for example, numerical data to text and map formats, tabular to graphs, matrix and graphical to written. In addition, Geography makes a major contribution to the student's acquisition of skills used in research, analysis, synthesis, decision-making and communication.

Geography caters for a variety of learning styles. Geography, when taught well by teachers trained in the subject, is a very motivating subject for students with a range of strengths and abilities. For instance, students positively enjoy the fieldwork that is an essential part of geographical education. Geography lends itself to a variety of learning styles which gives students wide opportunities for self fulfilment, for example: verbal/linguistic – listen to expository teaching, interview for a survey, write essays; visual/spatial – interpret aerial photos, create climate graphs, produce field sketches; logical/mathematical – classify and categorise information, analyse data, solve problems; bodily/kinesthetic – undertake practical fieldwork, build models; interpersonal – work in groups, empathise with others' perspectives on an issue; intrapersonal – reflect on own learning.

The issue

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The lower number of students choosing Geography can partly be attributed to competition from a range of new subjects such as legal studies, accounting, business studies, environmental and outdoor education, tourism, sustainable futures and behavioural studies. These subjects, which perhaps should be taught as vocational subjects or left until the tertiary level, have displaced subjects of basic educational value such as Geography. In order to maintain the necessary emphasis on the core subjects it may be necessary to rationalise the overcrowded curriculum and its ever-expanding list of subjects.

Anecdotal evidence suggests that some students appear to avoid Geography because of a perception that it has an above average workload. This is perhaps related to its academic rigour. There is also a false impression among some students and parents that Geography is not vocationally relevant.

Geography's task is to write the Earth. The problem is that the discipline needs re-energising. It has been bruised by competing claims in high-school and university curricula. In New South Wales, the number of students taking HSC geography is less than one third its level of 15 years ago. This has impacted on entry-level university geography programs. – Bill Pritchard and Nick Hutchinson, 'True Blue Geography'

The solution

Geography needs to be a compulsory part of every student's education up to Year 10, and a stand-alone subject in secondary schools

This document outlines the value of Geography. These benefits are so important that every student should study Geography up to and including Year 10.

In primary schools, Geography should be taught through structured and sequenced units. This systematic approach is needed so that all students acquire knowledge of key geographical facts and an understanding of basic geographical concepts and skills, to create a platform for later studies. With the lack of specialist Geography teachers in primary schools, Geography may well be part of a broader social science subject at this level.

In secondary schools, the benefits of studying Geography, with the required continuity and progression in acquiring knowledge and in developing understandings and skills, can only be delivered through a stand-alone subject. An single amalgamated subject such as Studies of Society and Environment (SOSE) is not the sum of its parts, and students do not gain a depth of understanding of each of Geography, History, Sociology, Economics, Anthropology and Politics.

Geography has its own widely used and effective method of enquiry based on the questions: Where is it and what is it like? Why is it there and how did it happen? How is it changing? What impacts does

it have? How should it be managed? Geographical enquiry differs from the social investigative model in its need for cumulative study and in its syntax of enquiry. The syntax of disciplines has disappeared in SOSE to be replaced by unsequenced generic activities that do not adequately provide students with the steps required to create new knowledge.

In secondary schools it is essential that Geography be taught by qualified Geography teachers

In order to be taught with academic rigour, Geography should be taught in secondary schools by trained Geography teachers who meet high standards. Geography is not a generalist subject. If teachers lack strong disciplinary skills and knowledge, and a passion for the subject, then the Geography they try to teach will be second rate. This can result in students becoming disillusioned with the subject, leading to lower enrolments in Geography in the senior years.

Primary school teachers should have completed at least an introductory Geography course so that they have a basis on which to teach the geographical component of the primary curriculum.

The Geography curriculum needs to include understandings and skills identified as core.

Students should develop knowledge and understanding of the human and natural characteristics of places and the interactions between them, in Australian and international contexts, and of the central concepts of Geography. In particular they should develop knowledge and understanding of:

- locations and places, in order to set national and international events within a geographical framework and to understand basic spatial relationships
- major bio-physical systems of the Earth (landforms, soils, water bodies, climate, vegetation), in order to understand the interaction within and between ecosystems
- major socio-economic systems of the Earth (agriculture, settlement, transport, industry, trade, energy, population and others), in order to achieve a sense of place
- the relationships between land and people; an ecological approach that links aspects of the natural environment of a particular area with a human population occupying or modifying it
- different ways of creating environments according to differing cultural values, religious beliefs, technical, economic and political systems, to help facilitate understanding of the diversity of peoples and societies on Earth and the cultural richness of humanity
- the structure and processes of the student's local region and of Australia as daily action space; and the challenges of, and opportunities for, global interdependence

Students enjoy learning about diverse places. The study of Geography should encompass a broad and balanced range of locations – the student's local area, elsewhere in Australia, the Asia-Pacific region, and other places in the world. These should be studied at a variety of scales – local, regional, global.

Students should develop a deep understanding of the central organising concepts of Geography, which include: location, distribution, scale, place, region, movement, spatial association, spatial interaction, spatial interdependence and spatial change over time.

Students should develop a range of intellectual and practical skills, both transferrable and specific to the discipline. The Geography curriculum should be designed so that students become proficient in the use of a range of transferrable skills such as:

- identifying questions and issues
- collecting and structuring qualitative and quantitative information
- processing, evaluating and interpreting information

- developing generalisations
- assessing alternatives with respect to their own position
- making decisions on the basis of evidence
- working co-operatively in team situations
- presenting information in a variety of ways

Skills specific to Geography should increase in complexity and include:

- thinking geographically, guided by the questions: Where is it and what is it like? Why is it there and how did it happen? How is it changing? What impacts does it have? How should it be managed?
- fieldwork techniques such as planning, observing, interviewing, measuring, recording, photographing, sketching
- acquiring, analysing and applying spatially referenced data, including using GIS
- creating maps (including choropleth, land-use), graphs (including climate graphs, population pyramids), diagrams (including cross-sections), field sketches
- using and interpreting those, and also satellite images, aerial photographs, atlases, topographic maps, orthophoto maps, synoptic charts, block diagrams

Students should develop informed attitudes and values related to environmental sustainability, a just society, and democratic processes. The Geography curriculum contributes to values education in the context of its investigations on a local, national and global scale. Geography develops specific understandings and skills to assist students to analyse and clarify their own values, and understand the values of others. The geographical concepts of place, distribution, spatial interaction and spatial interdependence are particularly relevant to exploring the values of environmental sustainability and social justice. The skills and knowledge developed in Geography help students become active and informed citizens, contributing significantly to the democratic process.

Geography is able to develop sound values and critical skills in studies of contemporary issues where values permeate the content and learning experiences. Rather than a number of value positions being accepted as given, the emphasis is strongly on values being taught by example, and developed by the individual through interaction with a diversity of human situations and of philosophical approaches to current issues.

Conclusion

There is a growing international consensus that the integrated model of social education does not deliver an effective education in the contributing disciplines. Including Geography in the core curriculum to Year 10, and teaching it as a distinct subject in secondary school, is the best way to give students the framework to understand the world around them.

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