

Report to the Department of Education,  
Employment and Workplace Relations

## **A Study into the Teaching of Geography in Years 3-10**

Final Report

February 2008



# A Study into the Teaching of Geography in Years 3-10

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Erebus International

February 2008

# Executive Summary

## Background to the Study

On 18<sup>th</sup> June 2007, the then Minister for Education, Science and Training, the Hon Julie Bishop MP, announced this study of the teaching of geography in Australian schools. The then Minister's press release outlined the purpose of the study as being to "investigate why there has been a decline in the quality of the content and rigour in the teaching of geography in our schools".

This initiative follows representations made by several organisations including the Institute of Australian Geographers (AIG) and the Australian Geography Teachers' Association (AGTA) who have raised concerns that too little geography is being taught in schools. The then Minister noted that parents have also raised concerns about the lack of rigour in the teaching of geography. These concerns have also been raised with the 2007 Senate Employment, Workplace Relations and Education Committee Inquiry into the Academic Standards of School Education.

The Australian Geography Teachers' Association recently released figures showing a national decline in enrolments in geography courses in Year 11 and 12. New South Wales, the only State or Territory to have a separate, mandatory geography course in Years 7-10 also experienced a decline in enrolments in Year 11 and 12 (Ferrari, 2006). The proportion of HSC students sitting geography has fallen from 14% to 7.5% last year. Victoria is reintroducing geography as a separate subject in the humanities domain after watching the number of students decline from more than 4,000 in 1992 to just over 2,500 in 2004. The decline in South Australia (from about 2,000 in 1996 to 1,500 in 2004) coincided with the rise in the number studying tourism (837 to 1,856). The president of AGTA, Mr Nick Hutchinson commented that some of the fundamentals of geography had been lost, with school curriculums instead focusing on solving problems.

In summary, the concerns about the teaching of geography centre on the loss of specific focus on geographical skills and knowledge that has occurred with the incorporation of geography, along with history and a number of other areas of learning into broader curriculum groupings of Studies of Society and Environment (SOSE). The submission by the Australian Geography Teachers Association to the 2007 Senate Inquiry sums up the situation as follows:

*It is theoretically possible for primary school students to acquire geographical knowledge and skills within the Key Learning Areas of SOSE, Science (which includes some aspects of physical geography) and Mathematics (which includes some elements of mapping skills). In reality this is wholly dependent on how those Key Learning Areas are delivered by individual teachers and schools. If the primary school teachers themselves do not have a thorough grasp of geographical concepts and skills, then they are likely to structure their units to concentrate on areas they feel more comfortable with, such as history or culture, while geographical material is at best only addressed superficially.*

Perceptions of the increasing threat to geography as a distinct area of academic inquiry within schools and universities are not new, nor are they limited to the Australian context.

It is apparent that the integrity of geography has been progressively undermined over a number of years by many factors. As will be discussed later in this report, the number of students in Australia studying geography has been declining since at least the early 1990s, and many of the factors thought to be influencing this decline are no less relevant today. The situation in the United Kingdom has many similarities to that seen in Australia, and many of the proposals put forward by geography teachers and professional associations in that country have some resonance with recommendations made in relation to the Australian education system.

It should be noted that concerns about the adequacy of the Studies of Society and Environment curriculum grouping are not limited to the apparent impact on geography. Similar concerns have also been expressed about the teaching of history, and over the past two years the Australian Government has supported initiatives to strengthen the place and maintain the integrity of Australian history in the school curriculum. These initiatives include the convening of a summit with a number of leading Australian historians and educational specialists, and the commissioning of a number of papers.

The present study aims to provide information of a similar kind on the current approaches of all states and territories to the teaching and learning of geography and on what a young Australian should know about geography by the end of Year 10.

#### Terms of Reference

The terms of reference for this Review were as follows:

1. Outline what geography is taught in each jurisdiction from Years 3-10, where it is structurally located within the curriculum (as a stand-alone subject or as part of Studies of Society and the Environment), the number of hours mandated (where applicable) and include appendices with relevant excerpts on geography content from syllabuses and curriculum frameworks across the country;
2. Review and analyse current pedagogical practices and factors which affect the quality of teaching and learning of geography in Australian schools;
3. Identify any gaps in existing provision; and
4. Make recommendations on what geography every Australian student should know before they complete Year 10.

#### Methodology for the Study

This study involved several components:

##### **1. Literature Review and Document Analysis**

A review of the relevant literature relating to the teaching of geography in Australian schools from Years 3 to 10 was an important element of the study. The literature review focused on current views on appropriate content and pedagogical practices, and means of curriculum organisation that optimise learning within this subject area.

##### **2. Review of current State/ Territory curriculum documents**

A second part of the methodology for this project supporting the literature review was a mapping of state/territory syllabus and curriculum documents to identify opportunities for teaching and learning of geography.

The mapping exercise identified where geography is structurally located within the curriculum (for example, as a stand alone subject or integrated study), the number of hours of study mandated (where applicable), and topics covered.

### 3. Consultations and Liaison with Stakeholders

To supplement information gathered from the literature review and curriculum mapping, face to face and telephone interviews were conducted with representative stakeholders from such organizations as the Australian Geography Teachers' Association (AGTA), Institute of Australian Geographers (IAG) and a sample of informed stakeholders from educational jurisdictions nationally.

The curriculum mapping exercise was followed up with interviews with relevant jurisdiction officials to clarify preliminary analyses of the data. These interviews allowed exploration in greater depth issues such as factors facilitating or hindering implementation of policies in relation to the teaching of geography.

### Conclusions

From the curriculum mapping exercise conducted for this study, it is readily apparent that all education jurisdictions consider that the study of geography is an important part of the programme of study for students in years 3-10 and recognise the benefits to students' all-round development from this study.

*Any national geography curriculum initiatives should not be just about geography (and history) versus social education (SOSE) or geography replacing SOSE. Rather they should be about how studies of geography are significant contributors of knowledge, understandings, skills and capacities (ways of seeing and engaging in the world) that enables students to participate, in a range of ways, as ethical, active and informed citizens in a democratic society within a global community. (Submission by SA Department of Education and Children's Services)*

The study of geography in one form or other has long been part of the Australian school curriculum. While now studied by relatively few students at senior secondary levels, there is still a strong expectation in all states and territories that young people will be exposed to key concepts of Place and Space, specific skills such as map reading and the development of higher order skills of analysis and interpretation of data as part of the explanation of the world they live in.

As the then Minister for Education, Science and Training, the Hon Julie Bishop MP noted in announcing this Review, "The teaching of geography is vital to link students with society, culture and the physical environment at the local, national and global level" (Ministerial Media Release, 18 June 2007). The debate of the present time, concerns not so much whether the study of geography is important or not – but how it should best be taught within the context of the curriculum as a whole.

This Review explored some of the perceived deficiencies in current approaches to teaching geography, and particularly the impact of the introduction of the SOSE curriculum. Geography teacher professional associations have lobbied strongly to re-introduce geography as a core subject, as a strategy to reverse the significant decline in the number of students in Australia studying this subject in any depth. They rightly point to the challenges facing the discipline now and into the future if the number of teachers with sufficient knowledge and skills in the area is not significantly increased.

Criticism of the integrated approach to teaching the humanities as a means of addressing curriculum overcrowding is not new. The argument has been made that the absorption of geography into SOSE has led to several problems.

Firstly, the geographical content of SOSE is often taught by teachers with no training in geography, and perhaps with no great enthusiasm for the subject. Teachers in several states report that SOSE teachers in Years 8-10 are expected to teach across the disciplines of history, geography and economics, even though they may have studied only one of these subjects at university level. This is not conducive to good education (Council of the Institute of Australian Geographers, 2007).

Second, SOSE syllabuses are organised into complex structures of essential learnings, values, processes, strands and concepts, which do not adequately allow for a focus on geographical questions and their analysis. A concept-structured syllabus also makes it difficult to examine a geographical question from a variety of perspectives, using a variety of concepts, as is typically done in geographical inquiry. The experience of many teachers has been that the absorption of geography into SOSE has meant a loss of much of the content, rigour and skills taught when geography was a separate subject. They find that students taking up geography in the final years of high school are lacking much of the basic knowledge needed for that level of study (CIAG 2007).

While it is important to recognise the factors that have negatively impacted on the teaching of geography, it is also important to note, and encourage practices that have a positive impact on learning in this area. The following list, proposed by the Geography Teachers Association of South Australia, and encapsulating the views of other contributors to this study, summarises what are considered to be good practices in school organisation, curriculum focus and pedagogy for supporting the study of geography. The list suggests that the quality of geographical education is enhanced by the following factors:

- Geography teaching and learning is provided with adequate time in the curricula
- Qualified geography teachers who have the academic background and skills to facilitate rigorous and in depth learning
- Teachers who have a passion for the subject and believe in its value in the curriculum and are innovative
- Teachers who want to teach the subject rather than being required to as is at times the case when geography is combined into SOSE
- Teachers who keep their knowledge and skills current
- Teachers who embrace and are confident to utilize new technology
- Teachers who develop positive relationships with their students
- Class size-large classes reduce the opportunities for individual students to interact and be assisted by teachers
- Access to technology such as computers, Geographic Information Systems, broadband internet access, software programs
- Access to excursions and fieldwork. These activities develop students' skills but also to connect classroom learning with real world applications
- Students understanding the relevance of what they are learning to themselves and others
- Activities that involve problem solving and higher order thinking skills. These challenge and extend students.

- Incorporating current learning theory into teaching practices, for example, Multiple Intelligences and Thinking Skills
- Incorporating a range of different learning activities in the classroom that cater for the different learning style preferences of students, e.g. role plays, group work, individual research, and team investigations
- Opportunities for student involvement in practical community based projects, e.g. water care, coast watch, Trees for Life. These activities involve students putting their learning into action and empower students.
- Access to quality and current resources (GTASA submission, 2007).

This list is perhaps not exhaustive, but is indicative of some of the areas to be addressed if the teaching of geography is to be enhanced. The principles enunciated suggest that enhanced student learning will not come about simply by re-designing the curriculum, but will require significant effort on a number of fronts over a period of time. As other submissions point out, even if geography was re-establishing as a stand alone subject, issues relating to the supply of teachers and quality of instruction would remain to be addressed.

There are no easy answers to the question of what geography Australian students should know. While it is certainly possible to identify more or less comprehensive lists of topics, concepts, skills and areas for inquiry that are common across state and territory Year 3 - 10 curriculum frameworks, or to consolidate the "wish lists" of stakeholders (see the body of the report and Appendices for examples), there will be ongoing debate about any proposal put forward. This debate is healthy, and this report should therefore be seen as the starting point for further discussion within the profession. Experienced geography teachers can teach good geography to their students despite the current limitations, or the perceived constraints or advantages of their particular syllabus or curriculum. They find ways of acquiring appropriate resources and manage to inspire their students. But, as one submission put it, it shouldn't be this way. It is neither equitable nor nationally acceptable that some students are well-prepared to understand the world around them and the forces that have, and will continue to shape this world, while others are not. Both the curriculum and school practice should facilitate the students' cumulative understanding of geographical concepts and their development of geographic skills at increasing levels of complexity and in different contexts. All Australian students should have these opportunities, not just the lucky few.

This Review provides a contribution towards the ongoing debate about the development of a future national approach to geography, and provides a sample curriculum for further discussion.

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## Acknowledgements

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We would also like to acknowledge the contribution to this report by Mr Ian Sinclair.

While the information presented in this report draws on the contributions of a range of stakeholders, responsibility for the accuracy of the findings and the conclusions drawn are, however, the responsibility of Erebus International.

Dr Tim Wyatt  
Dr Robert Carbines  
Ms Leone Robb  
*Erebus International*

# Chapter 1. Introduction

## 1.1 Background to the Study

On 18<sup>th</sup> June 2007, the then Minister for Education, Science and Training, the Hon Julie Bishop MP, announced this Review of the teaching of geography in Australian schools. The then Minister's press release outlined the purpose of the Review as being to "investigate why there has been a decline in the quality of the content and rigour in the teaching of geography in our schools".

This initiative follows representations made by several organisations including the Institute of Australian Geographers and the Australian Geography Teachers Association, who have raised concerns that too little geography is being taught in schools. The then Minister noted that parents have also raised concerns about the lack of rigour in the teaching of geography. These concerns have also been raised with the 2007 Senate Employment, Workplace Relations and Education Committee Inquiry into the Academic Standards of School Education.

In summary, these concerns centre on the loss of specific focus on geographical skills and knowledge that has occurred with the incorporation of geography, along with history and a number of other areas of learning into broader curriculum groupings of Studies of Society and Environment (SOSE). The submission by the Australian Geography Teachers Association to the 2007 Senate Inquiry sums up the situation as follows:

*It is theoretically possible for primary school students to acquire geographical knowledge and skills within the Key Learning Areas of SOSE, Science (which includes some aspects of physical geography) and Mathematics (which includes some elements of mapping skills). In reality this is wholly dependent on how those Key Learning Areas are delivered by individual teachers and schools. If the primary school teachers themselves do not have a thorough grasp of geographical concepts and skills, then they are likely to structure their units to concentrate on areas they feel more comfortable with, such as history or culture, while geographical material is at best only addressed superficially.*

More recently, in October 2006, the Premiers and Chief Ministers of all states and territories meeting as the Council for the Australian Federation established a steering committee, chaired by Professor Peter Dawkins, Secretary of the Victorian Department of Education, to review the 1999 *Adelaide Declaration on National Goals for Schooling in the Twenty-First Century*. A paper, *The Future of Schooling in Australia*, released by the Council on 24 April 2007, notes that SOSE had been "criticised by a number of commentators, partly because its focus is not clear from the label" and that it had become "increasingly clear that what should be studied under this label, are the disciplines of history, geography and economics". *The Future of Schooling in Australia* does not specify a timeframe or mechanisms for such a change.

Perceptions of the increasing threat to geography as a distinct area of academic inquiry within schools and universities are not new, nor are they limited to the Australian context. It is apparent that the integrity of geography has been progressively undermined over a number of years by many factors. As will be discussed later in this report, the number of

students studying senior-level geography has been declining since at least the early 1990s in Australia, and many of the factors thought to be influencing this decline are no less relevant today (see for example, Cranby, 2001 for a discussion of these factors). Likewise, the situation in the United Kingdom has many similarities to that seen in Australia, and many of the proposals put forward by geography teachers and professional associations in that country have some resonance with recommendations made in relation to the Australian education system.

It should be noted that concerns about the adequacy of the Studies of Society and Environment curriculum grouping are not limited to the apparent impact on geography. Similar concerns have also been expressed about the teaching of history, and over the past two years the Australian Government has supported initiatives to strengthen the place and maintain the integrity of Australian history in the school curriculum. These initiatives include the convening of a summit with a number of leading Australian historians and educational specialists, and the commissioning of a number of papers to inform the summit, including two papers were produced for the summit – *An Overview of the Teaching and Learning of Australian History in Schools*, prepared by Tony Taylor (Associate Professor of Education, Monash University) with Anna Clark (Australian Postdoctoral Fellow, Monash University) and *The Teaching of Australian History in Australian Schools: A Normative View*, prepared by Associate Professor Gregory Melleuish (Associate Professor of History and Politics, The University of Wollongong). Associate Professor Taylor’s paper summarises the approaches of all states and territories to the teaching and learning of Australian history and draws on current curriculum documentation. Associate Professor Melleuish’s paper provided a view of what a young Australian should know about Australian history by the end of their Year 10 schooling.

The present geography study aims to provide information of a similar kind on the current approach of all states and territories to the teaching and learning of geography and on what a young Australian should know about geography by the end of their Year 10 schooling.

## 1.2 Terms of Reference

The terms of reference for this Review were as follows:

1. Outline what geography is taught in each jurisdiction from Years 3-10, where it is structurally located within the curriculum (as a stand-alone subject or as part of Studies of Society and the Environment), the number of hours mandated (where applicable) and include appendices with relevant excerpts on geography content from syllabuses and curriculum frameworks across the country;
2. Review and analyse current pedagogical practices and factors which affect the quality of teaching and learning of geography in Australian schools;
3. Identify any gaps in existing provision; and
4. Make recommendations on what geography every Australian student should know before they complete Year 10.

## Methodology for the Study

This study involved several components:

### 1. Literature Review and Document Analysis

This study required a review of the relevant literature relating to the teaching of geography in Australian schools from Years 3 to 10. More particularly the literature review focussed on current views on appropriate content and pedagogical practices, and means of curriculum organisation that optimise learning within this subject area.

### 2. Review of Current State/ Territory Curriculum Documents

A second part of the methodology for this project supporting the literature review was a mapping of state/territory syllabus and curriculum documents to identify opportunities for teaching and learning of geography.

The mapping exercise identified where geography is structurally located within the curriculum (for example, as a stand alone subject or integrated study), the number of hours of study mandated (where applicable), and topics covered.

### 3. Consultations and Liaison with Stakeholders

The curriculum mapping exercise was followed up with interviews with relevant jurisdiction officials to clarify preliminary analyses of the data. These interviews allowed exploration in greater depth issues such as factors facilitating or hindering implementation of policies in relation to the teaching of geography. Participants were provided with a prior copy of the semi-structured interview schedule based on the research questions for this study to help them prepare for the interview.

An important aspect of this study involved testing the findings of the literature review with stakeholders in the field. Face to face and telephone interviews were conducted with representative stakeholders from such organizations as the Australian Geography Teachers' Association (AGTA), Institute of Australian Geographers (IAG) and a sample of informed stakeholders from educational jurisdictions nationally. Initially, the consultations identified effective strategies or characteristics not revealed by the data or the literature review. In addition, the consultations provided an opportunity for gathering key insights about the future direction of teaching geography at both the school and systemic levels.

## Chapter 2. Findings

### The Teaching of Geography across Australia: Years 3-10

#### Introduction

This overview summarises the curriculum approaches of all states and territories to the teaching and learning of geography. The information has been collected primarily from curriculum documents that are available through the jurisdictions' websites. A caveat is that the web-based sources provide no information regarding policies under review. Accordingly, as the document was constructed in May-June 2007, the interpretations were drawn from documents available at that time, but may be subject to change in the near future.

The summaries are arranged alphabetically by jurisdiction for convenience. For each jurisdiction, a background statement provides information about the overall curriculum structure; that is followed by a statement that places geography, generally, in that curriculum. An analysis of the manner in which learning in geography (Years 3-10) is described and a summation completes the section on the jurisdiction. A concluding statement for the paper draws the threads together using the evidence provided and other material presented in the Appendices.

The Appendices are designed to be illustrative rather than a comprehensive representation of all current curriculum and syllabus documents. They contain snapshots drawn from the jurisdictions' documents. This is done to amplify statements and arguments presented in the body of the paper.

The following matrix is provided below to facilitate comparisons.

**Table 1: Geography Curricula Years 3-10 in Australian Jurisdictions**

Jurisdiction	Curriculum: Primary	Curriculum: Secondary	Mandatory geography post primary	Mandated geography hours
ACT	SOSE*	SOSE+	No	No
NSW	HSIE	Geography	Yes (reported)	Yes
NT	SOSE	SOSE	No	No
QLD	SOSE	SOSE	No	No
SA	S&E**	S&E	No	No
TAS	SOSE	SOSE	No	No
VIC	Humanities	Humanities (Geography)	Yes (reported)	No
WA	SOSE	SOSE	No	No

\* Studies of Society and the Environment \*\* Society and Environment

+ Geography is stand-alone subject in many non-government secondary colleges

## Australian Capital Territory

### Background

The Australian Capital Territory school education system locates curriculum decision-making within schools and provides a framework for curriculum design and management. The framework for schools comprises “ten principles that underpin the curriculum and curriculum decisions schools make when exercising their school-based curriculum responsibility. The first two principles [create] the framework. Eight principles support schools in making school-based curriculum decisions on the basis of the framework” (ACT, *Every Chance to Learn Phase 2 Framework*, p.7). The curriculum is based on twenty-six Essential Learning Achievements (ELAs) that are described with *markers of progress* and *essential content* in four bands of development; early childhood, later childhood, early adolescence and later adolescence (Appendix 3.1).

The third phase is expected to be completed late 2007, ready for implementation in all ACT schools (preschool to Year 10) from 2008.

It is the school’s role to use the framework provided to ensure all ELAs are mapped to curriculum organisers and all essential concepts, understandings, skills and knowledge are placed into an appropriate learning program. The schools, accordingly, have autonomy of interpretation.

Secondary schools in ACT Government schools generally teach geography in the context of Studies of Society and the Environment (SOSE). Primary schools teach geography either through an Integrated Inquiry approach or SOSE. Geography is available and taught reasonably prominently in non-government secondary colleges (Freeman, 2006).

### The Place of Geography

A geography syllabus is not prescribed, as such in the ACT. The intention for students to acquire essential geographical understandings, skills and knowledge is represented in the curriculum framework through the Essential Learning Achievements (ELAs), most obviously in ELAs, 14, 19, 20 & 22:

- ELA 14: *The student recognises and represents patterns and relationships* “...is the creation and use of visual representations of position, space and relationship, including maps, plans, models, drawings, graphs, diagrams, charts, concept maps, networks and timelines. ... It is also underpinned by geospatial concepts of location, distance, region, scale and distribution.” (p.92)
- ELA 19: *The student acts for an environmentally sustainable future*. The essential content “promotes environmental stewardship, encouraging everyone to recognise that they are a part of the environment and to act as caretakers and custodians of the environment. It considers environments as complex systems in which changes to one part affect the system’s functioning as a whole. It examines the impact of humans on the Earth’s ecosystems, natural resources, climate systems and animal and plant populations, and how the environment shapes human activities.” (p. 126)
- ELA 20: *The student understands about Australia and Australians*. The essential content addresses “the events, spaces and diverse people that make up Australia, the interrelationship of primary and secondary sources of information, as well as

geographical tools such as maps, to describe and draw connections between people, places and events in Australian history and geography.” (p.132)

- ELA 22: *The student understands about world events and issues.* The essential content addresses “identifying and evaluating the political, cultural, social and environmental events and issues that shape the world. It involves examining significant event that have shaped the history and geography of other countries, as well as examining world issues and events of current relevance and interest to the global community. It is underpinned by the concepts of: time, continuity and change; cause and effect; and place and space.” (p.145)

Statements of *essential content*, *the opportunities to learn* and the development of *values and attitudes* complete the curriculum construct.

Appendix 4 shows examples of the essential content demonstrating a possible scope of teaching within each ELA and the markers of progress that show what students should know as they complete each band of development.

### Geography Years 3-10

The relevant *essential content* statements incorporate geographical knowledge, skills and concepts across the later childhood and early adolescence bands of child development. The *essential content* includes concepts such as natural and built features, landforms and geographical features. The *opportunities to learn* include items such as recognising and creating maps, interpreting map and mapping symbols and the use of photographs to learn about geographical ideas. To demonstrate how geographical concepts are included in the curriculum, an amalgamated extract from ELA 20 is located in the appendix.

The number of hours devoted to the study of geography is not mandated in the ACT, but is decided by individual schools.

### Comment

The ACT’s curriculum framework, as articulated in the document *Every Chance to Learn*, is currently undergoing revision. This process has involved opportunities for consultation, school trialling, an external validation, and audits of current curriculum practices. This process has highlighted gaps and provided the opportunity to strengthen the geography understandings, knowledge and skills to be taught in ACT schools.

ACT schools are responsible for the development of curriculum within the guidance of the ACT curriculum renewal framework. It is expected that the ELAs and the essential content are covered within the context of each school. Pedagogical practice of individual teachers and schools is being supported at system level by professional learning opportunities and preparation of exemplar units of work. However, since local decision-making is such a strong part of the ACT school system, the extent to which individual schools implement the curriculum can vary considerably.

Schools in the ACT are currently mapping their curriculum to ensure that all essential content is covered and each student has every chance to learn. While geography as a separate study or discipline is not being taught as such, it is being taught in the context of ELAs. The understanding about what every student should learn is described in a combination of the markers of progress and the essential content relating to the four ELAs mentioned.

Pedagogical practices and factors which affect the quality of teaching and learning, are the professional responsibility of the school and teachers. The ACT Department of Education supports the development of quality teaching practice through professional learning and exemplar units of work that are aligned with the framework.

The ACT curriculum describes learning in “framework terms” as distinct from key learning area, subject or single discipline terms. These learning structures represent an holistic approach to learning and the curriculum, reflecting the view that learning in the 21<sup>st</sup> Century is increasingly assuming an interdisciplinary, unit based integrated and thematic dimension which some believe is a more effective mode of delivery than stand alone subjects.

## New South Wales

### Background

The NSW Board of Studies provides the curriculum for both primary and secondary years. Students are grouped in stages with Stages 2 & 3 (Years 3 & 4 and 5 & 6) in the primary years and Stages 4 & 5 (Years 7 & 8 and 9 & 10) in the secondary. The curriculum and its supporting documents are comparatively prescriptive with sample units of work supplied to support teaching in each area.

### The Place of Geography

In the primary years, geography is taught as part of Human Society and Its Environment (HSIE) and in secondary schools, geography is essentially mandatory in Years 7-10.

For the primary school years, HSIE replaced the Investigating Social Studies (K-6) and General Religious and Moral Education curricula in the mid 1990s. The HSIE curriculum states, “Through the learning experiences in this syllabus, students will develop knowledge and the essential understandings about Australia’s history and geography...”

([http://k6.boardofstudies.nsw.edu.au/hsie/pdf\\_doc/k6\\_hsie\\_syl.pdf](http://k6.boardofstudies.nsw.edu.au/hsie/pdf_doc/k6_hsie_syl.pdf) p.5).

Geography is a stand-alone, mandatory course in the NSW junior secondary curriculum.

### Geography Years 3-10

#### *Primary School Years 3-6*

HSIE syllabus outcomes are organised in four strands: change and continuity; cultures; environment; and social systems and structures. The syllabus and its accompanying documents detail the outcomes, knowledge and skills students are expected to gain in HSIE. The elements of geography are introduced and expanded as the student progresses.

The most obvious geographical outcomes are located in the *environments* dimension that is divided in two strands: *patterns of place and location*; and *relationship with places*. Each of these is described for all the primary stages and the accompanying documents include

foundation statements; sample scope and sequence statements; and units of work. These are available to guide and facilitate teachers' work.

### *Secondary School Years 7-10*

Geography is taught as a mandatory subject for 100 hours in each of Stages 4 and 5 (Years 7-10). The syllabus has two key dimensions: *spatial*; and *ecological* and the students essentially learn *global* geography in Stage 4 and *Australian* geography in Stage 5. With the satisfactory completion of the course, students receive a grading on their School Certificate, the 100 hours geography in Stages 4 and 5 being "a requirement for eligibility for the award of the School Certificate".

See [http://www.boardofstudies.nsw.edu.au/syllabus\\_sc/pdf\\_doc/sc-course-descriptions.doc](http://www.boardofstudies.nsw.edu.au/syllabus_sc/pdf_doc/sc-course-descriptions.doc), p.15.

An elective geography course can be studied at any time in Years 7-10 for either 100 or 200 hours. The course "provides students with a broader understanding of the discipline of Geography and the processes of geographical enquiry, and enables depth studies [sic] through flexible learning in a choice of focus areas" (Bliss, 2006).

See [http://www.boardofstudies.nsw.edu.au/syllabus\\_sc/pdf\\_doc/sc-course-descriptions.doc](http://www.boardofstudies.nsw.edu.au/syllabus_sc/pdf_doc/sc-course-descriptions.doc), p.14.

### Comment

The NSW HSIE and geography curricula are prescriptive and detailed, making it quite clear that the system requires geography to be taught and for the students to be exposed to specific geographical concepts, knowledge and tools.

## Northern Territory

### Background

The Northern Territory Curriculum Framework provides guidance for schools teaching students up to Year 10. The Territory uses the Senior Secondary Assessment Board of South Australia syllabus for the senior years. The curriculum framework is specifically geared to the expectation and experiences of NT students with indigenous perspectives shaping its structure. The framework emphasises the need for flexibility in teaching and learning and this is done, in part, because English is the second language for many indigenous students.

The Northern Territory curriculum framework advocates an outcomes-based approach that stems from four essential learnings, eight learning areas and three cross-curricula perspectives that are taught across the five learning bands from Years 2-10.

### The Place of Geography

The Studies of Society and Environment (SOSE) Learning Area "is based on integrated processes and rich skills that combines rigorous meta-cognitive strategies with multi-media literacies to support the construction of learner understanding and knowledge" (NT Curriculum Framework SOSE, p. 369).

The SOSE Learning Area incorporates "the disciplines of History, Geography, Politics, Economics, Business and Careers. Through SOSE, learners explore and critically construct

their knowledge and understandings about the society in which they live and their place within it" ([http://www.deet.nt.gov.au/education/ntcf/docs/learning\\_areas\\_soc\\_env.pdf](http://www.deet.nt.gov.au/education/ntcf/docs/learning_areas_soc_env.pdf) p. 369). Geography is primarily located in the *environments* strand in SOSE (Battalis and Boland, 2006).

### Geography Years 3-10

The *environments* strand of SOSE that includes many geographical concepts is organised in three elements: place, landforms and features; environmental awareness and care; and natural systems.

The *expectations of learning achievements* in geography and other areas are set out with *outcomes*, and *indicators*. This is done using the *key growth points* and *bands* as points of reference and guidance. A sample of the Curriculum Framework for Band 3 *environments* is located in the Appendix.

### Comment

The curriculum framework of Northern Territory provides a progression of skills and learning concepts that is based on geographical principles. The outcomes and indicators plot a growth pattern for student learning so that although geography is not taught as a stand-alone subject, the development of geographical learning is clearly identified as an expectation for all students.

## Queensland

### Background

In Years 1 to 10, the Queensland curriculum uses an outcomes approach to teaching, learning, assessment and reporting. While assessment is school-based, professional associations, sector cluster groups and professional development provide opportunities for moderation across the curriculum through the development of a shared understanding of "standards" of expected achievement at various stages.

From 2008, Queensland will introduce the Queensland Curriculum, Assessment and Reporting (QCAR) framework for each Key Learning Area. This initiative will define essential learnings, standards, model quality assessment practices and provide advice about reporting requirements in Years 3, 5, 7 and 9.

### Queensland SOSE

In Queensland, geography is included in the Years 1 to 10 Studies of Society and Environment (SOSE) Key Learning Area syllabus. SOSE focuses on the subjects of geography, history, economics, civics and citizenship, and anthropology. Other topics the SOSE syllabus captures include: law, psychology, ethics, sociology, politics, Aboriginal and Torres Strait Islander cultures, Australian and Asian studies, business, environments, futures, and rural issues.

SOSE is allocated 80 hours per year in Years 1-3 and 60 hours per year in Years 4-10. There are four strands in the SOSE KLA. These include: Time, Continuity and Change; Place and Space; Culture and Identity; and Systems, Resources and Power. In each strand, there are

six levels. A “level statement” describes the strands’ focus and is matched to a set of core learning outcomes.

The social and environmental inquiry process underpins the SOSE syllabus and is important in assisting students with developing knowledge and understanding of social and environmental issues. These processes include investigating, creating, participating, communicating and reflecting. The Queensland SOSE syllabus also promotes reflection on values to enable students to make decisions about societal and environmental issues through inquiry. These values include the democratic process, social justice, economic and ecological sustainability, and peace. SOSE is supported by Queensland’s cross-curricula priorities of literacy, numeracy, life skills and futures.

### *Geography learning outcomes Years 3-10*

While there are geographical elements in all four strands of the SOSE syllabus, *Place and Space*, and *Systems, Resources and Power* give significant emphasis to the study of Geography. At Years 3-10, students are expected to complete levels 2-6 in each of the strands (see Appendix 3.4 for details of levels within strands). In each strand, at each level, a “level statement” describes the focus and it is matched to a set of core learning outcomes. An example adapted from the Level 5 *Place and Space* strand is provided below.

<p><b>Level statement:</b> Students understand the relationships within and between ecosystems in different place settings and can use geographical and environmental inquiry processes to investigate these relationships. They can also understand the pattern of environments in Queensland, Australia and the Asia-Pacific and can apply values to evaluate the effects of decisions related to industries.</p>	
<p><b>Core learning outcomes</b></p>	<p><b>Geography learning outcomes</b></p>
<p><i>PS 5.1</i> Students synthesise information from the perspectives of different groups to identify patterns that constitute a region.</p>	<p><i>5.1</i> Students interact with, record and reflect on the view of local groups to develop an understanding of their relationship with the environment.</p>
<p><i>PS 5.2</i> Students design strategies for evaluating environmental impacts on a proposed project, highlighting relationships within and between natural systems ...</p>	<p><i>5.2</i> Students identify different types and patterns of settlement in Australia and other regions of the world and examine the physical and social factors operating within these settlements ...</p>

- In Years 3 and 4, students typically study the consequences of changes to particular elements of an environment for an ecological system and how to value and care for places in different ways. They investigate practices for fair, sustainable and peaceful ways of sharing and working in a familiar environment. They also use and make simple maps of local and global features and express preferred futures for familiar places resulting from changes and continuities.
- In Years 5 and 6, students study the interrelationships between people and natural resources in different environments so that they can identify and resolve local and environmental issues. They make inferences about interactions between people and natural cycles, including the water cycle. Students typically learn how to collect and analyse data obtained through field study instruments and surveys. They also use some standard map references about local, national and global places (e.g. coastal

and land features, countries and continents, and climate zones), and identify the values underlying human action in familiar places.

- In Years 7 and 8, students analyse and evaluate how decisions about resource use and management affect environmental and economic sustainability and use local field studies to identify how a place is valued and cared for. They also understand how to use a range of maps (e.g. thematic and topographic maps) and features (e.g. latitude, longitude, compass, scale) to analyse global patterns and make decisions about resources.
- In Year 9, students study the relationships within and between ecosystems in different place settings and use geographical and environmental inquiry processes to investigate these relationships. Students also use maps, diagrams and statistics to justify placing value on environments in Australia and the Asia-Pacific region and evaluate ideas concerning sustainability.
- In Year 10, students study the interactions of forces involved in the evolution of places and use criteria and geographical skills to develop conclusions and create proposals about how to manage a place and resolve environmental issues. Students design strategies for evaluating environmental impacts of a proposed project, highlighting relationships between and within natural systems. Students also learn how to use maps, tables and statistical data to express predictions about the impact of change on environments.

Throughout Years 3-10, students also have the opportunity to study additional contexts or areas that may broaden and challenge students' understandings. These discretionary learning outcomes also include the study of geography.

### *Geography Core Content Years 3-10*

The SOSE syllabus also contains core content, derived from the core learning outcomes' level statements. Core Content is organised by key concepts and presented in levels. Geographical key concepts students typically study across Years 3-10 include: human-environment relationships; processes and environments; stewardship; spatial patterns; significance of place; interactions between ecological and other systems; participation and decision making; and access to power.

While these key concepts typically have a geographical focus, core content examples provided for all key concepts include geography-related examples. As a result, there is flexibility for geographical study in key concepts that are not explicitly geographical in nature. These core content examples are further expanded on in *The Sourcebook Guidelines*, developed to assist teachers implementing the SOSE syllabus.

- In Years 3 and 4, students typically study the cause and effect of removal or introduction of plant or animal species (e.g. toad, rabbit); needs of school grounds, gardens, classrooms and homes; local and major global features including oceans, continents, hot and cold zones, landforms, waterways, vegetation; and changes and continuities in the local environment.
- In Years 5 and 6, students typically study management of natural resources by colonial settlers; introduction of European land management; controlled burning practices and ecologically sustainable practices of indigenous groups; elements of

catchments and ecosystems; coastal and land features; and values held by different groups towards the built and natural environments.

- In Years 7 and 8, students typically study primary, secondary and tertiary industries; sustainable practices and environmental hazards (e.g. oil spills, uranium, mining, toxic waste); impacts on the environment from changes (e.g. erosion, deforestation, tourism, urbanisation); effective ways to care for a place (e.g. prevention, conservation, protection); global patterns relating to population, climate, physical geography; topographic and thematic maps; references (e.g. latitude, longitude, compass, scale); boundaries defined by contours, population, religion, politics, languages, agriculture and industry; and exploitation of labour and resources of less economically developed countries.
- In Year 9, students typically study patterns of population, politics and geography; international borders; impacts of adding or removing plants, animals and water; impacts on ecosystems in different global locations such as the Amazon basin, Mururoa Atoll, and Canadian fishing industry; indigenous and non-indigenous values; world heritage listings; national parks and resource-rich environments; topographic, choropleth and weather maps; climographs and proportional graphs and statistics; and sustainability impacts such as closure of mines and timber mills, and eco-tourism.
- In Year 10, students typically study sustainable practices and policy relating to environmental protection, town planning, past and present farming practices; cross-sections; global warming, tourism, resource management, climate change, and trade; environmental phenomena such as drought, fire, flood, and earthquakes; impacts of human change such as dams, farming and urbanisation; environmental and economic sustainability.

### *Essential Learnings and Geography*

With the development of SOSE Essential Learnings, Queensland has strengthened the existing geography curriculum. The Essential Learnings include an explicit focus on physical geography characteristics, features and processes which are important for students to know in order to understand human impact.

- Year 3 – distinguishable features of bushlands, waterways, meeting places, sacred sites and parks; sustainable practices relating to reduction of water and electricity use, and litter; relative positioning of landmarks on 2D and birds eye view maps.
- Year 5 – physical and human characteristics of environments, such as rivers, mountains, farms and shopping centres; impacts of population increases and the impacts on the habitat from removal, water supply and traffic pollution; impact of environmental physical features on housing design, leisure activities and employment opportunities; attitudes towards sustainability and quality of river systems, building design and city liveability; spatial features including land forms, countries, regions, continents, climatic and time zones, Tropics of Cancer and Capricorn, and the Equator; and basic map direction, including the four compass points.
- Year 7 – patterns of natural processes including climate, weather, natural resource distribution and vegetation; patterns of human activities such as resource use and

settlement; relationships between patterns of natural processes and human activities such as wind farming and the 'coal belt'; natural hazards such as cyclones, tsunamis, bushfires, droughts and the impact of human activity such as coastal development on natural hazards; decision making and resource use around sustainability, including recycling and renewable versus non-renewable energy sources; physical systems such as weather, biomes such as tropical rainforests and deserts, national borders, developed and developing nations; distribution, climate and weather maps; specific map features including latitude, longitude, the eight compass points, scale and distance.

- Year 9 – how cultural, economic and political activities and natural characteristics and process such as landforms, vegetation, climate and weather define regions; impacts of human activity on land and resource use such as overgrazing and erosion, nuclear power generation and waste disposal, and overuse of fossil fuels; balancing sustainable development through consideration of economic, social, political and environmental factors; spatial patterns; features of topographic, political and thematic maps.

### Geography in Years 9 and 10

As part of the suite of SOSE KLA documents there is an optional geography syllabus for Years 9 and 10. This syllabus promotes the geographical investigation of social and physical processes and aligns with the Queensland Senior Geography syllabus. These processes include: what and where are the issues or patterns being studied; how and why are they there; what are their impacts or consequences; and what is being done and could be done. The geography syllabus provides opportunities for students, who have already demonstrated core learning outcomes, to engage in and demonstrate further learning related to geography. The syllabus emphasises the importance of studying geography through topical issues and the need to include fieldwork activities and provide global coverage and a range of scales when selecting geographical study topics.

### Comment

The study of geography in Queensland is promoted through the SOSE syllabus strands and the optional Years 9 and 10 geography syllabus. The SOSE core content provides an embedded and flexible approach to the study of geography. The Years 9 and 10 geography syllabus provides an option in schools for the delivery of a program which focuses specifically on the study of geography.

Following the release of the second Federalist Paper by the Council for the Australian Federation and the outcomes of the Queensland review of syllabuses for the senior phase of learning, Queensland is investigating strengthening the disciplinary basis of SOSE. Outcomes of the review of syllabuses for the senior phase of learning have indicated the need for a discipline-based approach to learning. With the senior phase moving towards a tighter alignment with disciplines, it will be important to ensure that the foundations of disciplinary knowledge are laid in the middle phase of schooling. This alignment will be further strengthened as Queensland develops principles for a P-12 framework which prioritises the importance of continuity in the curriculum.

Investigation is currently being undertaken to redevelop the SOSE syllabus. Consideration is currently being given to developing SOSE as a Year 1-7 syllabus with history and geography syllabuses in lower secondary. Consideration is also being given to redeveloping the SOSE syllabus as a Humanities and Social Sciences Learning Area with the content organised around the disciplines of history, geography and economics, and the cross disciplinary learning areas of civics and citizenship and business.

## South Australia

### Background

In 2002, the South Australian curriculum authority adopted an Essential Learnings curriculum model. It is described as the South Australian Curriculum Standards and Accountability framework (SACSA) and emphasises five Essential Learnings that guide curriculum development and design.

The mandatory parts of the SACSA Framework are the Key Ideas [Levels of schooling based] and the Objectives (at Standards 1 to 5). The Key Ideas and Outcomes are located within the 8 Learning Areas, although linked to Essential Learnings.

The *Curriculum Standards* mark the end of Years 2, 4, 6, 8 and 10. The curriculum standards provide the basis for monitoring, judgement and reporting of progress at regular intervals. To achieve a *standard*, a student must have met all the outcomes in all strands for a particular learning area.

The learning stages are: the early years (from birth to age five and to Year 2); primary years (Years 3-5); middle years (Years 6-9); and senior years (Years 10-12). The Senior Secondary curriculum is developed by the Senior Secondary Assessment Board of South Australia in the South Australian Certificate of Education.

Using an outcomes approach to teaching and learning the framework advocates that students are *active* in their own learning. Learning outcomes increase in complexity and depth as the students complete each standard, learning a range of spiralling skills.

### The Place of Geography

The SACSA framework states, "Society and environment is informed by such subjects as history, geography, social studies, economics, politics, legal studies, religion studies, environmental education, Aboriginal studies and Asian studies. Both integrated and subject discipline approaches can be used to deliver this curriculum".

Society and Environment (S&E) strands include: time continuity and change; place, space and environment; society and cultures; social systems; and crime prevention. Geography is taught, essentially, through the place, space and environment strand which is focused on geography knowledge, understandings, skills, values and actions. While the SACSA Framework allows for a holistic view of teaching and learning or a disciplinary approach, the holistic integrated model of learning is encouraged (McInerney and Shepherd, 2006).

The fact that each of the learning stages has explicit sections detailing literacy, numeracy and ICT shows the intention of achieving an integrated learning model.

## Geography Years 3-10

SACSA sets out the learning experiences in S&E using a complex matrix (see Appendix 5 for the standards section of one strand in the primary years). The strands are each supported with a *key idea* statement that is followed by details of *intended learning*. A cross-referenced set of *standards* is divided into the learning stages.

Geographical concepts are included across the learning and standards that are embedded in the Essential Learnings and Society and Environment.

The description of the “emphasis” in the place, space and environment strand in the SACSA Framework indicates the geography focus of this strand from Reception (R) to Year 10.

### *Knowledge and understandings*

- Spatial concepts and the distinctiveness of places and environments
- Interconnections, interactions and interdependence of people and natural and built environments
- Patterns and processes associated with natural and built environments

### *Skills*

- Using geographical field skills
- Using maps, globes, electronic forms of technology (e.g. Geographic Information Systems) and gathering and analysing statistical data

### *Values and actions (capacities)*

- Investigation and evaluation of diverse and changing environmental and social perceptions and practices
- Commitment to valuing and adopting ecologically sustainable solutions.

## The Location of Geography in the Years 3-10 Curriculum

Geography is a core part of the Society and Environment Key Learning Area.

The development of the Society and Environment curriculum in the South Australian Curriculum Standards and Accountability (SACSA) Framework in 2000 acknowledged the importance of the geography and history disciplines within the scope of the Society and Environment KLA. Accordingly, geographical and historic knowledge, understandings, skills and values and actions (capacities) form the core of two of the four strands:

1. Place, space and environment
2. Time, continuity and change.

The other two strands are Societies and Culture and Social Systems. [Note that it is likely that as a result of the refinement of Society and Environment in 2007 the first two strands will be called geography and history].

The description of the “emphasis” in the place, space and environment strand in the SACSA Framework indicates the geography focus of this strand from Reception (R) to Year 10:

### *Knowledge and understandings*

- Spatial concepts and the distinctiveness of places and environments
- Interconnections, interactions and interdependence of people and natural and built environments
- Patterns and processes associated with natural and built environments

### *Skills*

- Using geographical field skills
- Using maps, globes, electronic forms of technology (e.g. Geographic Information Systems) and gathering and analysing statistical data

*Values and actions (capacities)*

- Investigation and evaluation of diverse and changing environmental and social perceptions and practices
- Commitment to valuing and adopting ecologically sustainable solutions

The scope of geography in the South Australian Society and Environment KLA is similar to the scope of geography descriptions in both the Victorian and New South Wales Year 7-10 curriculum. A difference is that the associated values and actions are more clearly articulated and expected in the South Australia curriculum.

There are no mandated hours per week for teaching Society and Environment. It is expected that schools will report on each student's achievement of the outcomes described in each of the strands according to the "set standards".

In Society and Environment there are 3 connected mandated Key Ideas and related Outcomes per strand that follow the same pattern of knowledge/understandings; skills; values and actions from R-10. For example at Standard 4 (Year 8) outcomes are as follows:

Outcome 4.4 (Understandings)

Describes places in Australia and elsewhere according to their location, natural and built features, and population and resources. Students explain interrelationships, including the effects of human modifications.

Outcome 4.5 (Skills)

Hypothesises, then collects, records, organises and evaluates data from fieldwork, print and electronic sources, in order to analyse local and global, environmental or socio-economic issues.

Outcome 4.6 (Values and actions)

Identifies and describes ways that places and natural environments are valued or threatened, and discusses strategies related to ecological sustainability.

**Comment**

While comparatively non-prescriptive, the South Australian curriculum details the concepts and learnings in geography. The actual teaching of geography is dependent on the school and teachers' chosen emphases. They will decide how to integrate geographical concepts and other relevant concepts, skills and knowledge in units of work and other learning tasks and structures.

**Tasmania****Background**

Tasmania moved to an Essential Learnings Framework (ELs) for Years K-10 in an endeavour to improve student engagement. The framework represented a shift from prescribed content to allow schools and teachers to make local decisions regarding teaching emphases. ELs represent an interdisciplinary approach to teaching.

The framework emphasises *learning skills* as distinct from content and it is set out in five Essential Learnings: thinking (inquiring and reflective thinkers); communication (clear and effective communication); personal futures (self-directed, ethical); social responsibility (responsible, active citizens); and world futures (local and global environments). The framework contains student outcomes and five set standards to be achieved as students move through their schooling. The standards are set for the end of Kindergarten and Years 2, 5, 8, and 10.

In 2006, the approach was enhanced with the addition of *areas* and written *standards* to assist teachers to assess student progress against the set standards.

The learning areas in primary schools are: English/literacy; mathematics/numeracy; science; and society and history. In secondary schools, the learning areas are: English/literacy; mathematics/numeracy; science; society and history; health and wellbeing; and arts (Robertson and Doyle, 2006). Accordingly, the teaching of geography remains non-specific.

### The Place of Geography

Geography is taught as an integrated study or multidisciplinary area. While geographical principles have a clear presence in the Tasmanian ELs framework, the skills are stipulated rather than content.

### Geography Years 3-10

Geographical concepts are presented merged with science and other traditional “subject” areas in studies of *World Futures*, for example. *World Futures* is divided into: investigating the natural and constructed world; understanding systems; designing and evaluating technical solutions; and creating sustainable futures. In the document, Curricula Mapping, the structures are set out by providing the *standards*, *key concepts* and *supporting concepts* (<http://www.itag.education.tas.gov.au/planning/scopeseq/ELsplanning.doc>, 8/2006).

These cross “subject” barriers as all the traditional subjects are subsumed under Essential Learnings in a curriculum and conceptual map. An example of one section that has geographical, environmental education and science education implications is provided (the expanded page is in Appendix 3.6).

World Futures	Standard 1	Standard 2	Standard 3	Standard 4	Standard 5
<i>Understanding Systems</i>	<i>Why has a focus on systems emerged as critical to the health and wellbeing of the world</i>				
Understands that the social, natural and constructed world is made up of a complex web of relationships or systems.	How are things around me connected?	How does the way things are connected make them work?	In what way do systems impact on people and the environment?	What is the function of different systems and how are they interdependent?	Why is systems thinking important?

## Comment

The Tasmanian curriculum structure is designed to allow schools and teachers the scope to make learning directly and locally relevant to the students. Accordingly, it describes the Essential Learnings, the strands and areas that emerge from it and it provides key questions, supporting questions and key concepts as guides to teachers. Their role then is to find a balanced approach to ensure that the standards are met and the learning delivered and understood.

## Victoria

### Background

In 2004, the Victorian Curriculum Authority moved to replace the Curriculum and Standards Framework (CSF) with the Victorian Essential Learning Standards (VELS). The CSF had a complex system of outcomes and indicators that were deemed unwieldy and counter-productive.

VELS has three *strands* and sixteen *domains*. The strands are: physical, personal and social learning; discipline-based learning; and interdisciplinary learning. The discipline-based learning strands include: the arts; English; the humanities (economics, geography and history); LOTE; mathematics; and science.

### The Place of Geography

The humanities, including geography, provide a framework for developing the key ideas and concepts that enable the students to understand the way in which people and societies have organised their world under particular conditions. Research skills and inquiry processes are encouraged and students learn to plan an investigation and ask key questions. They question and analyse data and sources including artefacts, photographs, maps, stories, special events, interviews, site visits and electronic media. They draw conclusions supported by evidence and present information in a variety of ways.

In primary school, students are introduced to basic concepts related to history, geography and economics. Specific learning focus statements and standards for economics, geography and history are introduced at Level 4 (from Year 5).

The major change brought about by the introduction of VELS is that geography is a clearly defined discipline at both primary and secondary school levels, with its own clearly outlined attributes and its own content (Kriewaldt, 2006).

### Geography Years 3-10

#### Primary School (Levels 3 & 4)

The Humanities outline (December 2005) states that students will, for example, investigate the human and physical characteristics of their local area and other parts of Victoria and consider features of their local community that have changed over time.

Students will learn:

- about settlement patterns
- major land uses
- communication networks
- the location and variety of national parks in Victoria
- to make some simple comparisons between local and other Victorian environments, including natural features, climate, land use and types of human activities.

And they will:

- draw simple maps and plans of familiar environments observing basic mapping conventions
- identify places on a simple map using a grid
- describe direction using the four cardinal compass points
- use maps and a globe to locate and name the states and territories of Australia.

From Level 4 on, the geography domain is organised in three sections, one for each level of achievement from Level 4 to 6. Each level includes a learning focus statement and a set of standards organised by dimension.

### Secondary School

From Level 5, for example, students collect geographical information from electronic and print media, including satellite images and atlas maps, and analyse, evaluate and present it using a range of forms. They also:

- construct overlay theme maps using map conventions of scale, legend, title, and north point
- identify and gather geographical information from fieldwork and organise, process and communicate it using a range of written, oral, visual and graphic forms.

While at Level 6, for example, students will learn to interpret information on different types of maps and photographs at a range of scales, and use map evidence to support explanations, draw inferences and predict associated outcomes. They will collect and collate information gathered from fieldwork observations and present their findings observing geographical presentation conventions.

### Comment

Geography has specific curriculum standards applying to the discipline from Level 4. Prior to that, geographical concepts are planned in studies in humanities that include many of the humanities sub-strands.

## Western Australia

### Background

The WA Curriculum Council curriculum framework sets out what all students should know, understand, value and be able to do, Kindergarten to Year 12 and schools are required to establish programs that ensure students achieve the agreed outcomes.

Learning stages such as middle childhood (Years 3-7) and early adolescence (Years 7-10) are also described.

The WA state curriculum authority has demonstrated a very strong, yet controversial, commitment to outcomes-based education. The WA submission to this Study notes “this focus on outcomes represents a major shift in school curriculum from a focus on educational inputs and time allocation toward one that emphasises the desired results of schooling”. It should be noted that the process of curriculum reform in WA is still in progress, and current directions may be subject to change.

The basic structure of the framework is the thirteen overarching outcomes that accommodate the more specific discipline based outcomes (see Appendix 3.8).

### The Place of Geography

Society and Environment is divided into seven strands: investigation, communication and participation; place & space; resources; culture; time continuity & change; natural & social systems; and active citizenship. Geography is studied mainly through the *place, space, and natural and social systems* sections, emerging essentially from overarching outcomes 7 & 8. Those overarching outcomes are respectively: students understand and appreciate the physical, biological and technological world and have the knowledge and skills to make decisions in relation to it; and students understand their cultural, geographic and historical contexts and have the knowledge, skills and values necessary for active participation in life in Australia (Cawley, 2006).

The discipline of geography is located as part of the Society and Environment (S&E) learning area statement in the *WA Curriculum Framework*. The knowledge, skills and understandings of geography are taught in Years 3-10 under the umbrella of the S&E curriculum.

The Society and Environment learning area outcomes in particular that support the learning of geography are:

- *Investigation, Communication and Participation*: skills, values and understanding of geographical questions, texts or sources and information retrieval, ethical inquiry.
- *Place and Space*: understandings of natural and built features, processes between and within features of places, spatial patterns, use of places, the interrelationship between natural features and human activities, the significance of places, and how and why people care for the wider environment.
- *Natural and Social Systems*: the elements and interrelationships in natural systems, how natural systems are related to political/economic systems, how people care for systems.
- *Active Citizenship*: how to plan responsible action using democratic decision-making processes, and actions they can take to show respect and care for the environment.

The teaching of geographical concepts (knowledge and understandings) and skills are also part of students' achievement of the overarching outcomes in the *Curriculum Framework* namely: *Using Numerical and Spatial Patterns*; *Investigating and Using Information*; *Using Scientific Understandings*; and *Active Australian Citizenship*.

Support materials developed since 2005 provide strong guidance on what is to be taught.

The *Curriculum Guides* identify the content to be taught from Kindergarten to year 10. This content is sequenced in 3 phases of schooling: early childhood (Years K to 3), middle childhood (Years 4 to 7) and early adolescence (Years 8 to 10). The *Curriculum Guides* are further elaborated and scope out the geography content to be taught within each phase of schooling. For more details see:

[http://www.curriculum.wa.edu.au/pages/curric\\_guides/society.html](http://www.curriculum.wa.edu.au/pages/curric_guides/society.html).

These guides are currently being reviewed to include content identified in the *Statements of Learning* for Civics and Citizenship, which include geographical content that is to be included in the Place and Space outcome. Incorporation of the *Asia scope and sequence for Studies of Society and Environment* would also require some changes to this outcome. In considering pedagogical practices, implementation of the *Curriculum Framework* will vary with schools depending on their system/sector policies, curriculum planning based on whole school priorities and the needs of their students. Time allocations will also vary on the same basis. At present, this information would be difficult to quantify empirically.

Students need to develop an understanding of the interconnected nature of the physical and human elements of the global world, thus they need to have a geographical understanding of the locality in which they live, be able to apply these understandings to other localities (national and global). They need to develop skills such as questioning, critical inquiry and decision-making by investigating a range of localities and issues that enable the application of geographical knowledge, values and skills when considering contemporary issues and planning sustainable processes for working through solutions (Curriculum Council of WA submission, 2007).

### Geography Years 3-10

Geographical concepts are embedded in the Society and Environment curriculum. The *scope of the curriculum* describes the knowledge and the teaching and learning experiences. These are divided generally into *phases of development* (stages or levels) and in-principle statements are provided regarding knowledge.

The principles of learning and teaching are detailed under seven classifications: opportunity to learn; connections and challenge; action and reflection; motivation and purpose; inclusivity and difference; autonomy and collaboration; and supportive environment.

The discipline of geography is articulated in the Western Australian Curriculum Framework in two overarching outcomes 7 and 8 (for instance, "Students understand and appreciate the physical, biological and technological world and have the knowledge and skills to make decisions in relation to it"; and "Students understand their cultural, geographic and historical contexts and have the knowledge, skills and values necessary for active participation in life in Australia") and two Society and Environment learning area outcomes; "Place and Space" and "Natural and Social Systems".

Curriculum support guides developed since 2005 complement the Curriculum Framework and focuses on providing stronger guidance as to what to teach.

For example, the 2005 Curriculum Framework Curriculum Guides support the implementation of the Curriculum Framework by articulating the content (knowledge, skills, understandings and values) to be taught that will enable student achievement of the Overarching and Learning Area outcomes. In Years 3-10 content is sequenced within three phases from Early Childhood through Middle Childhood to Early Adolescence.

To assist teachers in developing learning and teaching programs with a geography focus the Curriculum Guides, Elaborated Curriculum Guides and working versions of the Syllabus Statements, being currently developed by the Department of Education and Training, deconstruct the two related learning area outcomes into a series of six aspects and eleven content organisers (see Appendix 3.8 for details). Whilst the guides scope out the geography content that could be taught during the three phases the Syllabus Statements compliment the Guides by further defining for teachers what is considered essential content to be taught to enable students to achieve progress in the learning area outcomes.

The working versions of the WA syllabus scope and sequence statements have been constructed to assist teachers in programming for best practice in the teaching of the disciplines embedded within the Society and Environment learning area. The Early Adolescence Society and Environment Syllabus Working Version presents six of the seven outcomes in separate scope and sequence statements. Active Citizenship has been incorporated into each outcome.

In all three phases the required development of broad understandings has been scoped with accompanying mapping of suggested topics, geographical skills and values. In all three phases an emphasis has been placed on teaching through social inquiry with the geographical inquiry process emphasised in Early Adolescence.

Advice regarding which outcomes and aspects to be taught takes into account the needs and interests of the students, time allocation for the learning area and the learning pathways to senior schooling. At present schools are required to teach all outcomes at least once over Years 8-10. Within Society and Environment outcomes may be taught through integration, focusing on one conceptual outcome and combining it with one or more aspects from another conceptual outcome. Due to the need for flexibility in curriculum planning it is expected that how teachers use the scope and sequence statements will vary according to their knowledge, experience of the learning area and of teaching. The syllabus will therefore support teachers' professional judgement when planning learning, teaching and assessment programs to meet individual student needs.

Table 2: Key Understandings in the WA Curriculum Framework

National Initiatives	Key Understandings
Civics and Citizenship	<ul style="list-style-type: none"> <li>the rights and responsibilities of students as active citizens within a democracy and as global citizens.</li> <li>Active Citizenship encourages involvement in the community in developing solutions to local issues and applying these to broader contexts on a regional or global scale</li> </ul>
Information and Communications Technologies	<ul style="list-style-type: none"> <li>the importance of a code of practice when using ICT</li> <li>the need to respect issues of access and ownership of materials and other ethical and legal implications of using ICT</li> </ul>
Consumer and Financial Literacy	<ul style="list-style-type: none"> <li>consumer and financial management</li> <li>the development of financial skills</li> <li>identify individual importance and influence as an informed consumer</li> </ul>
Global Perspectives [National initiative?]	<ul style="list-style-type: none"> <li>regional and global issues using the values of democratic process, social justice and sustainability</li> <li>Active Citizenship reflects global perspectives, encompassed within student rights and responsibilities as global citizens</li> </ul>
Sustainable Future [National initiative?]	<ul style="list-style-type: none"> <li>investigate local solutions for global issues relating to water use, land degradation, energy production and consumption and the influences on climate change</li> </ul>
Engaging Young Australians with Asia	<ul style="list-style-type: none"> <li>explore past, present and the future links with Asia through regional historical and cultural events</li> </ul>
Values Education	<ul style="list-style-type: none"> <li>values of social justice, sustainability and democratic process form the basis of Active Citizenship opportunities within each outcome</li> <li>Values for Australian schooling</li> </ul>
History Education	<ul style="list-style-type: none"> <li>historical literacy skills are crucial in developing understandings of the different interpretations of historical evidence</li> <li>individual perspectives and values are implied and reflected within historical narratives</li> </ul>

### Comment

The WA documents are strongly focused on the teachers' skills in interpreting the curriculum and having the capacity to include disciplines such as geography in the Society and Environment studies.

## Chapter 3: Discussion

The following two sections discuss some of the factors that have impacted on the teaching of geography in Australia in recent years and the gaps that appear to be present in current arrangements. The chapter concludes with a discussion of views on what geography Australian students in Years 3-10 should know.

### 3.1 Current pedagogical practices in the teaching of geography

The origins of this study lie in the concerns that have been expressed about the SOSE curriculum, in general, and, more specifically, the philosophical structure of it. The past decade has been a period of considerable curriculum reform in Australian states and territories, a process that is far from complete. The possibility of a national curriculum remains under active consideration. What this national curriculum might look like and what it might include is however by no means certain. The geography profession in Australia is actively seeking to ensure that geography is part of whatever priorities emerge for the future.

The curriculum mapping above shows that the approaches of the jurisdictions to geography in many instances are quite different, and have significant implications for pedagogy (*the art or science of teaching*). The syllabus and curriculum are documents that guide teachers in the approaches to a subject and, accordingly, the manner in which the subject area is described and presented will have an impact on pedagogy. If the curriculum statement is specific and detailed it directs the teacher to that end; if it is philosophic, setting broad parameters, it provides opportunities for teachers to organise learning as they best see fit to achieve the intended objectives. To support that judgement, it must be noted that all jurisdictions adopt the more general approach with their primary-aged students and provide guides and resources to assist teachers. Some choose to be more prescriptive in the secondary years. However, only one state (NSW) currently mandates inclusion in a formal certificate. The extremes in Australia are represented by the ACT at the most general level and NSW as the most prescriptive, with the other jurisdictions located along this continuum.

The mapping exercise above also provides an indication of current approaches for the provision of geography for Australian Years 3-10 students within the curriculum of the various education jurisdictions. Accordingly, the mapping exercise outlines the professional directions given to teachers in Australian schools. How individual schools and teachers manage the implementation of the curriculum is another matter.

While there are considerable differences across the jurisdictions, these differences are essentially philosophical and structural. There is evidence of similar “content” matter across most jurisdictions; it is most specific in NSW and embedded in those jurisdictions that have chosen Essential Learnings (variously defined) as a curriculum framework. The differences relate more to matters of curriculum design, subject, and content specificity than to the desirability or otherwise of geography as a legitimate area of study.

At least two recent newspaper articles have reported concerns about the perceived lack of specificity in relation to the teaching of geographical principles and one questions the style of curriculum. For example, Ferrari (2007) reports:

*Geography is taught in schools as a series of issues pushing a particular opinion rather than giving students grounding in basic facts about natural processes and human interaction with the environment.*

*The Australian Geography Teachers Association and the Institute of Australian Geographers told a Senate inquiry into the academic standards of school education that geography, under the umbrella of Studies of Society and the Environment, had lost its disciplinary rigour.*

*AGTA director Grant Kleeman told the hearing in Sydney that students studied global warming but not the atmospheric processes required to understand climate change and its impact. ... The traditional discipline encouraged students to look at issues from a variety of perspectives with the expectation students then formulate their own opinions rather than inculcate them with a particular perspective.*

Australian curriculum documents are a minefield of nomenclature. Years and grades; stages, bands and levels; outcomes, standards and markers of progress; and it seems that the same words can mean quite different things in different jurisdictions. There are, however, elements of similarity in many of the structures and it is clear that one has been influenced by another with changes in some titles and categories.

The elemental matter is that, embedded in the curricula, there is a similarity about the strands, the knowledge, skills and concepts proposed. It is the structures that are different and the differences are in terminology, nomenclature and the processes of teacher guidance. It is the structures, essentially, that cause the concerns expressed some that the teaching of geographical principles is no longer as evident as it was. Further from the same article by Ferrari:

*IAG president Jim Walmsley said the teaching of SOSE into schools resulted in geography students being "issue-led rather than being rigorous in their understanding of these issues".*

*Mr Kleeman said the notion of issue-based learning was introduced in the 1970s and 80s when everything taught in schools had to be immediately relevant to the lives of students, and that: "We're advocating a return to a more systematic study of geography and history, where you look at processes as the entry point of study rather than the issue".*

This opinion is supported by Professor Peter Curson as he said:

*What is important is that geography is able to satisfy the curiosity of every schoolchild, every university student and every citizen. If it ever becomes divorced from the popular interest it will lose much of its justification and significance.*

*Geography, like history should be an indispensable part of every school syllabi in Australia. Every schoolchild should know something about where they live, what makes its distinctive and how it differs from other places.*

*Even at the most simplest level, do school students not need to know where places are, who lives in them, what sort of lives they lead, what sort of activities they engage in, and how such places are linked into a wider local, regional, national and international system?*

*Despite efforts to make geography more “scientific” or more “culturally relevant” by the same sort of post-modernists that have remodelled history, geography remains fundamentally what it has always been – a simple and straightforward discipline of diverse and catholic tastes. Nonetheless, it provides scope for the theoretician, the mathematically-minded, for those seeking cultural relevance, as well as those simply interested in what places are like and what human and physical processes produced them.*

Curson added that:

*Surely all our schoolchildren need to appreciate and understand the geographical nature of the country they live in, as well as the variable nature of the parts of the earth’s surface, how places differ one from another and why, and how human intervention has changed the world, as well as to appreciate the linkages and inter-relationships between the human and the bio-physical environment and how this is played out in differing spatial or geographical locations or places?*

### 3.2 Factors which affect the quality of teaching and learning of geography in Australian schools

The perceived decline in the teaching of geography is most likely a product of several factors, some of which are related to curriculum structures, and some of which relate more generally to teaching and learning, school organisation and teacher professional development.

A number of obstacles to the quality of teaching and learning of geography were identified in submissions to this study. These factors are summarised below.

#### 1) Problems caused by amalgamation of geography into Studies of Society and Environment (SOSE)

As noted above, a primary concern for many stakeholders has been the loss of identity of geography in the primary school and early and middle years of high school through its amalgamated with other subjects into the learning area of Studies of Society and Environment (SOSE) in most states and territories. This, stakeholders believe, has led to several problems.

Firstly, the geographical content of SOSE is often taught by teachers with no training in geography, and perhaps with no great enthusiasm for the subject. Members of the Council of the Institute of Australian Geographers (CIAG) in several states report that SOSE teachers in Years 8-10 are expected to teach across the disciplines of history, geography and economics, even though they may have studied only one of these subjects at university level. This is not conducive to good education” (CIAG, 2007).

Second, SOSE syllabuses are organised into complex structures of values, processes, strands and concepts, which do not adequately allow for a focus on geographical questions and their analysis. A concept-structured syllabus also makes it difficult to examine a geographical question from a variety of perspectives, using a variety of concepts, as is typically done in geographical inquiry. The experience of many teachers has been that the absorption of geography into SOSE has meant a loss of much of the content, rigour and skills taught when geography was a separate subject. They find that students taking up

geography in the final years of high school are lacking much of the basic knowledge needed for that level of study (CIAG, 2007).

As argued in its submission to the 2007 Senate Inquiry into the Academic Standards of School Education, AGTA and other geographical organisations believe that ... "Studies of Society and Environment (SOSE) do not systematically support the cumulative understanding of the discipline's concepts and the development of its skills".

They go on to say that:

*[A]n integrated SOSE subject is not the sum of its parts. Students do not gain a depth of understanding of each of geography, history, sociology, economics, politics and anthropology. As at the primary level, non-geography teachers are likely to shy away from concepts such as spatial association, or skills such as constructing a climate graph, if they do not feel confident in their own abilities in the discipline. The teachers' mastery of the content of a discipline is central to the successful teaching of that discipline. It is unrealistic to expect teachers to have the requisite understanding of all the disciplines supposedly encompassed by SOSE.*

*Based on feedback from members of our organisations, we believe that the absorption of geography into SOSE has meant a loss of much of the content, rigour and skills characteristic of geography when it was taught as a separate subject. Students starting geography in Year 11 often lack much of the basic precursor knowledge and skills needed for study at that level.*

The discipline of geography has its own central organising concepts, such as location, distribution, scale, spatial association, spatial interaction and spatial interdependence. Within SOSE their importance is dissipated and lost. 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 un-sequenced generic activities that do not adequately provide students with the steps required to create new knowledge.

Others also criticize the way that learning is sequenced in Studies of Society and Environment. Whilst it might appear that the curriculum has a logical sequence, the practical reality is that topics are frequently taught in "slabs of content with very little connection", rather than as seamlessly integrated learning bringing different viewpoints from different discipline areas into play. "The connections are rarely clear to students either as skills, ways of thinking, or context" (RGSSA, 2007).

As will be seen in the discussion below about what might be considered "essential" knowledge and skills for all students, there is a diversity of views on the content taught in geography. Some teachers also believe there is a trend that has existed for some time towards curricula which are less challenging and too issue-based, and would like to see a return to a more traditional course. Others prefer a curriculum which offers variety and flexibility, and opportunities for engaging student interest and deep understanding through inquiry based learning and the application of higher order thinking skills such as analysis, synthesis evaluation, prediction and problem-solving. All agree, however, that students need to develop a basic core of knowledge and skills in the subject.

## 2) Loss of status for geography and geography teachers

A further consequence of the absorption of geography into SOSE has been what has been perceived as an undermining of the subject's integrity and the specialist knowledge of geography teachers. This has in turn led to geography being afforded less class time than that of other core subjects. Where geography has been offered as an elective subject, it is often timetabled in the same timeslot as history, forcing students to choose between these two subjects. There is anecdotal evidence that students perceive senior level geography to be very demanding, yet "scaled down" in its contribution to tertiary entrance scores. It thus becomes an unattractive option compared to other subjects. These factors, together with the perception that in many schools, teachers assigned to geography courses do not have sufficient background to teach the subject (an issue discussed further below), have contributed to the erosion of the status of the subject in the eyes of students, parents and school administration.

Several submissions from individuals and geographical organisations commented on the issue of competition between subject areas as adversely affecting the current status of the subject, and particularly the attention being accorded history. There is a strong sense that unless similar attention is given to geography, there will be even further erosion of support for its continued inclusion within the curriculum. For example, the submission to this study from Jeana Kriewaldt noted:

*Geography and history's existence under the umbrella of SOSE (HSIE/ Humanities) coupled with the significant interest in the place of history in schools has resulted in geography's marginalisation. There is a significant risk of this continuing or being exacerbated by the current developments in history education.*

These issues have come to the fore in recent discussions in regard to the possible development of a national curriculum, and in particular, what should be "core" components of this curriculum. While this debate is in its early stages, there is already some disagreement as to what should be considered "core" learning. For example, the ACER report, *An Australian Certificate of Education: exploring a way forward*, recommended that curriculum essentials be identified initially for Year 12 "Biology, Chemistry, Economics, English, Geography, History, Information Technology, Mathematics, and Physics". Other proposals specify a more limited range of subjects for inclusion, with geography conspicuously omitted.

Research from the United Kingdom shows that the designation of a subject as core or non-core has a major effect, as the status of non-core subjects is diminished in the eyes of students, parents, teachers and educational administrators. In the UK, geography was core for students aged 8 to 11 but then lost its core status. The effect was so damaging that the UK Government reinstated its core status after a couple of years but the subject's teaching standards at the upper primary level are still suffering (AGTA, 2007).

## 3) Loss of priority for geography in an over-crowded curriculum

Related to the issue of the absorption of geography into SOSE is what is regarded as a lack of curriculum time allocated for teaching the subject. Some argue that because few teachers of SOSE have geography training, the geography component of SOSE is given lower priority than other areas. Where related content is taught it is often done in a superficial and disjointed manner (Kleeman, Submission to Geography Study 2007). This is said to be

particularly the case in schools where geography is only taught for part of the year or for few classes in each cycle. For teachers who *do* have geography training, the structure of the curriculum has contributed to widespread frustration, because it is difficult to develop students' knowledge and skills, and cover enough content to provide a thorough and rigorous course (GTAV).

This point is illustrated in a submission using the situation in Victoria. In this state, there is no minimum time mandated for geography. Geography provision varies widely as shown in the Table below, which shows that geography is more likely to be compulsory at Years 7 and 8, and offered as an elective at year 9 and 10. For one third of respondent schools, geography is taught within SOSE curriculum. The inclusion of geography in integrated subjects occurs in less than 10 per cent of schools.

**Table 3: Year 7-10 Geography Timetabling in Victoria, 2006**

	Year 7	Year 8	Year 9	Year 10
Geography is compulsory	64	64	49	25
Geography is an elective	1	4	23	40
Geography is taught as a separate subject	36	38	44	49
Geography is taught within SOSE curriculum	38	36	26	11
Geography is integrated across a number of KLAs	9	6	5	1
Geography is taught across the whole year	12	13	13	14
Geography is taught one semester of the school year	37	40	42	47

Source: GTAV Provision Survey (unpublished), Term 4 2006. 93 schools responded.

#### 4) The shortage of suitably qualified geography teachers

The decline in the number of school students undertaking geography as a tertiary entrance subject over the past 20 years or so has contributed to the decreasing number of students enrolling in tertiary-level geography courses, and even fewer graduating as geography teachers. At the present time, there are few new geography graduates entering teaching. The lack of specifically-trained geography teachers has in turn, contributed to the lower esteem for the subject, leading to fewer enrolments, continuing the downward spiral for the subject. The following comments illustrate this point:

*There are large numbers of teachers teaching Society and Environment with little understanding of geography as a discipline and way of thinking. This is conveyed to the students, who in turn, do not develop disciplined thinking.*

*Teachers who have been well educated in geography through university courses are not being used well in many schools. They spend too much of their time teaching other parts of the Society and Environment courses where they can only present the content rather than the thinking (RGSSA, 2007).*

*A key influence for pedagogy in Queensland is teacher-training. It is well known that there are few teachers with double majors in geography from universities and also few teachers studying a geography curriculum area within a postgraduate diploma or degree in Education. The number of geography subjects has been significantly reduced at universities compared to the number offered a decade ago. Some universities offer only SOSE as a curriculum area. It is suggested that this reduces the specialist geographical knowledge of teachers and possibly contributes to the waning numbers of students choosing geography*

*at a senior level. Many schools have reported difficulties finding specialist geography teachers for employment. (QCEC, 2007)*

Several reasons are offered to explain the unattractiveness of teaching as a career for geography graduates. Firstly, some believe that with the absorption of geography in the SOSE curriculum, there are perceived to be fewer opportunities for geography specialists to teach the subject (since there are fewer students) and the reality is that they are assigned to teach other aspects of the SOSE curriculum (or even other areas) that they are not trained for nor especially interested in.

*Specialist teachers often find it difficult to master the methodology of disciplines in which they have little or no professional training. History teachers, for example, have great difficulty with the geographical skills used to interpret topographic maps. (Kleeman, 2007)*

Second, potential geography teachers have sought other (often better paid) career options through which to pursue their interest in the discipline.

More teachers with qualifications in geography are needed to replace the “baby-boomers” retiring from the workforce, a situation not peculiar to geography teaching, but having a special effect in that fewer geography graduates in recent years have found fulfilling teaching positions, and have disappeared from teaching (RGSSA, 2007).

##### 5) Failure to engage students

A further partial explanation for the declining student interest in elective geography stems from perceptions about the way that the subject is taught by some teachers. This in part, recycles the argument about inadequately prepared teachers, but also reflects a much older perception that the way that geography is taught by some teachers (at both primary and secondary levels) fails to engage students, relying on memorisation of geographical facts—a teaching style referred to as “capes and bays” geography. Some stakeholders consulted for this study recounted their own experiences of geography as consisting of “memorising the rivers of northern NSW”. Submissions recognise that the modern teaching of geography needs to incorporate use of technologies and methodologies that are an integral part of the practice of the discipline. The analogy is drawn to the situation in which it is now inconceivable that science could be adequately taught without access to laboratory practical experience, yet geography is routinely taught through “chalk and talk”.

There is a strong body of opinion within the geography profession that contemporary geography curriculum should allow students to progressively work towards designing investigations in which they collect data from primary sources and secondary sources and work with this data to process it to draw conclusions which may include recommendations for action on issues which have a spatial component. Inquiry can be conceptualised in many ways including using scientific methods as seen in the “develop a hypothesis and test it” type of activity or as a series of guiding questions that are more commonly found in the social sciences.

While this “inquiry” approach is widely advocated in geography, an observation by stakeholders suggests that the limited time available for geography inhibits the extent to which inquiry is developed in the classroom. Typical practice will more likely see geography lessons comprising students reading from set text and answering comprehension questions. This lacks variety for students and provides few opportunities for students to make choices about how they will achieve open-ended tasks. Textbooks that incorporate some open

ended tasks are available but an “almost inevitable disadvantage of data in textbooks is that only the relevant data is provided” (Roberts, 2003, p. 41). This limits students experience in finding and selecting data. At some stages of the child’s development, this can be seen as scaffolding but it also illuminates the need to use textbooks as source books not course books. Some modern textbooks used in Australian schools are partly moving beyond comprehension to provide a range of open-ended tasks (Kriewaldt, 2007).

Several submissions noted the increasing difficulties in arranging fieldwork. Most geography teachers emphasise the importance of fieldwork, but the constraints to taking students out of school for experiential learning diminishes this opportunity. Field work is an integral part of teaching and learning in geography, is popular with students, and has well recognised educational benefits. However, teachers tell us that it has become increasingly difficult to take students out of the school, because of timetable constraints, cost, and the growing preoccupation with risk avoidance (CIAG, 2007).

Similarly, the cost and availability of resources and technological support was noted as being a constraining factor for some schools. Inadequate funding for geography was said to have restricted funding for computers, software, data projectors, and class sets of resources such as textbooks and maps. The availability of computers, technical expertise and support for GIS and other ICT applications were also often cited as problematic. Some schools were reluctant to request students purchase a textbook in addition to their atlas, as they may only use it for a part of the year. Schools may then take on the burden of purchasing class sets of books, which often have quite a short shelf life given the nature of their content (GTAV, 2007).

The following Table, taken from Bliss (in press) provides an indication of the kinds of tools and resources that secondary students in NSW are expected to have access to.

Tool	Content		
	Students will incorporate the following geographical tools within geographical knowledge and understanding:		
	Years 7-8	Years 9-10	Years 11-12
Maps	<ul style="list-style-type: none"> <li>atlas; map projections; different types of maps; latitude; longitude; legend; area reference; grid reference; distance; scale; direction; spot height; sketch map</li> </ul>	<ul style="list-style-type: none"> <li>flow chart; area; density; bearing; local relief; aspect; cross-section; gradient; transect; describe and explain relationships</li> </ul>	<ul style="list-style-type: none"> <li>gradient; vertical exaggeration; transect; spatial interactions; describe patterns, relationships, networks, linkages and evidence of changes; choropleth maps</li> </ul>
Fieldwork	<ul style="list-style-type: none"> <li>use compass, clinometer, weather instruments; Beaufort wind scale, cloud and vegetation identification charts</li> <li>interviews; surveys; field sketch; diagram</li> </ul>	<ul style="list-style-type: none"> <li>develop a research action plan</li> <li>use fieldwork techniques to collect primary and secondary data</li> </ul>	<ul style="list-style-type: none"> <li>formulate a geographical question; collect and record geographical data from a variety of primary sources; synthesise data and evaluate fieldwork</li> </ul>
Graphs and Statistics	<ul style="list-style-type: none"> <li>maximum, minimum, total, range, rank, average</li> <li>bar, column, line, climate and proportional graphs</li> </ul>	<ul style="list-style-type: none"> <li>population pyramids; divided bar and column graphs; composite line graphs; satellite images; digital images</li> </ul>	<ul style="list-style-type: none"> <li>ternary graph; proportional divided circles; logarithmic and semi-logarithmic graphs; population pyramid; rate of increase or decrease between two points</li> </ul>
Photographs	<ul style="list-style-type: none"> <li>line drawing; oblique, aerial, ground-level photographs; satellite imagery; photographic images</li> </ul>	<ul style="list-style-type: none"> <li>interpret satellite images; collect and use digital images</li> </ul>	<ul style="list-style-type: none"> <li>orientate photo to a map; scale of aerial photographs and satellite images; time of day photograph taken; land use area as a ratio; spatial associations and change; construct a précis map from aerial photograph or satellite image</li> </ul>

Synoptic maps	<ul style="list-style-type: none"> <li>wind direction, wind speed, pressure patterns, fronts and precipitation</li> </ul>	<ul style="list-style-type: none"> <li>changing pressure patterns</li> </ul>
GIS	<ul style="list-style-type: none"> <li>integrated within topics to support student learning</li> </ul>	<ul style="list-style-type: none"> <li>examine spatial and ecological issues and their management</li> </ul>

Source: Adapted from NSW Stages 4/5/6 Geography Syllabuses (BOS 1999, 2003)

A specific area in which a shortage of resources was noted concerned Geographic Information Systems (GIS). The submission from Spatial Education Advisory Committee of the Spatial Science Institute (SEAC) considered that the introduction of spatial technologies such as Geographic Information Systems into the teaching of geography in schools is imperative if schools are to deliver relevant, current and meaningful geographical education. Spatial technologies enable students to view the world from a variety of angles and perspectives and enable high-level thinking, problem solving and analytical interpretation. They argue that the use of spatial technologies in geography teaching is underutilised in schools and does not reflect the pervasive and extensive use of the technology in the community.

The 2007 SEAC submission goes on to note:

*Traditional methods of teaching with “text, talk, chalk and watch” have their place but the armoury of digital spatial technology such as GIS, GPS, the Internet and remote sensing provides a multiplicity of approaches and multiple intelligence aspects to a child’s education. Spatial technologies are also the tools for the field and can and should be used to get students out and about exploring the world. ICTs such as GIS provide teachers with teaching tools and processes, which have been shown to motivate and engage students in their learning while also empowering them as independent learners.*

*The use of spatial technologies in the teaching of geography is very disparate across Australia and is very much dependent on teacher interest and ICT skills. We have areas of Australia where spatial technology is employed to its maximum potential and the schools using it are providing “state of the art” geographical education commensurate with best practice overseas. “Lighthouse” schools such as these are convinced of the benefits of the technology and the associated approaches for geographical learning and subsequent spatial literacy for their students and have been involved in regional efforts to spread the pedagogical word. However across the country we still have many schools (the majority), which are ignorant of the technology or unable to master the learning curve in terms of time, money and resources.*

## 6) Lack of incentives for the study of geography in senior years

Student motivation in a particular subject can be influenced by career aspirations and the perceived value of the subject as a prerequisite to a tertiary course. As the completion of Year 12 geography is not a prerequisite to any tertiary course, students may undervalue studying the subject in the senior and upper middle school years. Furthermore, in schools where career teachers are not aware of the career possibilities for students who enjoy the subject, the opportunity to encourage the study of the subject may be missed.

It should be noted that the Australian Geography Teachers’ Association has initiated significant efforts to promote the vocational advantages of the study of geography, for example, through the publication of brochures, newsletters and websites.

As argued in *Australians Need Geography* (AGTA, 2006), study in this area 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.

To counter public perceptions that geography is not vocationally useful, brochures produced by the Australian Geography Teachers' Association point out that 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. These materials suggest that 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.

A strong case is also argued for the transferability of skills gained through the study of geography, for example, through provision of varied and stimulating opportunities to develop literacy and numeracy skills. The study of geography is both qualitative and quantitative. Proponents argue that ... "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 (<http://www.literacytrust.org.uk/Database/oracy.html>) is encouraged in role-plays, presentations, fieldwork and interviews. 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. This argument is encapsulated in the following comment:

*An important feature of school geography is the emphasis placed on learning a wide range of transferable skills, possibly wider than in any other subject. These include the ability to communicate in written, numerical, graphical, cartographic and oral forms; to observe; to collect and analyse a very diverse range of information; to work collaboratively with others; to think critically; and to be open to a wide range of causes and consequences of the phenomena being studied. Geography makes a significant contribution to the development of all of the four key skills identified in the ACER report on an Australian*

*Certificate of Education (reading literacy/verbal reasoning, mathematical literacy/quantitative reasoning, written English and ICT literacy), and most of the 'employability skills' identified by the Australian Chamber of Commerce and Industry and the Business Council of Australia, as also listed in the ACER report. (AGTA, 2007).*

### Good practice principles

Perhaps an effective way to sum up the submissions made about the factors that are negatively impacted on the teaching of geography in Australian schools is to contrast them with what the consensus of views reveals as good practices that stimulate student learning in this area. One submission to this study defined best practice in the following way:

*Best practice in geography teaching should move students beyond a focus on the descriptive, that is, the ability to describe the features of our planets surface and their spatial location, to include conceptual and creative questioning that combine the discrete inter disciplines of physical and human geography. By application of theoretical models and investigation of case studies students are able to explain why our world is like it is. By asking students to then consider what should be enables the application of their geographical knowledge, skills, understandings and values to address contemporary problems and consider solutions. (Brian Rogers, WA DET 2007)*

While it is important to recognise the factors that have negatively impacted on the teaching of geography, it is also important to note, and encourage practices that have a positive impact on learning in this area. The following list, proposed by the Geography Teachers' Association of South Australia (GTASA), encapsulates the views of other contributors to this study, which summarises what are considered to be good practices in school organisation, curriculum focused and pedagogy for supporting the study of geography. The quality of geographical education is enhanced by the following factors:

- Geography teaching and learning is provided with adequate time in the curricula;
- Qualified geography teachers who have the academic background and skills to facilitate rigorous and in-depth learning;
- Teachers who have a passion for the subject and believe in its value in the curriculum and are innovative;
- Teachers who want to teach the subject rather than being required to as is at times the case when geography is combined into SOSE;
- Teachers who keep their knowledge and skills current;
- Teachers who embrace and are confident to utilize new technology;
- Teachers who develop positive relationships with their students;
- Class size — large classes reduce the opportunities for individual students to interact and be assisted by teachers;
- Access to technology, e.g. computers, Geographic Information Systems, broadband internet access, software programs;

- Access to excursions and fieldwork. These activities develop students' skills but also to connect classroom learning with real world applications;
- Students understanding the relevance of what they are learning to themselves and others;
- Activities that involve problem solving and higher order thinking skills. These challenge and extend students;
- Incorporating current learning theory into teaching practices, e.g. Multiple Intelligences and Thinking Skills;
- Incorporating a range of different learning activities in the classroom that cater for the different learning style preferences of students, e.g. role plays, group work, individual research, team investigations;
- Opportunities for student involvement in practical community based projects, e.g. water care, coast watch, Trees for Life. These activities involve students putting their learning into action and empower students; and
- Access to quality and current resources (GTASA submission, 2007).

This list is perhaps not exhaustive, but is indicative of some of the areas to be addressed if the teaching of geography is to be enhanced. The principles enunciated suggest that enhancing student learning will not come about simply by re-designing the curriculum, but will require significant effort on a number of fronts over a period of time. As other submissions point out, even if geography was re-established as a stand alone subject, issues relating to the supply of teachers and quality of instruction would remain to be addressed. These themes are taken up further in the discussion about the "gaps" in current provision below.

### 3.3 Gaps in existing provision

Arguments about gaps in the current provision of geography concern pedagogical practices (reflecting the perceived weaknesses discussed above), deficiencies in teacher competency, and school and systemic curriculum organisation as well as the content of current state/territory curriculum statements.

In relation to curriculum content, stakeholders who provided submissions to this study raised the question of possible neglect of physical geography in some jurisdictions. The Council of the Institute of Australian Geographers, for example, do not believe that the content of the geography and SOSE syllabuses provide a balanced coverage of the contemporary geographical questions relevant to Australian students. Some questions, they believe, are well covered, but others are largely missing. Areas where the Council of Australian Geographers, echoing issues raised by members of the Royal Geographical Society of Queensland (RGSA) and others, perceive there are gaps include the following:

1. There is generally inadequate study of basic physical geography, particularly in SOSE, and as a consequence environmental issues are examined with insufficient understanding of the physical processes needed to understand these issues. Physical geography encompasses the study of climates, landforms, soils and underlying geology, vegetation and oceans. It emphasises the interrelationships between them, the effects of change in one element of the environment on other elements, the explanation of environmental differences between places, and the role of the

environment in providing the resources and services that support human life and economic activity. The RGSA adds, “units often concentrate on say, the human effects and mitigation of natural disasters, without an equivalent time being spent understanding the physical forces at work”.

2. There is little study of the geography of the economy, although economic issues are central concerns of households, communities and governments. In the syllabuses, we have examined there is study of individual industries, but little or no study of the structure and growth of regional economies in Australia. Far more attention is paid to economic development in other countries than to economic development within Australia’s regions. Students should know something about the structure of Australia’s urban and rural economies, the linkages between economic sectors within and between regions, the reasons for the concentration of economic activity in particular regions, and the differences between regions in economic growth, employment opportunities, incomes and welfare.
3. The study of population mobility, whether within a city, between regions or between states, and its consequences for communities, economies and environments, is generally neglected. Australians are quite mobile people by world standards, and population movement is a significant feature of Australian life.
4. The study of the socioeconomic characteristics of communities, and the geography of advantage and disadvantage, is another neglected area. Informed citizenship requires Australians to have an understanding of the socioeconomic differences between communities in indicators such as educational attainment, health, employment and occupations (Council of the Institute of Australian Geographers submission, 2007).

A lack of suitable resources for use by students and teachers was mentioned by several stakeholders as creating a gap in teaching of some aspects of geography. For example, one submission said ... “schools need access to up-to-date material, because geography is a ‘current affairs’ subject. This is possible in many schools through internet access and GIS developments, but it is not yet possible in all schools”.

It is difficult to assess how important a lack of resources might be on a national scale. While clearly individual schools may have difficulty accessing resources, there are a large number of books and websites addressing various aspects of geography readily available, as reviews in professional association journals attest. With the pace of change in Australian curriculum showing no sign of abating, it is unlikely that a single text book would meet the needs of all schools, even within a particular jurisdiction. Even if such a situation were possible, it may not be desirable. As with other subject areas, good teachers tend to use a variety of source materials to engage students, and the greater challenge is to ensure that teachers have sufficient ongoing professional development to ensure that they are able to take advantage of the possibilities that are readily available.

Concerns were also expressed by several individuals and organisations that over and above any gaps in curriculum content such as those described above; there are more important gaps in continuity of geographic thinking, content, skills and ideas through the curriculum, particularly from Year 6 to Year 10. This gap in continuity, in the view of the Royal Geographic Society of SA, means that many students have a “scrambled” understanding of world patterns of places, resources, developments and issues.

More importantly, this gap in continuity occurs because there is little guarantee that all students will actually be taught any geographical skills or knowledge in any particular

school, even though it is possible or even mandated within current state/territory curriculum and syllabus frameworks.

As the Royal Geographical Society of Queensland submission put it:

*The yawning gap is that it depends too much on the teacher, not the system, as to whether a student will gain the geographical understandings, knowledge and skills that will help address many of the big issues facing us today - climate change, drought, ageing populations, urban growth, ethnic conflicts, globalisation.*

State and territory jurisdictions also recognised that the variation in the quality of learning geography from school to school and teacher to teacher is considerable. Jurisdictions have attempted to address this situation, with varying degrees of success, through the development of resources, support materials and guidelines and provision of professional development. This work is ongoing, both within the context of support for geography as an area of study within established curriculum, and as part of broader curriculum renewal efforts. In states such as Western Australia, for example, the development of the syllabus materials by the Department of Education was seen as having the potential to fill a significant gap in the provision of support to teachers.

*The materials will contain explicit statements regarding the content that should be taught and will provide guidance in appropriate pedagogical practices to enhance particular learning tasks. Up until now, teachers have expended considerable energy on planning and the development of appropriate assessment tasks without the use of explicit curriculum resources. There has been constant 're-inventing of the wheel' from one school to another with no certainty as to the consistency of content and skill development. Of course this has varied from school to school and from teacher to teacher, especially from primary to secondary classrooms, depending on the availability of specialist S&E teachers. From 2008 this will certainly be addressed for those teachers who need the detailed support. The syllabus materials are also detailed to provide support for teachers who are teaching outside of their area of expertise. (Submission from WA Catholic Education Office)*

Similarly, issues under consideration in South Australia do not necessarily address gaps in curriculum content, but rather how levels of required learning are expressed. Currently the required learnings are prescribed by the key ideas and the outcomes. More detailed descriptions are provided only as examples of what might be covered under each key idea and outcome. Future refinement of the Society and Environment KLA will involve determining the level of required prescriptive detail at each standard.

On a national scale, these school-level differences in the quality of exposure to learning aspects of geography contribute to a larger gap – that is, the very small proportion of students that study geography in any systematic and sustained way through to senior levels. As noted above, while all state and territory syllabus and curriculum frameworks in theory allow students to study geography during the secondary school years in some form or another, only in NSW is this mandatory, where some 82,000 15-16-year-olds studied geography in 2005.

However, Hutchison (2006) notes that in Victoria and New South Wales only 6 per cent and 7.5 per cent, respectively, of students enrolled in their final year of post-primary schooling chose to study geography in 2005. In South Australia more vocationally focused subjects

such as tourism and psychology appear to be drawing students away from geography in their final two years of schooling. Similarly, in Tasmania the Behavioural Studies is believed to be a much more attractive course than geography for 16-18-year-old students. Queensland schools appear to have maintained their numbers in senior geography classes.

This trend has been evident for some time. Cranby (2001) examined participation rates in Year 12 geography for the period 1984 to 1995 (see Table 4). He notes that over this period, the proportion of all students preparing for tertiary entrance who studied geography fell from 27.3 per cent to 15.3 per cent. However, this took place during a period of increasing retention rates across the country. In real terms, the number of students increased through most of this period, though not at the same rate as the total number of students. Significantly, in the middle of the 1990s, towards the end of this period, as the retention rate began to fall the numbers of geography students fell at a greater rate. Cranby notes that the drift away from geography began before the introduction of the SOSE curriculum and was relatively consistent across states and territories; however the period of decline and stability has varied from state to state.

Table 4: Geography Students as a Proportion of National Year 12 Candidates (1984-95)

Year*	Total Cohort	Geography Cohort	Geography % of National Cohort
1984	110,462	30,132	27.3
1985	116,316	29,461	25.3
1986	128,112	30,572	23.9
1987	142,107	32,829	23.1
1988	162,469	34,791	21.4
1989	167,845	35,220	21.0
1990	169,471	33,452	19.7
1991	183,257	36,210	19.8
1992	192,511	36,566	19.0
1993	186,916	33,406	17.9
1995	175,898	26,863	15.3

\*1994 data not available

(Source: Mapping Curriculum in the final year of secondary school across Australia. DEETYA, 1997.)

Since 1995, the trend towards declining participation in senior geography has continued. One consequence of this, as discussed earlier, has been a decline in the number of geography enrolments in tertiary level courses, leading to a decrease in the number of geography graduates, and even fewer numbers of geography trained teachers.

The Australian Council for Educational Research analysis of the Longitudinal Surveys of Australian Youth study provides some information on the study of geography in Year 12 (with figures for history provided for comparative purposes).

**Table 5: Enrolments in Year 12 Geography and History**

Year	Percentage of Year 12 students studying geography	Percentage of Year 12 students studying History
1993	18.3	21.1
1998	13.8	17.4
2001	12.0	18.2

Source: Fullerton, Walker, Ainley & Hillman (2003) *Patterns of Participation in Year 12*.

The report on pp. 27 and 52 comments:

*Around seven out of every ten of the Year 12 students were studying at least one subject in this area. In terms of the subject areas that constitute this Key Learning Area, a little more than 34 per cent of Year 12 students undertake subjects in the humanities and social sciences area while almost 40 per cent study in the area of economics and business ... [T]he business studies area continues to grow in terms of proportion of enrolments, while the more traditional areas of geography, politics and social sciences, and economics continue to see a decline in enrolments.*

*In the humanities and social sciences learning area there has been a continuing decline in overall participation from 52 to 35 per cent of Year 12 students. The most marked decline has been in the percentage of students taking more than one humanities subject. In terms of specific subjects the change from 1993 to 2001 for history has been from 21 to 18 per cent, for geography it has been from 18 to 12 per cent (the figure was 21 per cent in 1990) and for politics or social studies it has declined from 15 to 7 per cent ... These trends in participation are reflected in the decline in the curriculum share attributable to the humanities and social sciences from 12 to 8 per cent over the period from 1990 to 2001.*

Several explanations for the decreasing popularity of geography in post compulsory education have been posited by various authors. Hutchison (2006) sums these up as follows:

- geography has little to offer in students' eyes;
- geography educators have been slow to update their image and initiate moves in the community to re-educate thinking away from the 'capes and bays' mentality of past perceptions;
- curriculum change that has marginalised the role of geography;
- the adoption of standards-based curriculum and reporting against these standards rather than subject content;
- the paucity of geography teacher training;
- the teaching of geography curricula by non geographers lacking geographical knowledge, skills, pedagogy and passion for the subject;
- absence of geography skills, in particular field skills being taught at junior and middle secondary levels;
- variations in the amount of time allocated to Studies of Society and Environment in compulsory schooling;

- inadequate support for geography teachers in the context of Studies of Society and Environment;
- an increasingly crowded curriculum, including vocational education;
- unfavourable timetabling within schools noted as a barrier to the selection of geography, exacerbated by principals and decision makers promoting other subjects;
- the cost of, and legal constraints on, fieldwork;
- elimination of the extension courses in geography; and
- increased popularity of other social science subjects, such as Business Studies, perceived by parents as contributing to future employment.

The problem created by this decline in post-compulsory study, together with the apparently patchy coverage in primary schools is that too few students have the opportunity...

*to appreciate and understand the geographical nature of the country they live in, as well as the variable nature of the parts of the earth's surface, how places differ one from another and why, and how human intervention has changed the world, as well as to appreciate the linkages and inter-relationships between the human and the bio-physical environment and how this is played out in differing spatial or geographical locations or places (Curson, 2006).*

If, as *Australians Need Geography* (2007) advocates, geography is vital to the education of every young Australian in the 21st century, the situation is serious. Without rigorous and sustained study, young people are less well prepared than needs be to fully participate in local and global decision-making. For this reason, stakeholders strongly argue that geography is as important, and of equal relevance in today's society, as English, mathematics, science and history. Two examples drawn from *Australians Need Geography* illustrate this point:

***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 provokes and answers questions about the natural and human worlds,*

*using the filter of different scales of enquiry to view them from different perspectives. Australia needs its citizens to understand these questions and its workforce to have the skills and knowledge to answer them.*

*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.” (p.3)*

Accordingly, the question is, *what is the place of geography in the Australian curriculum and what geography should students know?*

### 3.4 Recommendations on what geography every Australian student should know before they complete Year 10

Consideration of what geography every Australian student should know before they complete Year 10 requires addressing the prior question of “What is geography?” This is a question that has attracted considerable debate, and to which there is perhaps no simple or definitive answer. As the discipline area continues to evolve, its scope may continue to expand to take into account various aspects of the interaction between people and their environment, broadly defined. Bliss (in press), provides a discussion of the evolution of geography as a discipline over the last century.

*Modern physical geography dates from the developments in scientific thinking that emerged at the end of the 18th century. The Theory of the Earth (Hutton, 1775) was an influential source, as was the work of Davis explaining that the earth was subject to natural processes over long timescales to shape today’s scenery. Process studies became the ‘holy grail’ of geomorphology from late 1960s. In the early 1980s physical geography followed a scientific approach, such as measuring the correlation between stream order and gradient, and glaciers were part of a system with inputs, processes and outputs. In the last 25 years there is increasing concern about the interactions between people and environments. Although Jacks and Whyte’s book, The Rape of the Earth (1939) indicates that this idea is not new. Today there is greater focus on the sustainable management of the changing global physical environment, noted in texts such as Global Environmental Change (Mannion, 1997), Global Casino: An Introduction to Global Issues (Middleton, 1999) and The Weather Makers (Flannery, 2005).*

Bliss, citing Morgan and Lambert (2005), notes that:

*[I]n 1950s and 1960s the methodology and substance of human geography changed as geographers argued for a systematic human geography based on the principles of experimentation and quantification. In the post war period greater emphasis was given to spatial elements of geography. In turn, during the 1970s the emphasis on spatial models gave way to greater consideration of political economy approaches and the study of behavioural geography, which sought to provide greater understanding of how people perceived places and made locational decisions. The subject was widened in the 1980s to embrace critical social theories and was influenced by the ideas of ‘radical’ geographers such as*

*David Harvey. Contemporary views on geography seek a return to more empirically based study, recognising the need for balance between the aspects of geographical inquiry that all add to our understanding of the world.*

These differing views about the nature of geography were reflected in submissions to this review. Some respondents define geography in terms of how it is studied or practised, rather than the content of what is studied alone. For example:

*Geographical education makes a lifelong contribution to individual understanding of the natural and built features of the earth and the environmental, social and economic processes that change them. Geography can ignite young people's interest in their world. Geography education is fundamental and ought to be core for all Australian school students. Geographic knowledge is important, but equally it is the development of skills of spatial analysis which will play a critical role in human's future quality of life. Geography develops knowledge, understanding and skills essential to managing some of the most important issues facing our nation—water shortages, urban growth, climate change, and many others. (Kriewaldt, Submission to Geography Study, 2007)*

Similarly, AGTA (2007) argues that: “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 Council of the Institute of Australian Geographers provides a more extensive overview in its submission regarding the place of geography in education. Its view ... “Geography is the study of places—their environments, populations, economies and communities—and how and why these places are changing. When students learn about their own place or region, and of other places within Australia, they develop the knowledge and understanding to make sense of their own place, and to make informed decisions on local, regional, national and global issues. When geography teaches about places outside Australia students develop knowledge of the world and of their position within it, also an important aspect of informed citizenship. They may also learn about how other places, both within and outside Australia, manage problems they can identify in their own place or region. Students need some knowledge of the names and locations of places, but much more importantly they need to understand why these places are like they are, how they are changing, and the methods used to examine these questions. This is a socially useful contribution to education. In the words of a Queensland high school student, “Geography is a real life subject, for it is impossible to read a newspaper, watch television or surf the net without finding reports on current issues that are studied in geography”.

The Institute submission goes on to say that through the study of geography, students gain knowledge of their own and other parts of the world and of the processes and activities that shape and change the characteristics of places. They also learn some of the concepts and approaches that geographers use to understand the world around them, such as relative location, centrality, proximity, scale, human adaptation, comparison, interrelationships, connectedness, systems, cycles, agglomeration, perception, culture and power. “A geographical education therefore helps to produce citizens able to make informed decisions on personal, local, regional, national and global issues. An understanding of Australia's geography is also important in helping young people to develop their own identity as Australians” (CIAG, 2007).

According to Kleeman (Submission to Geography Study 2007), geography is the discipline that helps us find answers to questions about the world in which we live – about where things are and how they got there. It seeks to explain the character of places and the distribution of people, features and events on or near the earth’s surface. It is concerned with the processes that shape the earth’s surface and the ways people interact with the environment. Geographers focus on change over time and space. The outcomes of such changes are locations or places that are spatially different. The study of geography helps us to understand the nature and scope of these changes and to predict what might occur in the future.

Kleeman goes on to say, “Given its interdisciplinary nature, geography represents an excellent curriculum framework for engaging with some of the great challenges facing humanity—climate change, water and land management, global inequalities, sustainable economic growth, habitat protection and management, the impacts of rapid urbanisation and our future energy needs. It also provides a level of cultural understanding that enables students to better understand some of the important geopolitical issues and challenges facing Australia and the world”. The study of geography is therefore essential to:

- an understanding and appreciation of the Australian narrative – the ways in which Australia’s Geography has shaped the interactions of people with the environment over time, and how Australia’s Geography shapes our national identity;
- active and informed citizenship (at a local, national and global scale). Geography focuses on developing students’ participatory knowledge and skills. History, on the other hand, focuses on the historical and institutional aspects of governance. Both complement each other and overlap is avoided; and
- the inculcation of values. These include: social justice; ecological sustainability; the ethical conduct of research; responsibility; cultural understanding, tolerance and inclusion; and responsibility, autonomous life-long learning”.

What should be included in a Year 3-10 geography curriculum?

Some submissions to this study proposed detailed lists of topics that the authors believed should be included in any future geography curriculum for Australian students in Years 3-10 (see for example, the list of topics from a teachers’ association in the Exhibit below). Not surprisingly, there was a diversity of opinion amongst respondents as to what should be included. However, as the GTAV submission, noted, there are some aspects upon which all teachers appear to agree:

- the subject must assist students in developing a range of practical and intellectual skills, as well as acquire factual knowledge;
- the curriculum must display a progression of knowledge and skills which begins early in students’ school years and is built upon, year by year, taking into consideration the cognitive development of the child and their intellectual capacity at various stages of their life. An outline of the basic knowledge and skills to be taught at different year levels must therefore be clearly articulated in curriculum documents;
- there must be some flexibility within the curriculum to allow teachers to develop courses relevant to their students and to their own geographic setting;
- courses must engage students and explicitly indicate the relevance of course content;

- there must be a balance of human and physical geography;
- there should be scope for the study of case studies so that students can study some topics in detail;
- the teaching of skills should be integrated into course content;
- fieldwork is essential to the study of geography;
- teachers must be supported in adopting ICT applications, including GIS, in their geography classrooms;
- students should have opportunities to investigate their own local environment, as well as develop regional, national and global perspective to phenomena; and
- the subject should not avoid the sometimes depressing nature of topics they are studying, but develop a balanced approach and an optimistic outlook in their students. For this reason it is important for students to investigate how to respond to phenomena.

In a similar manner, other submissions provided details of the characteristics that a future geography curriculum should display. For example, Kleeman in his submission to this Study says: "Any potential geography curriculum must be flexible enough to accommodate a focus on **contemporary issues** in specific (often local) spatial contexts. Contemporary issues are those issues that are "in the news" and which are discussed and debated widely in the community. Any study of such issues should be grounded in the relevant geographical processes which become the "entry point of study".

Geography teaching should promote **critical thinking**. The term "critical thinking", as used in this particular context, refers to the processes by which individuals use reflective thinking to gather, interpret and evaluate information in order to formulate an informed opinion or judgment. By developing such skills we enhance the students' ability to identify, and perhaps challenge dominant discourses and enhance their capacity to evaluate various alternatives. Empowered by these understandings, the individual is better placed to act as an agent of social change, working towards the removal of inequalities and injustices.

The teaching of geography should encourage students to consider a variety of **perspectives** (or points of view) relating to geographical issues. By doing so they are better placed to formulate their own opinions and clarify their own values and attitudes. Perspectives, as used in this context, refer to a way of viewing the world; the people in it; their relationship with each other and with their environments.

Geography teaching should draw on the discipline's distinctive **inquiry-based methodologies** (including mapping, fieldwork and the emerging spatial technologies) and enhance the development of transferable skills including: the collection, organisation, analysis and synthesis of information; the use of written, oral and graphic forms of communication; and the ability to work cooperatively with others.

Kleeman identifies what he believes a well-balanced course in geography would include:

- a brief examination of the nature of geography as a discipline;
- geographical skills, especially those central to the discipline's inquiry-based methodology;
- physical environments (ecosystems/landscapes) and the elements that define them – weather and climate (including the water cycle), the physical processes shaping

landforms (weathering, erosion and deposition), and the distinctive communities of plants and animals characteristic of specific ecosystems;

- case studies of specific ecosystems/landscapes – their spatial distribution, the major geographical processes that operate within them and the manner in which people (and communities) interact with such environments;
- natural hazards – causes, impacts and human responses;
- our changing world – the dynamics of change including technological innovation, demographic and social change, and economic and cultural integration (globalisation);
- global inequalities (Development Geography) - including: global patterns of poverty and wealth; human rights; variations in access to the essentials of life including fresh water, education, healthcare, shelter and food; natural resources including energy sources etc.;
- global challenges – such as climate change, threatened habitats, world population growth, urbanisation, water and land management, and the management of ocean resources; and
- a study of the ways in which these challenges are being addressed by multi-national bodies, NGOs, national governments and community-based organisations.

Australian-related essential learnings (ideally integrated within a study of the above):

- Australia's place geography – its relative location and size, and its latitudinal and longitudinal extent;
- Australia's unique physical environment – its major landform features, drainage basins (or river systems), its ancient soils, and the continent's patterns of climate (with a special focus on the consequences of Australia's rainfall distribution and variability) and vegetation;
- natural hazards in Australia – causes, impacts and human responses (a focus on strategies for protecting life and property);
- unique characteristics of Australia's human/cultural environment – the nation's changing demographics including its age structure, population distribution and ethnic composition;
- the changing economic character of Australia and how this impacts on communities – especially the ways in which it constructs a geography of advantage and disadvantage;
- factors causing change in Australian communities. For example, the ways in which demographic and social changes are impacting on Australian communities and regional economies;
- geographical issues affecting Australian communities including climate change, coastal management, water and land management, population movements and growth; and
- Australia's geographical links with the Asia-Pacific region and the world.

Others were reluctant to specify any particular content, but rather believed that skills, concepts, values and key understandings are just as essential to students as a defined core of 'essential' knowledge. Through learning and applying new skills students develop greater conceptual understanding.

The Royal Geographical Society of South Australia (RGSSA), for example, broadly defined the requirement for geography curriculum to provide the key understanding for all students about the connectedness between people and environments – both natural and human. The following quote summarizes its position:

*Geography is the study of the earth as the home of people.* (Yi-Fu Tuan, 1991)

The RGSSA submission went on to say that ... “there are many topical issues that students can apply their knowledge and skills to develop a clear understanding of where they occur, what the problem is, why it has come about and what responses are possible and desirable? We believe that these issues should be incorporated into geography courses in schools. They should not necessarily form the basis of learning as issues based approaches to learning can be quite narrow, but rather be used as a vehicle for applying knowledge to issues that are relevant to students. There are three lenses for looking at geographical issues: local, national and global, and these perspectives should also be incorporated into geography courses.

The submission from the South Australian Department of Education and Children’s Services emphasised that geography should be a significant contributor to knowledge, understandings, skills and capacities (ways of seeing and engaging in the world) that enables students to participate, in a range of ways, as ethical, active and informed citizens in a democratic society within a global community.

Similarly, the RGSQ said: “the last thing we want is a list of facts – what geographers these days refer to as “capes and bays” geography. The UK went too far down that track to the detriment of the subject and has now reversed. Geography is more about understanding processes and relationships. It is a way of thinking. Of course, this is not to say that students don’t need to acquire some factual knowledge (and know where to look more up) to understand, say, the spatial relationships at play ... We need balance—between facts and no facts; among issues-based, systematic and regional approaches; in areas of the world included; in scales etc. We need scope for local adaptations, (e.g. Bourke and Cunnamulla have more in common with each other than either of their state capitals). We need some room for teachers to include studies that engage the individuals in their classes”.

### Exhibit 1. Sample Content for Geography Years 3-10

#### Knowledge content

There is a wide range of topics members consider important for students to learn in Years Prep - 10, including:

- Students’ local geography.
- While our members have stated they do not expect students to have a complete knowledge of the location of places, there is an expectation that students will learn the location of significant places: all the continents and the oceans, and many of the major seas, regions, countries and cities of the world, as well as a knowledge of Australia’s states, territories and capitals, many of its major natural features, and its near neighbours in the Asia Pacific region.
- A knowledge and appreciation of the diversity of cultural aspects and living conditions of people around the world.
- The rudimentary concepts of the earth’s rotation and orbit, and its impact on our measurement of time and seasonality.
- The major climatic zones of the world, and the factors affecting climate and weather.
- The water cycle and river catchments.
- Plate tectonics; the rock/soil cycle; earthquakes and volcanic activity; mountain building; erosion and weathering; coastal processes.
- The major ecosystems of the world; biodiversity; forests and their natural services; the carbon cycle.
- Natural hazards: the causes and consequences of natural hazards and extreme weather events; responses to natural disasters.
- Natural systems: how they operate; impacts on natural systems, including climate change, pollution, ozone depletion, land degradation, species loss, the degradation of selected ecosystems; managing environmental problems.
- Land use: different types of land use; urban and rural land use; the factors affecting the patterns of land use; settlement patterns; the built environment; urbanisation.

- Population studies: population growth and dynamics; migration; indigenous Australians; issues relating to rapid population growth and an ageing population; responding to population issues.
- Development studies: the global distribution of wealth; variations in living standards; the causes and consequences of poverty; how countries develop; globalisation; sustainable development.
- Resource development and use: water; fossil fuels; primary and secondary resources; sustainable use of resources.

#### Practical skills

Students should develop the ability to:

- conduct various mapping activities, including:
  - create a variety of different types of maps, including the required conventions
  - calculate distance and area
  - determine direction and bearings
  - locate places use alpha-numeric references, grid references, and latitude and longitude readings
  - identify features on a variety of maps, including topographic maps and weather maps
  - construct and analyse cross-sections
  - determine relief and calculate gradient
  - use of GIS to create maps;
- create a variety of graphs displaying geographic information;
- produce visual forms of information apart from maps and graphs, including diagrams, concept maps, field sketches, photographs, tables and matrices;
- collect data through:
  - fieldwork
  - surveying techniques
  - conducting effective research through defining the topic to be investigated, and then purposefully locating, selecting and synthesising information;
- present information in a written form appropriate to the subject. This requires the use of appropriate terms, including the spatial concepts, written responses which convey ideas clearly and concisely, and the inclusion of precise facts, quantitative data and examples.

#### Intellectual skills

Students need to develop a range of intellectual skills which are both subject specific and transferable, including:

- spatial awareness. This is fundamental to the study of geography and what sets it apart from other subjects. It is developed through frequent reference to maps, atlases and globes;
- the ability to interpret and synthesise information from a wide variety of sources, including a variety of different types of text, various types of maps and graphs, photographs, satellite images, diagrams, and tables;
- the use of spatial concepts: distance, location, region, movement, scale, distribution, spatial association, spatial change over time, and spatial interaction. This includes effectively describing spatial patterns, and identifying anomalies to the general patterns observed;
- the ability to investigate phenomena at a variety of spatial scales, including at local, regional, national, international and/or global scales;
- the ability to consider phenomena at a range of temporal scales, including short, medium and long term phenomena;
- the ability to classify phenomena. This includes:
  - differentiating between natural and human characteristics of the environment;
  - natural processes operating within the biosphere, the atmosphere, the lithosphere, the hydrosphere;
  - analysing the social, historic, economic, environmental, political and technological factors affecting phenomena;

- a repertoire of thinking skills, such as factual recall, comprehension, application, analysis, synthesis and evaluation. Students should also understand the subtle differences between various directive terms, such as describe, explain, analyse, compare, contrast, evaluate, classify, discuss, suggest, justify etc;
- critical thinking skills, so students can carefully analyse information for themselves, detecting possible bias or inaccuracies, and form and justify their own opinions;
- the ability to consider ways of responding to phenomena. This includes higher order thinking skills such as prediction, evaluation, problem solving, decision making, designing policy and justifying choices; and
- the ability to consider multiple dimensions of phenomena, including social, economic and environmental implications, and an understanding of the concept of sustainable development.

(Source Geography Teachers Association of Victoria, 2007)

### 3.5 Conclusions

The study of geography in one form or another has long been part of the Australian school curriculum. While now studied by relatively few students at senior secondary levels, there is still a strong expectation in the curriculum documents of all states and territories that in the compulsory years of schooling, young people will be exposed to key concepts of Place and Space, specific skills such as map reading and the development of higher order skills of analysis and interpretation of data to assist them to understand the world they live in.

This view continues to be important. As the then Minister for Education, Science and Training, the Hon Julie Bishop MP noted in announcing this Study, "The teaching of geography is vital to link students with society, culture and the physical environment at the local, national and global level" (Ministerial Media Release, 18 June 2007).

This brief Review has highlighted some of the perceived deficiencies in current approaches to teaching geography, and particularly the impact since the introduction of the SOSE curriculum. Geography teacher professional associations have lobbied strongly to re-introduce geography as a core subject, as a strategy to reverse the significant decline in the number of students in Australia studying this subject in any depth. They rightly point to the challenges for the discipline now and into the future if the number of teachers with sufficient knowledge and skills in the area is not significantly increased.

The decline in the fortunes of geography as an academic discipline are not new, nor are the criticisms of the integrated approach to teaching "the humanities" as a means of addressing curriculum overcrowding. For example, Powell (1997: 49-51) expressed concern about the anti-intellectualism of this approach if an attempt were made to introduce another integrated social studies course, titled Studies of Society and Environment, to replace the disciplines of geography, history, and economics in the school curriculum. It is difficult to justify the introduction of another integrated course in Australia when the evidence from the USA indicates that, after being implemented in their school systems over a long period, integrated courses did not achieve the educational objectives expected by their supporters (Biddle, 1996 & 1999; and Gardner, 1986).

There are no easy answers to the question of what geography Australian students should know. While it is certainly possible to identify more or less comprehensive lists of topics, concepts, skills and areas for inquiry that are common across state and territory Year 3–10 curriculum frameworks, or to consolidate the “wish lists” of stakeholders (see the body of the report and Appendices for examples), there will be ongoing debate about any proposal put forward. This debate is healthy, and this report should therefore be seen as the starting point for further discussion within the profession.

Experienced geography teachers can teach good geography to their students despite the current limitations, or the perceived constraints or advantages of their particular syllabus or curriculum. They find ways of acquiring appropriate resources and manage to inspire their students. But, as one submission put it, it shouldn't be this way. It is neither equitable nor nationally acceptable that some students are well prepared to understand the world around them and the forces that have, and will continue to shape this world, while others are not. Both the curriculum and school practice should facilitate the students' cumulative understanding of geographical concepts and their development of geographic skills at increasing levels of complexity and in different contexts. All Australian students should have these opportunities, not just the lucky few.

This study provides a contribution towards the ongoing debate about the development of a future national approach to geography, and makes the following recommendations to further this process.

### **General principles for a Year 3-10 geography curriculum**

There will inevitably be disagreement with both the format and content of any proposed geography curriculum (indeed the curriculum in any learning area). This difference of view can be readily seen from the differences between the various state/territory syllabus and curriculum documents in Australia discussed in the body of this report. The format chosen to present the sample geography curriculum below is by no means the only way in which a curriculum can be presented. The emphasis on content will be criticised by some as being out of step with recent trends in curriculum development which favours presentation of the “big ideas” to be covered in a learning area rather than detailed descriptions of content, leaving it to teachers in individual schools to interpret these big ideas into classroom programs. Indeed, the UK geography curriculum authorities have gradually reduced the amount of detailed comment from a 1991, 1995 and 2000 Geography National Curriculum to a position where enquiry and skills became more prominent (Rawlings, 2000). Lambert (2007) subsequently proposed curriculum that is “moving away from planning and implementing a curriculum defined by its content and closer to a curriculum designed around the subject's main concepts”. VELS, similarly, adopts a minimalist position in curriculum design, emphasising key concepts.

Whatever format is selected needs to ensure that attention is given to knowledge, skills and values. As Bliss (2007) maintains, “Primary geography is not based on facts about places and environments. At the heart are the attitudes and values promoted in geography”. Elsewhere, the International Geographic Union Commission on Geographical Education says that geography and the education of the individual promote values conducive to:

- interest in their surroundings and in the variety of natural and human characteristics on the surface of the earth;

- appreciation for the beauty of the physical world, on the one hand, and of the different living conditions of people, on the other;
- concern for the quality and planning of the environment and human habitat for future generations;
- understanding the significance of attitudes and values in decision making;
- readiness to use geographical knowledge and skills adequately and responsibly in private, professional and public life;
- respect for the rights of all people to equality;
- dedication to seeking solutions to local, regional, national and international problems on the basis of the "Universal Declaration of Human Rights" (IGU, 2006).

Likewise, there is a strong need for any geography curriculum to have a bias towards helping students to have an understanding of the world around them, recognise the relationship between human activities and the environment, and understand how they can act to solve perceived problems. Catling (2002) advocate primary geography is important, because it develops children's sense of place, awareness of the world, and positive attitudes and values towards people and environments that works towards a better world. Harm de Blij (1999) declares that "without primary geography, students' comprehension of the planet's natural resources and the need for judicious use and conservation is deferred".

Similarly, the curriculum needs to ensure that students have the opportunity to develop skills through practical activities. "Fieldwork is intrinsic to the discipline as clinical practice is to medicine. Geography without fieldwork is [perceived as being] like science without experiments. Sauer (1956:296) stated that 'the principal training of geographers should come, wherever possible by doing fieldwork". This process must begin in primary schools, using aerial photographs and maps, linked to local area studies. The local environment in and around school is a resource for work across geography but especially for local area studies (Bliss, 2007). The use of ICT needs to have a strong presence in any future geography curriculum. Geography teachers already use ICT used by teachers, including the internet, presentation software, spreadsheets and CD-ROMs.

The curriculum needs to respond to the needs and interests of students. There is evidence that students prefer content that is current and linked to issues around them either in their own lives or in the news. They see it as a dynamic subject that responds to the changing nature of the world around them, unlike mathematics which is more logical and constrained (Catling, 2004). Students suggest that geography is not merely about factual knowledge; it encourages them to have different viewpoints and express their own opinions. This means it can also be challenging because it requires thinking (Norman and Harrison, 2004; Adey and Biddulph, 2001).

These principles are contained in the following sample curriculum.

SAMPLE CONTENT OF A NATIONAL 3-10 GEOGRAPHY CURRICULUM\*

Level 2 (Early primary)			
Key Learning Outcomes	Sample content		
<p>Students should demonstrate an understanding of:</p> <ul style="list-style-type: none"> <li>the major features of the local, national and global environment (natural and built) and use appropriate geographical terminology to describe these features</li> <li>the characterisation or representation of geographical information (through maps, models and other tools)</li> <li>the interrelationship between natural and built environments</li> <li>people's interaction with the environment, including understanding of ways in which people change the built, natural and social environment</li> <li>responsible ways of interacting with the environment</li> </ul>	<p><b>Knowledge</b></p> <p>Students should know:</p> <ul style="list-style-type: none"> <li><i>basic geographical terminology to describe natural and built features (e.g. mountains, rivers, vegetation and climate patterns, urban/rural areas, deserts, oceans, tropical forests, cities)</i></li> <li><i>the spatial elements of point, line, area and volume and spatial concepts of location, distance, direction, scale, movement and region</i></li> <li><i>names and locations of natural, built and heritage features in their local area and why these are significant</i></li> <li><i>the location and name of the capital city of Australia and of each State, and major regional centres</i></li> <li><i>the components of ecosystems in a local context</i></li> <li><i>why particular activities may be associated with particular places</i></li> <li><i>how aspects of natural environments are used to supply basic needs (e.g. food, shelter, work, recreation)</i></li> <li><i>how natural and built features, sites and places in the local area compares with other locations in Australia or the world</i></li> <li><i>how people can construct and modify</i></li> </ul>	<p><b>Skills</b></p> <p>Students should be able to:</p> <ul style="list-style-type: none"> <li><i>locate and map cities, rivers and mountains and use locational terminology such as north, south, east, west</i></li> <li><i>how to use a mental map to identify the location of places in the local community and to map the route to and from school</i></li> <li><i>identify the location of Australia in relation to the Equator, Tropic of Cancer, Tropic of Capricorn and North and South Poles on a map</i></li> <li><i>gather information about Aboriginal names for geographical features</i></li> <li><i>identify geographic features (e.g. continents, oceans, countries, cities) in written texts and maps and the globe</i></li> <li><i>compare information from maps, photos and videos with observable features in local environments in order to identify patterns</i></li> <li><i>use latitude and longitude or an alphanumeric grid to locate significant places on an atlas map</i></li> <li><i>explain which kind of map (e.g. wall, atlas, globe, electronically generated) is best for showing particular features and relationships</i></li> </ul>	<p><b>Attitudes and values</b></p> <p>Students should be able to:</p> <ul style="list-style-type: none"> <li><i>express aesthetic awareness of environments, both natural and built</i></li> <li><i>demonstrate awareness of issues about the care of places in the community or places of importance to them</i></li> <li><i>evaluate the necessity of caring for and conserving a feature, site or place</i></li> <li><i>identify the viewpoints of others regarding how sites, places and features can be cared for and demonstrate an appreciation of the rights of others to have these viewpoints</i></li> <li><i>give reasons why a specified feature, place or site should be cared for</i></li> <li><i>identify personal responsibility for, and collaborates in environmental projects.</i></li> </ul>

	<p><i>environments in a manner that reflects ideas, culture, needs and wants, e.g. designs of playgrounds, gardens</i></p> <ul style="list-style-type: none"> <li>• <i>how landscapes, land uses, resources and changes over time in Australian regions, compared with other regions or countries</i></li> <li>• <i>the relationship between some identified features (e.g. river systems and irrigation areas; mineral deposits and transport systems) in an Australian or other region</i></li> <li>• <i>how patterns of culture vary across the earth's surface</i></li> <li>• <i>that Aboriginal nations and boundaries are a way of understanding the Australian continent</i></li> <li>• <i>ways in which Aboriginal peoples have used and interacted with the environment to meet their needs</i></li> <li>• <i>that people use the environment in other cultures, e.g. in the Asia-Pacific region, Africa, USA.</i></li> <li>• <i>that Aboriginal peoples have a special relationship with the land and sea</i></li> <li>• <i>how the lives of children in different societies are affected by different perspectives, life chances and opportunities</i></li> <li>• <i>some organisations concerned with the care of features, places and environments in the community</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>demonstrate understanding of different scales used on various maps and models</i></li> <li>• <i>use electronically generated maps, models or photographs to describe the relationship of places to particular relevant features (e.g. cities located on coasts and rivers, transport patterns following topography, mining areas linked to ports) and flow-charts to describe resource relationships.</i></li> <li>• <i>plan and implement a strategy for caring for a particular feature or site</i></li> </ul>	
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Level 3 (late primary)			
Key Learning Outcomes	Sample content		
<p>Students should demonstrate an understanding of:</p> <ul style="list-style-type: none"> <li>the interrelationship between people and the environment including natural cycles and natural and human changes to the environment</li> <li>the interconnectedness of the Australian and global environment</li> <li>how individuals and groups can interact with the environment in an ecologically responsible and sustainable way</li> </ul>	<p><b><u>Knowledge</u></b></p> <p>Students should know:</p> <ul style="list-style-type: none"> <li><i>how people, products and information move around the globe, including where the goods and services they use come from</i></li> <li><i>The role of technology in shaping the characteristics of places and the importance of scale</i></li> <li><i>some patterns of migration to Australia, ancient trade routes of Aboriginal people</i></li> <li><i>how people's involvement in environmental areas of Australia has changed over time, e.g. human use of rainforest areas or river systems</i></li> <li><i>how people use an environmental area in other countries</i></li> <li><i>how human changes to the environment can have positive and negative aspects</i></li> <li><i>The influences and effects of regional labels and images</i></li> <li><i>The processes of cultural diffusion</i></li> <li><i>The spatial patterns of settlements in different regions of the world</i></li> <li><i>How cooperation and conflict among the world's people contribute to political, economic and social divisions of the Earth's surface</i></li> </ul>	<p><b><u>Skills</u></b></p> <p>Students should be able to:</p> <ul style="list-style-type: none"> <li><i>use maps and globes to locate global and Australian reference points, e.g. hemispheres, political states, lines of latitude and longitude, mountains and oceans, physical and cultural regions</i></li> <li><i>draws accurate sketch maps of a known area and includes title, key, scale and direction evaluates a variety of ways of addressing environmental problems in Australia and other countries</i></li> <li><i>select and use suitable media and modes of presentation (e.g. diagrams, maps, photographs, online resources) to illustrate and present researched information (e.g. to describe the ways in which people are a part of the water cycle and dependent upon water as a resource).</i></li> <li><i>use geographical terminology and tools to locate and investigate environments (e.g. a water catchment, soil erosion, mining of a resource, forestry) through local fieldwork or other research, individually or in groups or teams,</i></li> </ul>	<p><b><u>Attitudes and values</u></b></p> <p>Students should be able to:</p> <ul style="list-style-type: none"> <li><i>identify the different viewpoints that may be held by groups and individuals, including Aboriginal peoples, farmers and miners, about land use</i></li> <li><i>appreciate the need for regulations, laws and practices associated with the management and care of natural and built features and sites</i></li> <li><i>identify their own code of behaviour as it applies to their local area</i></li> <li><i>examine issues associated with differing values about natural and built environments, using a variety of sources, including the media</i></li> <li><i>express a personal point of view on an environmental issue and provides supporting evidence</i></li> <li><i>identify the views and actions of diverse individuals and groups on environmental quality and preservation of places in a particular region or landscape now and in the future</i></li> </ul>

	<ul style="list-style-type: none"> <li>• <i>some ways in which Aboriginal management of environments contributed to ecological sustainability</i></li> <li>• <i>how some aspects of religious and other belief systems can affect the way in which groups interact with the environment, e.g. the spiritual significance of the Ganges River in India</i></li> <li>• <i>factors that may give rise to different views about the care of places, e.g. economic circumstances, occupation, age, gender, interest in heritage</i></li> <li>• <i>some strategies practised by governments, and various people or groups including Indigenous peoples, around the world to sustain local/global environments.</i></li> </ul>	<p><i>including how the issue impacts on people and other living and non-living things, and how these issues are managed</i></p> <ul style="list-style-type: none"> <li>• <i>evaluate alternative views about the use of natural and built environments, e.g. economic, spiritual, sentimental, historical perspectives</i></li> <li>• <i>compare the relative costs and benefits of different technologies used to modify and create environments, and benefits and costs, and the interests that various groups have in combating or perpetuating a problem.</i></li> <li>• <i>participate in the maintenance or improvement of an environment, e.g. supports bush regeneration</i></li> <li>• <i>examine and report on the implications of interrupting or changing interactions and relationships in natural and local environments, using relevant Australian or global examples</i></li> <li>• <i>How to apply the geographic point of view to solve social and environmental problems by making geographically informed decisions</i></li> </ul>	
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Level 4 (Early secondary)			
Key Learning Outcomes	Sample content		
<p>Students should demonstrate an understanding of:</p> <ul style="list-style-type: none"> <li>Physical aspects of Australia's geography</li> <li>Australia's links to the global context</li> <li>Impact of natural and man-made hazards in the Australian environment</li> <li>Demographic features and trends in Australia</li> <li>The characteristics of some Australian communities and how people in these communities interact with the local environment</li> <li>Patterns of land use in Australia</li> <li>how a range of geographical issues are affecting Australian environments and how these issues are being addressed</li> <li>How geographic tools and inquiry methods can be used to analyse and communicate about geographic issues</li> </ul>	<p><b>Knowledge</b></p> <p>Students should know:</p> <ul style="list-style-type: none"> <li><i>Australia's major physical features and patterns (e.g. landforms, climates, soils, habitats) and identifies factors affecting them)</i></li> <li><i>the interrelationships that exist in the physical environment of Australia</i></li> <li><i>how flora and fauna have adapted to the Australian environment</i></li> <li><i>Australian weather and climate</i></li> <li><i>the range of natural hazards in Australia and their consequences, including:</i> <ul style="list-style-type: none"> <li><i>bushfires</i></li> <li><i>droughts</i></li> <li><i>earthquakes</i></li> <li><i>floods</i></li> <li><i>storms</i></li> <li><i>tropical cyclones</i></li> </ul> </li> <li><i>the geographical processes associated with the natural hazard</i></li> <li><i>the economic, environmental and social impacts of the natural hazard in Australia</i></li> <li><i>responses of individuals, community-based groups and different levels of government to the hazard</i></li> <li><i>Trends in world population numbers and patterns</i></li> </ul>	<p><b>Skills</b></p> <p>Students should be able to:</p> <ul style="list-style-type: none"> <li><i>compare Australia's size and shape with other continents and countries</i></li> <li><i>locate and recognise Australia on a world map using latitude and longitude</i></li> <li><i>explain the origins of the continent from an Aboriginal and geographical perspective</i></li> <li><i>identify and represent Australia's major physical features and patterns on a variety of maps</i></li> <li><i>describe and examine natural features</i></li> <li><i>describe and examine the built features of regions (e.g. population, function, culture, time, resources, economics, transport, politics, laws, management decisions) and identifies patterns and factors associated with changes</i></li> <li><i>use technology to represent and interpret Australia's physical and human systems</i></li> <li><i>analyse and report on some factors affecting land use in natural environments and rural or urban areas, using examples from case studies e.g. mining in a national park, a marina impacting on coastal dunes, changing land use,</i></li> </ul>	<p><b>Attitudes and values</b></p> <p>Students should be able to:</p> <ul style="list-style-type: none"> <li><i>Express and justify personal views about similarities and differences between regions, in Australia and globally, identifying factors which shape dominant natural, sociocultural, political, economic and environmental contexts.</i></li> <li><i>Identify values inherent in a plan for the development of a place or resource, and reports on outcomes on the basis of ecological sustainability.</i></li> <li><i>individually, or in teams, analyse published information for background material and strategies suggested by a range of interest groups, including those promoting the valuing and protection of Aboriginal heritage</i></li> <li><i>evaluate research findings sourced from electronic information to identify examples of the values promoted in this learning area.</i></li> </ul>

	<ul style="list-style-type: none"> <li>• <i>The meaning and significance of place</i></li> <li>• <i>The functions, sizes, and spatial arrangements of urban areas</i></li> <li>• <i>past and current population patterns in Australia, including:</i> <ul style="list-style-type: none"> <li>– <i>age structure</i></li> <li>– <i>distribution</i></li> <li>– <i>ethnic composition gender</i></li> <li>– <i>growth rates</i></li> <li>– <i>population size</i></li> </ul> </li> <li>• <i>trends in Australia’s demographic characteristics, incorporating the use of graphs and statistics</i></li> <li>• <i>how Australia’s changing demographic characteristics are influencing the nature and identity of Australian society</i></li> <li>• <i>the range of Australian communities based on shared space and/or social organisation</i></li> <li>• <i>the factors causing change in Australian communities</i> <ul style="list-style-type: none"> <li>– <i>changing nature and patterns of work</i></li> <li>– <i>cultural integration</i></li> <li>– <i>demographic change</i></li> <li>– <i>globalisation of economic activity</i></li> <li>– <i>lifestyle expectations</i></li> <li>– <i>new technologies</i></li> <li>– <i>recognition of native title</i></li> <li>– <i>resource depletion</i></li> </ul> </li> <li>• <i>how a range of geographical issues are affecting Australian environments in relation to:</i> <ul style="list-style-type: none"> <li>– <i>its nature</i></li> <li>– <i>its impacts</i></li> <li>– <i>the responses by individuals,</i></li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• <i>demolition of significant buildings)</i></li> <li>• <i>develop a research action plan</i></li> <li>• <i>apply fieldwork techniques</i></li> <li>• <i>present geographical information in an appropriate format</i></li> <li>• <i>demonstrate active citizenship by proposing individual/group action to address the issue</i></li> <li>• <i>prepare a report on an issue related to sustainable use of resources or places in Australia, after critically analysing information from multiple sources and discussing the political implications of decisions.</i></li> <li>• <i>uses inquiry strategies to collect, analyse and synthesise data from graphs, statistics, reports, texts, maps, and audiovisual and electronic media</i></li> <li>• <i>summarise and present relevant data from field investigations, interviews and Spatial Information Systems</i></li> <li>• <i>develop a multimedia report on a geographic issue, including appropriate graphic representations and emphasising evaluation of decisions made, multiple viewpoints and future implications.</i></li> <li>• <i>collect and communicate data to identify and locate nations with which Australia has regional and global links and the nature of the links</i></li> </ul>	
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	<p><i>groups and governments to the issue</i></p> <ul style="list-style-type: none"> <li>- <i>the interaction of physical processes and human activities create variations within the regions of Australia and those surrounding it: Asia, the Pacific and Antarctica</i></li> <li>- <i>the responsibility of the levels of government to the issue</i></li> <li>- <i>actions that promote sustainability, social justice and equity</i></li> </ul> <ul style="list-style-type: none"> <li>• <i>how Australia is linked to the regional and global context, in terms of:</i> <ul style="list-style-type: none"> <li>- <i>aid</i></li> <li>- <i>government (including international treaties)</i></li> <li>- <i>communication</i></li> <li>- <i>culture</i></li> <li>- <i>defence</i></li> <li>- <i>migration</i></li> <li>- <i>tourism</i></li> <li>- <i>trade</i></li> <li>- <i>sport</i></li> </ul> </li> <li>• <i>the advantages and disadvantages of these links to Australia</i></li> <li>• <i>the implications for social justice and equity in relation to the link</i></li> <li>• <i>government population policies:</i> <ul style="list-style-type: none"> <li>- <i>population growth</i></li> <li>- <i>refugees</i></li> <li>- <i>migration</i></li> </ul> </li> <li>• <i>current and future population trends and their implications</i></li> <li>• <i>responses of individuals, groups and governments in Australia to these challenges</i></li> </ul>		
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Study into the teaching of Geography

	<ul style="list-style-type: none"><li>• <i>the responses of Australia and other nations to the challenges</i></li></ul>		
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Level 5 (End of compulsory education)			
Key Learning Outcomes	Sample content		
<p>Students should demonstrate an understanding of:</p> <ul style="list-style-type: none"> <li>the global environment, according to such factors as location, natural and built features, changing populations, employment, resources, transport and government decisions.</li> <li>relationships between individuals and groups in relation to valued community resources.</li> <li>skills required to access, investigate, interpret and represent information from field-work, electronic systems and other research, in order to explain local and global interactions and relationships between people and environments.</li> <li>responsibilities as an Australian within the global community</li> </ul>	<p><b>Knowledge</b></p> <p>Students should know:</p> <ul style="list-style-type: none"> <li><i>the operation of the major natural systems that are part of the biosphere and atmosphere; for example, the hydrologic cycle, plate tectonics or the weather</i></li> <li><i>the interaction of human activities with the natural environment through a study of issues such as global warming and climate change, land degradation and desertification, and air and water pollution</i></li> <li><i>the challenges of, and opportunities for, global interdependence</i></li> <li><i>the characteristics of development that occur across the globe</i></li> <li><i>global patterns of development, considering classifications used by United Nation agencies, Non Government Organisations (NGOs) and other organisations, and evaluating the relevance of such classifications at global, national, regional and local scales</i></li> <li><i>the location of some natural and cultural World Heritage sites</i></li> <li><i>the importance of World Heritage listing</i></li> </ul>	<p><b>Skills</b></p> <p>Students should be able to:</p> <ul style="list-style-type: none"> <li><i>classify features of the global environment as physical or human elements</i> <ul style="list-style-type: none"> <li><i>air</i></li> <li><i>flora and fauna</i></li> <li><i>soil</i></li> <li><i>solar energy (heat and light)</i></li> <li><i>water</i></li> </ul> </li> <li><i>record patterns of physical and human elements of environments in different continents</i> <ul style="list-style-type: none"> <li><i>economic</i></li> <li><i>political</i></li> <li><i>sociocultural</i></li> <li><i>agricultural</i></li> <li><i>industrial</i></li> </ul> </li> <li><i>identify patterns resulting from the interaction of the physical and human environments</i></li> <li><i>analyses maps to explain associations and interrelationships between features</i></li> <li><i>compares map and graph data about mineral and agricultural exports of the present with those of the past, and explores reasons for change over time</i></li> <li><i>describes places in Australia and elsewhere according to their location,</i></li> </ul>	<p><b>Attitudes and values</b></p> <p>Students should be able to:</p> <ul style="list-style-type: none"> <li><i>Express and justify personal views about similarities and differences between regions, in Australia and globally</i></li> <li><i>Identify values inherent in a plan for the development of a place or resource, and reports on outcomes on the basis of ecological sustainability.</i></li> <li><i>individually, or in teams, analyse published information for background material and strategies suggested by a range of interest groups, including those promoting the valuing and protection of Aboriginal heritage</i></li> <li><i>evaluate research findings sourced from electronic information to identify examples of the values promoted in this learning area</i></li> </ul>

	<ul style="list-style-type: none"> <li>• <i>legal obligations of governments to the preservation of World Heritage sites</i></li> <li>• <i>the role of individuals, groups and governments in identifying and protecting World Heritage sites</i></li> <li>• <i>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</i></li> <li>• <i>The changing nature of the world (globalisation), including:</i> <ul style="list-style-type: none"> <li>– <i>the role of technology in the globalisation process</i></li> <li>– <i>examples of economic and cultural factors that are part of globalisation</i></li> <li>– <i>the impact of globalisation at an individual, local, national and global scale</i></li> <li>– <i>ways in which global relationships are changing as a result of globalisation</i></li> <li>– <i>global patterns of poverty and wealth</i></li> <li>– <i>describe global variations in the access of people to a range of essential aspects of life</i></li> <li>– <i>the changing importance of fossil fuels, nuclear power and alternative energy sources, consequences for communities as energy supplies change</i></li> </ul> </li> </ul>	<p><i>natural and built features, and population and resources. Students explain interrelationships, including the effects of human modifications.</i></p> <ul style="list-style-type: none"> <li>• <i>recognise continents using different map projections</i></li> <li>• <i>use latitude to describe the global pattern of climate, including the spatial and seasonal change in insolation</i></li> <li>• <i>use longitude to explain world time zones</i></li> <li>• <i>use geographical tools (including Spatial Information Systems) to measure and record elements of the local environment</i></li> <li>• <i>present geographical information about the local environment using a range of written, oral and graphic forms, including electronically</i></li> <li>• <i>collect, record, organises and evaluate data from field-work, print and electronic sources, in order to analyse local and global, environmental issues.</i></li> <li>• <i>describe the interrelationship of the environment and a specific community</i></li> <li>• <i>draw and describe the operation of a simple ecosystem</i></li> </ul> <p><i>explain the links between human actions and the consequences for ecological sustainability on a global scale, including</i></p> <p><i>the spatial dimensions of the issue</i></p> <p><i>the ecological dimensions of the issue</i></p> <p><i>different perspectives and bias about the issue, including in media reports</i></p> <p><i>the actions of individuals, groups and governments in relation to the issue</i></p>	
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	<ul style="list-style-type: none"> <li>- <i>describe different global life opportunities and quality of life, including those based on gender</i></li> <li>• <i>how places and natural environments are valued or threatened, and discusses strategies related to ecological sustainability.</i></li> <li>• <i>who and what benefits and loses from change changes in environments</i></li> <li>• <i>how diverse lobby groups (e.g. farmers' groups, mining companies, corporations such as retail giants, environmental groups) contribute to and seek to affect environmental decision making</i></li> <li>• <i>the responsibility of government to the community and its environment</i></li> </ul>		
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\* The content of the sample geography curriculum above draws from a variety of sources, including the NSW Board of Studies k-6 Human Society and Its Environment syllabus; the NSW Geography 7-10 syllabus; the Queensland Society and Environment syllabus, UK geography curricula, the Victorian Essential Learning Statements; Geography, the US National Geography Standards, 1994 Geography for Life Washington: National Geographic Research & Exploration and the Australian Geography Teachers Association 2007 paper: *Australians Need Geography*.

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Board of Studies 7-10	NSW	<a href="http://www.boardofstudies.nsw.edu.au/syllabus_sc/pdf_doc/geography_710_syl.pdf">http://www.boardofstudies.nsw.edu.au/syllabus_sc/pdf_doc/geography_710_syl.pdf</a>
Department of Education & Training	NSW	<a href="http://www.schools.nsw.edu.au/learning/k_6/hsie/index.php">http://www.schools.nsw.edu.au/learning/k_6/hsie/index.php</a>
Department of Education & Training	NSW	<a href="http://www.schools.nsw.edu.au/learning/yr07_10/hsie/geography/index.php">http://www.schools.nsw.edu.au/learning/yr07_10/hsie/geography/index.php</a>
Department of Employment Education & Training	Northern Territory	<a href="http://www.deet.nt.gov.au/education/ntcf/docs/learning_areas_soc_env.pdf">http://www.deet.nt.gov.au/education/ntcf/docs/learning_areas_soc_env.pdf</a>
Department of Education, Training & the Arts	Queensland	<a href="http://education.qld.gov.au/public_media/reports/curriculum-framework/pdfs/curriculum">http://education.qld.gov.au/public_media/reports/curriculum-framework/pdfs/curriculum</a>
Department of Education & Children's Services	South Australia	<a href="http://www.sacsa.sa.edu.au/index_fsrc.asp?t=LA">http://www.sacsa.sa.edu.au/index_fsrc.asp?t=LA</a>
Department of Education	Tasmania	<a href="http://www.education.tas.gov.au/school/educators/curriculum/el_standards/essconnchart.pdf">http://www.education.tas.gov.au/school/educators/curriculum/el_standards/essconnchart.pdf</a>
Advice to parents on Essential Learnings developments	Tasmania	<a href="http://www.education.tas.gov.au/dept/about/minister_for_education/curriculumupdateparents2">http://www.education.tas.gov.au/dept/about/minister_for_education/curriculumupdateparents2</a>

Tasmania Rosetta HS example	Tasmania	<a href="http://www.ltag.education.tas.gov.au/planning/wholeschool/Rosetta/default.htm">http://www.ltag.education.tas.gov.au/planning/wholeschool/Rosetta/default.htm</a>
Evandale Primary School	Tasmania	<a href="http://www.ltag.education.tas.gov.au/planning/wholeschool/Evandale/default.htm">http://www.ltag.education.tas.gov.au/planning/wholeschool/Evandale/default.htm</a>
Definitions, for example	Tasmania	<a href="http://www.ltag.education.tas.gov.au/glossary.htm">http://www.ltag.education.tas.gov.au/glossary.htm</a>
Planning, for example	Tasmania	<a href="http://www.ltag.education.tas.gov.au/planning/scopeseq/ELsplanning.doc">http://www.ltag.education.tas.gov.au/planning/scopeseq/ELsplanning.doc</a>
VELS Victorian Curriculum and Assessment Authority	Victoria	<a href="http://vels.vcaa.vic.edu.au/essential/discipline/humanities/geography/index.html">http://vels.vcaa.vic.edu.au/essential/discipline/humanities/geography/index.html</a>
VELS Victorian Curriculum and Assessment Authority	Victoria	<a href="http://vels.vcaa.vic.edu.au/downloads/vels_standards/velsrevisedgeography.pdf">http://vels.vcaa.vic.edu.au/downloads/vels_standards/velsrevisedgeography.pdf</a>
Western Australian Certificate of Education	Western Australia	<a href="http://www.curriculum.wa.edu.au/pages/framework/framework00.htm">http://www.curriculum.wa.edu.au/pages/framework/framework00.htm</a> <a href="http://www.curriculum.wa.edu.au/files/pdf/societyenv.pdf">http://www.curriculum.wa.edu.au/files/pdf/societyenv.pdf</a>
Department of Education & Training: The Curriculum Framework	Western Australia	<a href="http://www.det.wa.edu.au/education/curriculum/parents/overview.pdf">http://www.det.wa.edu.au/education/curriculum/parents/overview.pdf</a>
Australian Geography Teachers Association	NSW, current address of office holder	<a href="http://www.agta.asn.au/">http://www.agta.asn.au/</a>
Geography Teachers Association (Q)	Queensland	<a href="http://www.gtaq.webcentral.com.au/cms/index.php">http://www.gtaq.webcentral.com.au/cms/index.php</a>
Geography Teachers Association SA	South Australia	<a href="http://www.gtasa.asn.au/">http://www.gtasa.asn.au/</a>

# Appendices

Appendix 1: List of Persons Consulted

Appendix 2: Interview

Appendix 3: Excerpts on Geography content from syllabuses and curriculum frameworks across the country

## Appendix 1: List of Persons Consulted

State/Territory	Name	Organisation
National	Nick Hutchinson, Chairperson	Australian Geography Teachers' Association (AGTA) Limited
National	Alaric Maude, Secretary	Institute of Australian Geographers
National	Mr Ian Dalton, Executive Director	Australian Parents Council
National	Mandy Hudson, Secondary Curriculum Consultant - S&E AIS WA	Representing the Independent Schools Council of Australia
National	Sandra Kenman, Executive Officer	Australian Federation of Societies for the Studies of Society and Environment
National	Kath Berg	Australian Geography Competition
NSW	Dr. Grant Kleeman	Australian Centre for Educational Studies, Macquarie University
NSW	Lindsay Swan	NSW Office of the Board of Studies
VIC	Suzie Puszka, Acting President	Geography Teachers' Association of Victoria (GTAV)
VIC	Bruce Tomagno, Member	Geography Teachers' Association of Victoria (GTAV)
VIC	Bronwen Perry	Centre for Population & Urban Research Faculty of Arts, Monash University
VIC	Jeana Kriewaldt	Department of Education, The University of Melbourne
WA	Michael Fazio, President	Geographical Association of Western Australia (GAWA)
WA	Jeanne Harper	Catholic Education Office
WA	Kerry Boyd, Curriculum Framework Officer (Society and Environment)	Curriculum Council of WA
WA	Brian Rogers, Principal Project Officer, Syllabus Development and Resources Directorate	Department of Education and Training
SA	Rita Shepherd, President	Geography Teachers' Association of South Australia (GTASA)
SA	Malcolm McInerney, Immediate Past President	Geography Teachers' Association of South Australia (GTASA) in collaboration with the Spatial Education Advisory Committee
SA	John Butler OAM	Royal Geographic Society of South Australia
SA	Frank Cairns	Department of Education and Children

State/Territory	Name	Organisation
	Superintendent Curriculum and Professional Learning & David Butler Policy and Program Officer Society and Environment	Services
QLD	Focus Group (6 teachers)	Geography Teachers' Association of Queensland (GTAQ)
QLD	Terry Creagh, Assistant Director Education	Queensland Catholic Education Commission (QCEC)
QLD	Ms Michelle Moroney, Principal Policy Officer, P - 12 Framework	Queensland Curriculum Authority
QLD	Dr Thelma Perso, Executive Director Curriculum Branch	Queensland Department of Education and the Arts
ACT	Sally Alexander, Curriculum Executive Officer	ACT Department of Education and Training
TAS	Dr. Irene Gray, Manager, Curriculum State-wide Programs	Department of Education

## Appendix 2: Interview

Interviews with key stakeholders were conducted based on the following four key discussion areas:

1. Please outline what Geography is taught in your jurisdiction from Years 3-10, where it is structurally located within the curriculum (as a stand-alone subject or as part of Studies of Society and the Environment) and the number of hours mandated (where applicable).
2. What are the current pedagogical practices and factors which affect the quality of teaching and learning of Geography in Australian schools?
3. Are there any gaps in the existing provision of Geography
4. Please describe what Geography every Australian student should know before they complete Year 10.

## Appendix 3: Excerpts on Geography content from syllabuses and curriculum frameworks across the country

### Appendix 3.1: Australian Capital Territory

#### ACT Overview of Essential Learning Achievements

<http://activated.det.act.gov.au/learning/currenewal/EveryChanceToLearn-CurriculumForACTSchoolsP-10.pdf>

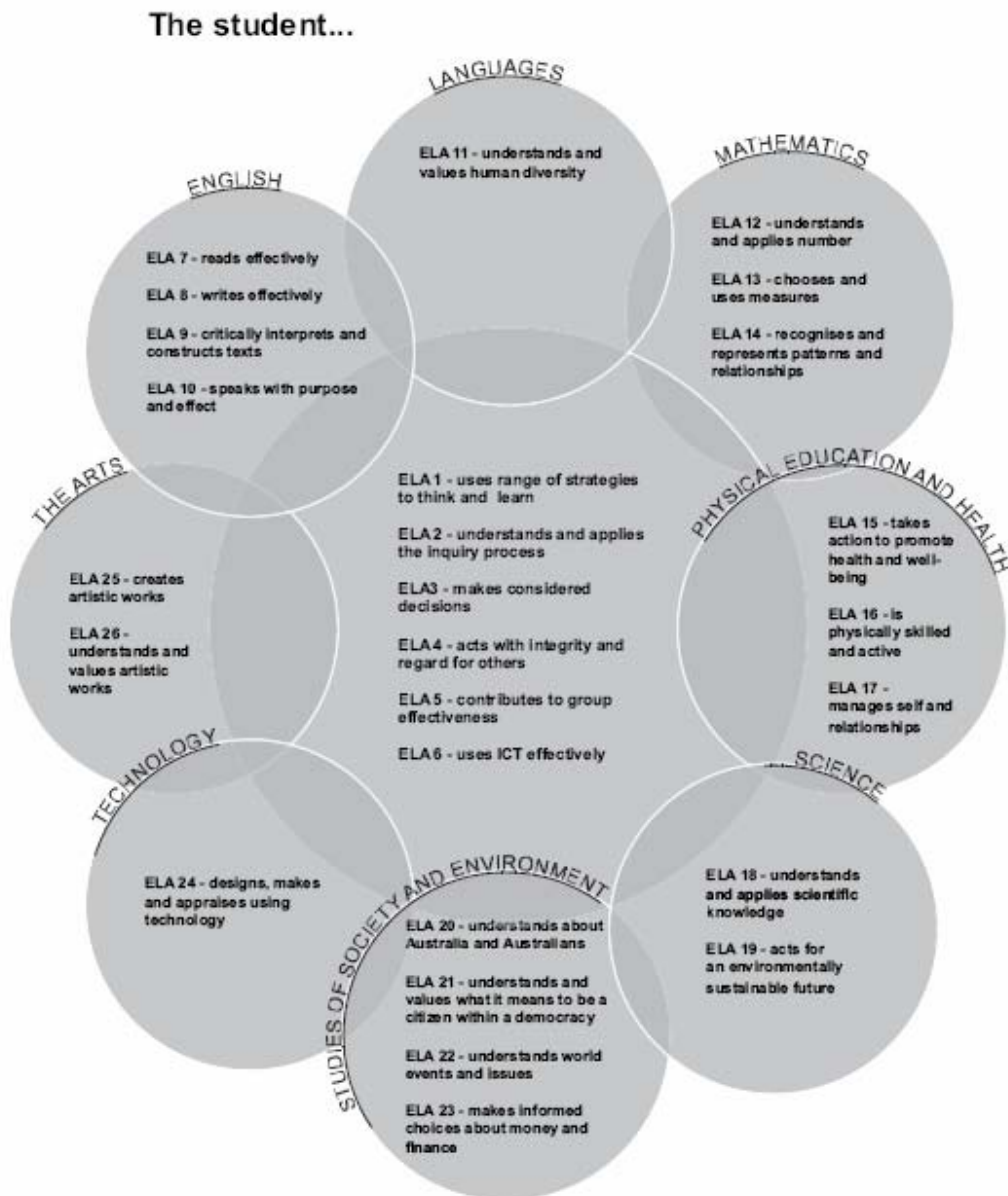
#### *6.2 Overview of Essential Learning Achievements*

The student knows how to learn	The student communicates ideas and feelings through the arts
The student uses information critically	The student makes plans and carries them out
The student applies methods of inquiry	The student takes action to promote health and wellbeing
The student applies different types of thinking	The student is physically skilled and active
The student makes considered decisions	The student manages self and relationships
The student uses problem-solving strategies	The student acts on values reflecting empathy and integrity
The student reads and writes effectively	The student applies understandings about money and finance wisely
The student interprets and constructs multimodal texts	The student contributes to group effectiveness
The student listens, views and reads critically	The student demonstrates intercultural understanding
The student speaks coherently and confidently	The student demonstrates enterprise
The student understands and applies numbers	The student understands about Australia and Australians
The student sorts and classifies	The student applies the principles of fairness and justice
The student chooses and uses measures	The student appreciates what it means to be an Australian citizen
The student recognises patterns and draws out generalisations	The student makes sense of world issues and events
The student visualises, and creates and uses representations	The student appreciates diversity in human society
The student creates products using technology	The student applies scientific understandings
The student uses technology to communicate	The student understands the effects of humans on the Earth
The student appreciates the artistic endeavours of others	The student understands change

## The ACT Key Learning Areas & Essential Learning Achievements Chart

See <http://activated.det.act.gov.au/learning/currenewal/EveryChanceToLearn-Phase2Framework.pdf>

Figure 2: Organisation of the Essential Learning Achievements in the framework



## Essential Learning Achievements 20 (ELA20)

The following, an amalgam drawn from the levels of ELA20, demonstrates the curriculum links and the parameters provided for schools' interpretations.

### Essential Content

*... students have opportunities to understand and learn about [matters such as]:*

- Natural and built features
- Key physical features
- Interrelationships that exist in the physical environment of Australia
- Major landforms
- Major geographical features

*... students have the opportunity to learn*

- To recognise the shape of Australia
- To create maps
- Use maps, graphs and photographs to ...
- Interpret maps and symbols

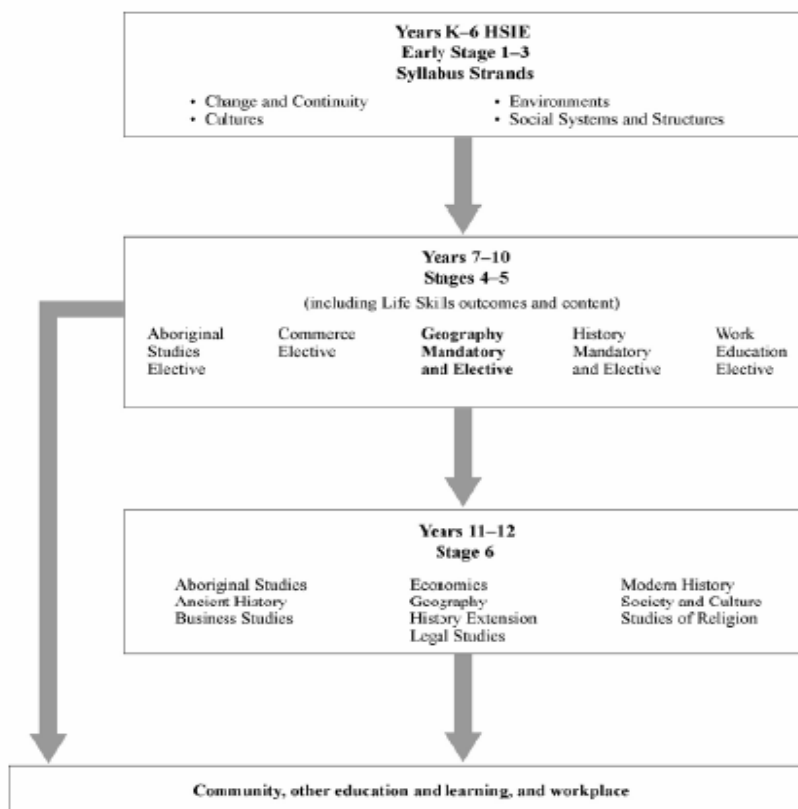
Use geographical information to describe significant features

Appendix 3.2 New South Wales

The Place of Geography ([http://www.boardofstudies.nsw.edu.au/syllabus\\_sc/pdf\\_doc/geography\\_710\\_syl.pdf](http://www.boardofstudies.nsw.edu.au/syllabus_sc/pdf_doc/geography_710_syl.pdf) p.9)

*Geography Years 7–10 Syllabus*

**3 The Place of the Geography Years 7–10 Syllabus in the HSIE K–12 Curriculum**



## NSW Geography Outline Years 7-10

([http://www.boardofstudies.nsw.edu.au/syllabus\\_sc/pdf\\_doc/geography\\_710\\_syl.pdf](http://www.boardofstudies.nsw.edu.au/syllabus_sc/pdf_doc/geography_710_syl.pdf))

### Geography (Mandatory Course)

The Geography (Mandatory) course requires students to complete:

- 100 hours of Global Geography in Stage 4
- 100 hours of Australian Geography in Stage 5

This is a requirement for eligibility for the award of the School Certificate.

Civics and citizenship learning is an essential feature of the Years 7-10 Geography syllabus.

#### *Course Description*

Geography allows students to develop an understanding of and an interest in the interaction of the physical and human environments. Students will develop geographic knowledge, understanding, skills, values and attitudes in order to engage in the community as informed and active citizens.

The syllabus has two key dimensions that form the basis for the study of all content in Geography:

- the spatial dimension - where things are and why they are there
- the ecological dimension - how humans interact with environments.

#### **What will students learn about?**

Global Geography consists of four focus areas in which students learn about the geographical processes and human interactions that shape global environments. They also learn about geographical issues and different perspectives about the issues; and develop an understanding of civics and appropriate methods of citizenship for individual and group responses to these issues.

Students of Australian Geography learn about the interaction of human and physical geography in a local context. They examine Australia's physical environments and communities and explore how they are changing and responding to change. Students also look at Australia's roles in its region and globally and how individuals and groups are planning for a better future. An important feature of the Australian Geography course is to allow students to become more informed and active citizens.

#### **What will students learn to do?**

Students learn to gather, process and communicate geographical information from a variety of primary and secondary sources. The study of Geography also provides opportunities for students to learn to use a wide range of geographical tools including information and communication technologies (ICT). Geographical tools, such as maps, graphs, statistics, photographs and fieldwork, assist students to gather, analyse and communicate geographical information in a range of formats.

#### *Course Requirements*

Fieldwork is an essential part of the study of Geography in Stages 4 and 5. In Stage 5, students are required to investigate a geographical issue through fieldwork by developing and implementing a research action plan.

#### **School Certificate**

Satisfactory completion of the mandatory study of Geography during Stage 5 (Years 9 and 10) will be recorded with a grade on the student's School Certificate Record of Achievement. In Year 10, students sit for the Australian History, Geography, Civics and Citizenship School Certificate test.

Appendix 3.3 Northern Territory

## Environments

### OUTCOMES

Learners demonstrating evidence of **Band 3**

**Env 3.1 Place, Landforms and Features**

investigate patterns of use of natural resources and how they have changed over time

**Env 3.2 Environmental Awareness and Care**

report on how organisations promote environmental monitoring and protection

**Env 3.3 Natural Systems**

describe features of ecosystems, explain their location and deduce the conditions that contribute to their distribution and/or change.

### Links

**EsseNTial Learnings:**

Cr 1, Con 1, Con 2, Con 4

**Learning Areas:**

Science

**Perspectives:**

Literacy, Numeracy, Learning Technology, Environmental, Indigenous

### INDICATORS

Learners demonstrating evidence of **Band 3** for example:

**Place, Landforms and Features [Con 3]**

- locate major geographical systems and classify main features, eg topography, location, climate
- organise and use field work to gather data about resource management and land use
- research places with similar land use or resources, and explain how these areas have changed over time
- examine how human impact can change environments, eg introduced species, damming, tourism
- locate places using longitude and latitude
- describe the location of places using compass points, or major reference points, eg North Pole, Equator
- investigate how and why hunting and gathering patterns in the community have changed over time.

**Environmental Awareness and Care [Col 1] [Num-MDS]**

- survey and describe different viewpoints of groups and individuals about people changing a natural system, eg building a dam
- critically analyse how conflict arises when different groups want to use the same resource for different purposes within a local context, eg environmentalist versus developers
- argue a course of action on a community issue
- produce examples of how our values and customs may affect the choices we make about the use of natural resources, eg vanishing trades, timber
- evaluate the impact of innovations which may have negative and positive effects on the environment, eg the introduction of cane toads, refrigerators
- interview representatives from local environmental organisations about their purpose, eg Landcare, Water Watch, Coast Care, Tangentyere Council, Dhimurru Land Management and Aboriginal Corporation, Centre for Indigenous Natural and Cultural Resource Management

**Natural Systems**

- explore the responses of people, plants and animals to changes in a natural system
- create a model of a specific natural system identifying inputs and outputs, eg inputs: sunshine, water, air, outputs: growth
- identify the purpose of adaptations of animals and plants to different environments
- identify how natural systems respond to changing conditions and research/debate issues arising, eg bushfire, invasion of new species
- research and report how alterations to environments can interrupt natural cycles and flows, eg rainforests, coral reefs, Antarctica
- investigate the impact of the range of natural disasters and events on a community
- identify the features of different 'aged' burns and explain how burning helps provide a good habitat for different animals.

The indicators for Key Growth Point 1 in Place, Landforms and Features are, for example:

- Use sensory exploration to interact with natural and built environments
- Experience a range of natural and built environments with safety constraints.

For Band 5 in Place, Landforms and Features, learners are expected to demonstrate evidence of an ability to:

- Use maps and field observations and explain changes in urban and land use patterns
- Refer to graphs, tables, Landsat images and statistical data to compare aspects of an environment
- Define urbanisation and identify contributing factors towards this trend e.g. work trends, mass production ...

Appendix 3.4: Queensland

**A relevant sample page from the SOSE outcomes**

<http://www.qsa.qld.edu.au/yrs1to10/kla/sose/docs/syllabus/outcomes.pdf>

Learning outcomes	
Place and Space	
Level 4	Level 5
<p><b>Level statement</b></p> <p>Students understand how decisions of resource use and management affect environmental and economic sustainability and can use local field studies to identify how a place is valued and cared for. They also understand how to use a range of maps to analyse global patterns and can consider local and global factors to make decisions about resources.</p> <p><b>Core learning outcomes</b></p> <p>PS 4.1 Students make justifiable links between ecological and economic factors and the production and consumption of a familiar resource.</p> <p>PS 4.2 Students predict the impact of changes on environments by comparing evidence.</p> <p>PS 4.3 Students participate in a field study to recommend the most effective ways to care for a place.</p> <p>PS 4.4 Students use latitude, longitude, compass and scale references and thematic maps to make inferences about global patterns.</p> <p>PS 4.5 Students explain whether personal, family and school decisions about resource use and management balance local and global considerations.</p> <p><b>Discretionary learning outcomes</b></p> <p>PS D4.6 Students use a range of evidence to investigate places where native and introduced elements have adapted or failed to adapt to changing conditions.</p> <p>PS D4.7 Students explain how a conflict about the care of a local place is presented in the media.</p> <p>PS D4.8 Students develop an action plan to contribute to a positive outcome for an issue of personal concern.</p>	<p><b>Level statement</b></p> <p>Students understand the relationships within and between ecosystems in different place settings and can use geographical and environmental inquiry processes to investigate these relationships. They also understand the patterns of environments in Queensland, Australia and the Asia-Pacific and can apply values to evaluate the effects of decisions related to industries.</p> <p><b>Core learning outcomes</b></p> <p>PS 5.1 Students synthesise information from the perspectives of different groups to identify patterns that constitute a region.</p> <p>PS 5.2 Students design strategies for evaluating environmental impacts of a proposed project, highlighting relationships within and between natural systems.</p> <p>PS 5.3 Students participate in geographical inquiries to evaluate impacts on ecosystems in different global locations.</p> <p>PS 5.4 Students use maps, diagrams and statistics to justify placing value on environments in Australia and the Asia-Pacific region.</p> <p>PS 5.5 Students evaluate ideas concerning sustainability to identify who may benefit and who may be disadvantaged from changes to a Queensland industry.</p> <p><b>Discretionary learning outcomes</b></p> <p>PS D5.6 Students apply ideas concerning sustainability to suggest how natural, social and built environments should interact in a preferred future.</p> <p>PS D5.7 Students use appropriate technologies to take action about environmental issues of international significance.</p>

5.1 Strand: place, space and environment ([http://www.sacsa.sa.edu.au/index\\_fsrc.asp?t=LA](http://www.sacsa.sa.edu.au/index_fsrc.asp?t=LA))

STANDARD 1	STANDARD 2	STANDARD 3
At Standard 1, towards the end of Year 2, the child	At Standard 2, towards the end of Year 4, the student:	At Standard 3, towards the end of Year 6, the student:
<p><b>1.4 Explains and communicates how people interact and identify with environments. [Id] [In] [KC2]</b></p> <p>Examples of evidence include that the child:</p> <ul style="list-style-type: none"> <li>• distinguishes between natural and built features of environments in other places around the world [C] [KC1]</li> <li>• describes how diverse elements of natural and built environments influence daily lives [Id] [In] [T] [KC2]</li> <li>• explains how people depend on particular resources, systems or features within environments [In] [T] [KC2]</li> <li>• identifies aspects of interdependence among people, environments and communities. [Id] [In] [KC1]</li> </ul>	<p><b>2.4 Shows and reports on understanding of the interrelationships between natural and built environments, resources and systems. [In] [T] [KC2]</b></p> <p>Examples of evidence include that the student:</p> <ul style="list-style-type: none"> <li>• identifies particular features (e.g. mountains, vegetation and climate patterns, urban/rural areas, desert landscapes, tropical forests, cities) in written texts and maps, and describes relationships observed [C] [KC1] [KC2]</li> <li>• compares information from maps, photos and videos with observable features in local environments in order to identify patterns [In] [KC1]</li> <li>• explains the relationships between some identified features (e.g. river systems</li> </ul>	<p><b>3.4 Identifies and describes significant resources, explains the threats which endanger them, and suggests strategies to combat threats. [F] [In] [T] [KC1] [KC2] [KC6]</b></p> <p>Examples of evidence include that the student:</p> <ul style="list-style-type: none"> <li>• determines a relevant resource issue to study (e.g. a water catchment, soil erosion, mining of a resource, forestry) through local fieldwork or other research, individually or in groups or teams [T] [KC1] [KC4]</li> <li>• identifies the dimensions of the issue, including problems, how they impinge on people and other living and non-living things, and how they are managed [In] [T] [KC6]</li> <li>• considers</li> </ul>

	<p>and irrigation areas; mineral deposits and transport systems) in an Australian or other region [In] [KC2]</p> <ul style="list-style-type: none"> <li>analyses the ways people use and depend upon environments, resources and other people. [In] [KC1]</li> </ul>	<p>various strategies, including the use of information and communication technologies, put forward by different people or groups, and articulates their own suggestions and plans [F] [In] [T] [KC2] [KC3] [KC6] [KC7]</p> <ul style="list-style-type: none"> <li>determines benefits and costs, and the interests that various groups have in combating or perpetuating a problem. [F] [T]</li> </ul>
<p><b>1.5 Represents and categorises features of places and resources, using maps, contextual language and models. [C] [KC2] [KC5]</b></p> <p>Examples of evidence include that the child:</p> <ul style="list-style-type: none"> <li>draws maps, makes models or produces visual display to describe elements of a particular place or feature [C]</li> <li>uses symbols to identify elements on a simple map or drawing [C] [KC5]</li> </ul>	<p><b>2.5 Uses symbols, maps, models and flow-charts to describe the location of places and demonstrate relationships. [T] [C] [KC2]</b></p> <p>Examples of evidence include that the student:</p> <ul style="list-style-type: none"> <li>identifies and asks questions about particular continents, oceans, countries and cities on various maps and the globe [T] [KC6]</li> <li>uses latitude and longitude or an alphanumeric</li> </ul>	<p><b>3.5 Interprets and represents data about natural and built environments, resources, systems and interactions, both global and local, using maps, graphs and texts. [In] [T] [C] [KC1] [KC2] [KC5]</b></p> <p>Examples of evidence include that the student:</p> <ul style="list-style-type: none"> <li>identifies and reports some ways in which people interact with environments [In] [T] [KC1] [KC2]</li> <li>locates natural and built</li> </ul>

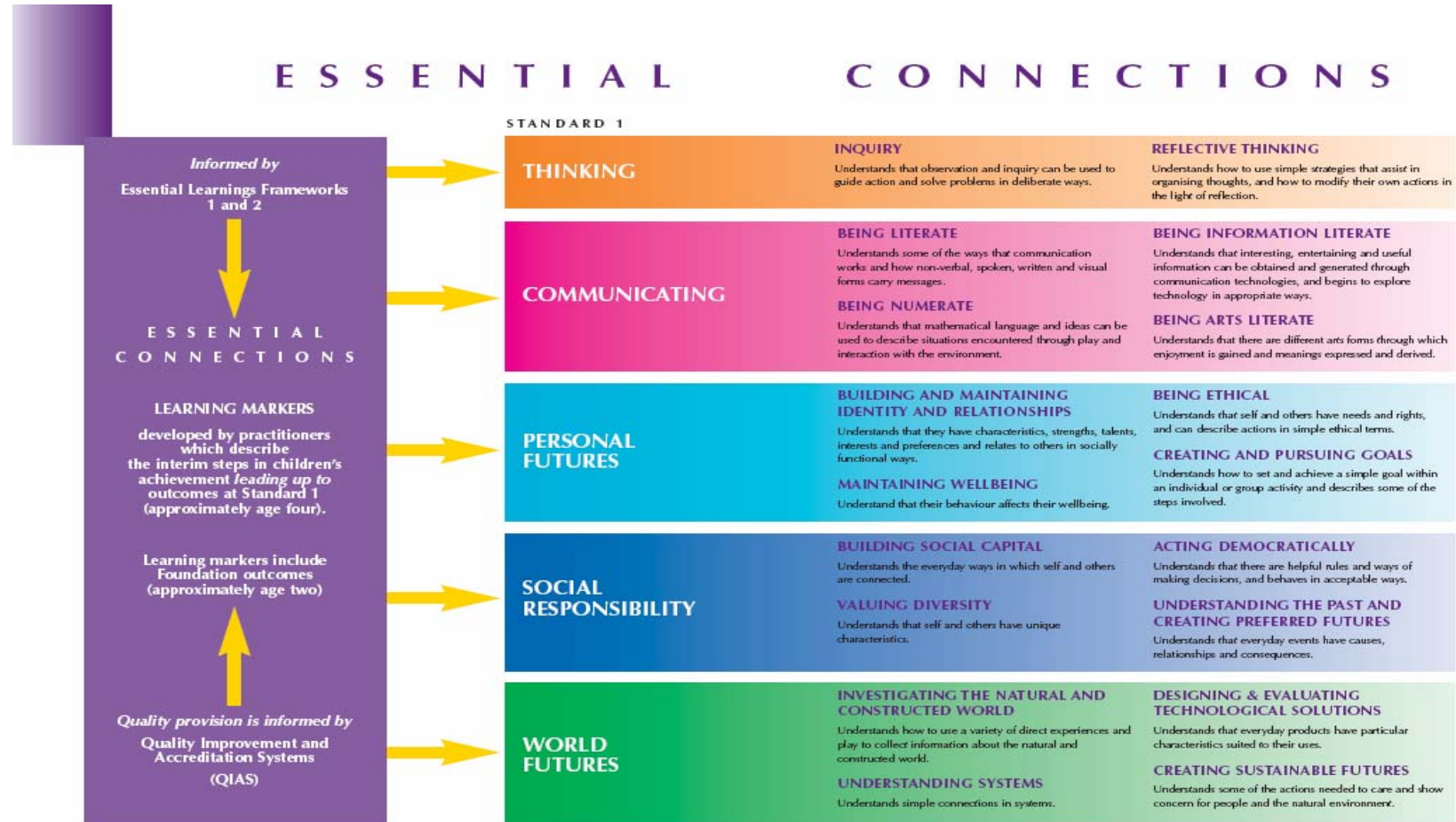
<ul style="list-style-type: none"> <li>describes location, using directional terms (north, south, east, west) [C] [KC2]</li> <li>estimates distances between known features in the environment, on models and maps [C] [KC5]</li> <li>describes simple patterns in maps. [T] [KC2] [KC5]</li> </ul>	<p>grid to locate significant places on an atlas map [C] [KC5]</p> <ul style="list-style-type: none"> <li>explains which kind of map (e.g. wall, atlas, globe, electronically generated) is best for showing particular features and relationships [C] [KC2]</li> <li>demonstrates understanding of different scales used on various maps and models [C] [KC2]</li> <li>uses electronically generated maps, models or photographs to describe the relationship of places to particular relevant features (e.g. cities located on coasts and rivers, transport patterns following topography, mining areas linked to ports) and flow-charts to describe resource relationships. [C] [KC2]</li> </ul>	<p>features and systems, and associates them with particular concepts on maps and statistical data [C] [KC1] [KC5]</p> <ul style="list-style-type: none"> <li>examines the implications of interrupting or changing interactions and relationships in natural and local environments, using relevant Australian or global examples [In] [T] [C] [KC1]</li> <li>selects and uses suitable media and modes of presentation (e.g. diagrams, maps, photographs, online resources) to illustrate and present researched information (e.g. to describe the ways in which people are a part of the water cycle and dependent upon water as a resource). [In] [C] [KC1] [KC2] [KC7]</li> </ul>
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<p><b>1.6 Participates actively in projects to show understanding of the importance of caring for local places and natural environments. [F] [In] [T] [KC3] [KC4]</b></p> <p>Examples of evidence include that the child:</p> <ul style="list-style-type: none"> <li>describes the purpose and work of relevant projects that involve caring for places and natural environments [In] [T] [KC3]</li> <li>explains how and why various people, including Indigenous peoples, care for particular places [In] [T]</li> <li>identifies why it is important to care for places and ways they can care for a particular place [F] [In] [T]</li> <li>contributes to planning, implementing and evaluating a cooperative class, group or team project to care for a place [F] [In] [KC3] [KC4]</li> <li>cares for animals as pets, and plants in gardens. [In]</li> </ul>	<p><b>2.6 Understands that people cause changes in natural, built and social environments, and they act together in solving problems to ensure ecological sustainability. [F] [In] [KC6]</b></p> <p>Examples of evidence include that the student:</p> <ul style="list-style-type: none"> <li>describes aspects of natural environments used to supply basic needs (e.g. food; shelter for people and native animals; interesting, beautiful and useful buildings; arts works; work; recreation) [In] [KC2]</li> <li>compares landscapes, land uses, resources and changes over time in Australian regions, or regions in another country [In] [KC1]</li> <li>explores the views and actions of diverse individuals and groups on environmental quality and preservation of places in a particular region or landscape now and in the future</li> </ul>	<p><b>3.6 Identifies factors affecting an environmental issue, and reports on ways to act for sustainable futures. [F] [In] [T] [KC1] [KC2]</b></p> <p>Examples of evidence include that the student:</p> <ul style="list-style-type: none"> <li>examines hazards, both natural and those caused by people, and develops questions that can be researched to analyse their impact on environmental systems [T] [C] [KC1]</li> <li>identifies the ways in which individuals, specialised groups and/or government departments work to prevent, control or clean up after the environmental devastation caused by hazards [In] [T] [KC1]</li> <li>explores ways they and the community can act for sustainable development, while taking into account hazards [F] [In] [T] [KC6]</li> </ul>
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	<p>[F] [In] [KC6]</p> <ul style="list-style-type: none"><li>discusses the concept of ecological sustainability, identifies personal responsibility, and collaborates in environmental projects. [F] [T] [KC2] [KC4]</li></ul>	<ul style="list-style-type: none"><li>recognises and describes strategies practised by governments, and various people or groups including Indigenous peoples, around the world to sustain local/global environments. [F] [In] [C] [KC2] [KC6]</li></ul>
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Appendix 3.6: Tasmania

Tasmania Essential Connections ([http://www.education.tas.gov.au/school/educators/curriculum/el\\_standards/essconnchart.pdf](http://www.education.tas.gov.au/school/educators/curriculum/el_standards/essconnchart.pdf))



Tasmania Extract from World Futures to demonstrate the place of Geography (<http://www.itag.education.tas.gov.au/planning/scopeseq/ELsplanning.doc> p.45)

<b>WORLD FUTURES</b>					
<b>Investigating the natural and constructed world</b>					
Understands how to scientifically investigate the natural and constructed world, appreciating the tentative nature of knowledge and the value of creative, imaginative and speculative thinking.					
	<b>Standard 1</b>	<b>Standard 2</b>	<b>Standard 3</b>	<b>Standard 4</b>	<b>Standard 5</b>
<b>Key questions</b>	<b>How can scientific thought be developed and used to investigate the natural and constructed world? (ELF 1 p36)</b>				
	How can I find out about the world around me?	How do I carry out scientific investigations?	How can I pose questions and record and check my findings?	How do I develop a hypothesis and investigate its validity?	How do I critically review the validity and implications of the results I obtain?
<b>Supporting questions</b> These questions can be used to develop and write understanding goals at a particular standard.	What is this and what does it do? How can I make observations? How do I find things out safely? How can I group things? Why did that happen? How can I tell someone else what happened? How do people use scientific information?	What is an experiment? Why do we conduct experiments? Why is it important to follow a series of steps? How can I measure things? How can I record information? What do I think will happen? Are my results what I expected?	What kinds of questions can I investigate? How do I make sure that my investigation is fair? Did other people get the same results that I did, and if not, why not? How will I explain my results to others? How could I improve my investigation?	How do I develop and test a hypothesis? How do I control the variables in my investigation? What will make my method reliable and ethical? Why do I need to replicate things? Can I see any patterns or relationships in my data? What do my results show?	How will my results help me to make informed decisions? What might have influenced the validity of my results? How do I account for unexpected or conflicting results? How accurate were my data sources? What further research is required?
<b>Key concepts</b> Across all standards	balance/equilibrium, change, conclusion, data, design, evidence, fair test, form, hypothesis, interdependence, interpretation, investigation, models, prediction, explanation, presentation, representation, systems				

Appendix 3.7: Victoria

Victorian Essential Learnings ([http://vels.vcaa.vic.edu.au/downloads/vels\\_standards/velsrevisedgeography.pdf](http://vels.vcaa.vic.edu.au/downloads/vels_standards/velsrevisedgeography.pdf) p.5)

The following table provides a summary of the structure of the Humanities.

DOMAIN	DIMENSION	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6
The Humanities	Humanities knowledge and understanding	Learning focus statement only			Not applicable		
	Humanities skills						
The Humanities – Economics	Economic knowledge and understanding	Not applicable					
	Economic reasoning and interpretation						
The Humanities – Geography	Geographical knowledge and understanding						
	Geospatial skills						
The Humanities – History	Historical knowledge and understanding						
	Historical reasoning and interpretation						

Shaded boxes represent levels in each domain that have formal standards against which student achievement will be assessed and reported.

A glossary is included which provides definitions of underlined terms (see page 22).

**Learning focus**

Learning focus statements are written for each level. These outline the learning

## Appendix 3.8 Western Australia

**The thirteen WA overarching outcomes are:**

- Students use language to understand, develop and communicate ideas and information and interact with others.
- Students select, integrate and apply numerical and spatial concepts and techniques.
- Students recognise when and what information is needed, locate and obtain it from a range of sources and evaluate, use and share it with others.
- Students select, use and adapt technologies.
- Students describe and reason about patterns, structures and relationships in order to understand, interpret, justify and make predictions.
- Students visualise consequences, think laterally, recognise opportunity and potential and are prepared to test options.
- Students understand and appreciate the physical, biological and technological world and have the knowledge and skills to make decisions in relation to it.
- Students understand their cultural, geographic and historical contexts and have the knowledge, skills and values necessary for active participation in life in Australia.
- Students interact with people and cultures other than their own and are equipped to contribute to the global community.
- Students participate in creative activity of their own and understand and engage with the artistic, cultural and intellectual work of others.
- Students value and implement practices that promote personal growth and well-being.
- Students are self-motivated and confident in their approach to learning and are able to work individually and collaboratively.
- Students recognise that everyone has the right to feel valued and be safe, and, in this regard, understand their rights and obligations and behave responsibly.

WA Curriculum Framework (<http://www.det.wa.edu.au/education/curriculum/parents/overview.pdf> pp. 4-5)

CURRICULUM FRAMEWORK							
Present and Future Conditions							
CULTURAL DIVERSITY	CHANGES IN THE FAMILY STRUCTURE	RAPID PACE OF TECHNOLOGICAL CHANGE	GLOBAL ENVIRONMENTAL ISSUES	CHANGING NATURE OF SOCIAL CONDITIONS	CHANGES IN THE WORKPLACE	INTER-DEPENDENCE IN THE GLOBAL ECONOMY	UNCERTAIN STANDARDS OF LIVING
Values							
PURSUIT OF KNOWLEDGE AND A COMMITMENT TO ACHIEVEMENT OF POTENTIAL		SELF ACCEPTANCE AND RESPECT OF SELF		RESPECT AND CONCERN FOR OTHERS AND THEIR RIGHTS		SOCIAL AND CIVIC RESPONSIBILITY	ENVIRONMENTAL RESPONSIBILITY
OVERARCHING STATEMENT							
KEY PRINCIPLES • OVERARCHING OUTCOMES • SCOPE • LEARNING, TEACHING & ASSESSMENT							
LEARNING AREA OUTCOMES							
THE ARTS	ENGLISH	HEALTH & PHYSICAL EDUCATION	LANGUAGES OTHER THAN ENGLISH	MATHEMATICS	SCIENCE	SOCIETY & ENVIRONMENT	TECHNOLOGY & ENTERPRISE
<p><b>ARTS IDEAS</b></p> <p>1. Students generate arts works that communicate ideas.</p> <p><b>ARTS SKILLS AND PROCESSES</b></p> <p>2. Students use the skills, techniques, processes, conventions and technologies of the arts.</p> <p><b>ARTS RESPONSES</b></p> <p>3. Students use their aesthetic understanding to respond to, reflect on and evaluate the arts.</p> <p><b>ARTS IN SOCIETY</b></p> <p>4. Students understand the role of the arts in society.</p>	<p><b>UNDERSTANDING LANGUAGE</b></p> <p>1. Students understand that the way language is used varies according to context.</p> <p><b>ATTITUDES, VALUES AND BELIEFS</b></p> <p>2. Students understand that language has an important effect on the ways in which they view themselves and the world in which they live.</p> <p><b>CONVENTIONS</b></p> <p>3. Students use the conventions of Standard Australian English with understanding and critical awareness.</p> <p><b>PROCESSES AND STRATEGIES</b></p> <p>4. Students select from a repertoire of processes and strategies by reflecting on their understanding of the way language is used for a variety of purposes in a range of contexts.</p> <p><b>LISTENING</b></p> <p>5. Students listen with purpose, understanding and critical awareness in a wide range of situations.</p> <p><b>SPeAKING</b></p> <p>6. Students speak with purpose and effect in a wide range of contexts.</p> <p><b>WRITING</b></p> <p>7. Students use a wide range of oral texts with purpose, understanding and critical awareness.</p> <p><b>READING</b></p> <p>8. Students read a wide range of texts with purpose, understanding and critical awareness.</p>	<p><b>KNOWLEDGE AND UNDERSTANDING</b></p> <p>1. Students know and understand health and physical activity concepts that enable informed decisions for a healthy, active lifestyle.</p> <p><b>ATTITUDES AND VALUES</b></p> <p>2. Students exhibit attitudes and values that promote personal, family and community health, and participation in physical activity.</p> <p><b>SKILLS FOR PHYSICAL ACTIVITY</b></p> <p>3. Students demonstrate the movement skills and strategies for confident participation in physical activity.</p> <p><b>SELF-MANAGEMENT SKILLS</b></p> <p>4. Students demonstrate self-management skills which enable them to make informed decisions for healthy, active lifestyles.</p> <p><b>INTERPERSONAL SKILLS</b></p> <p>5. Students demonstrate the interpersonal skills necessary for effective relationships and healthy, active lifestyles.</p>	<p><b>LISTENING AND RESPONDING, AND DRAWING</b></p> <p>1. Students comprehend and communicate in the target language through listening and responding, and speaking.</p> <p><b>READING AND RESPONDING</b></p> <p>2. Students view and read a variety of texts in the target language and respond appropriately.</p> <p><b>WRITING</b></p> <p>3. Students write a variety of texts in the target language.</p> <p><b>CULTURAL UNDERSTANDING</b></p> <p>4. Students develop sociolinguistic and sociocultural understandings and apply them in their use of the target language.</p> <p><b>THE SYSTEM OF THE TARGET LANGUAGE</b></p> <p>5. Students apply their knowledge of the system of the target language to assist them to make listening and reading tests.</p> <p><b>LANGUAGE LEARNING STRATEGIES</b></p> <p>6. Students acquire a range of skills and strategies to support their ability to make learning self-directed in the target language.</p>	<p><b>APPROPRIATING MATHEMATICS</b></p> <p>Students appreciate the role mathematics has had, and continues to have, in their own and other communities.</p> <p><b>WORKING MATHEMATICALLY</b></p> <p>Students use mathematical thinking processes and skills in attempting and dealing with mathematical and non-mathematical situations.</p> <p><b>NUMBERS</b></p> <p>Students use numbers and operations and the relationships between them orally and fluently.</p> <p><b>MEASUREMENT</b></p> <p>Students use direct and indirect measurement and estimation skills to describe, compare, measure, plan and construct.</p> <p><b>CHANGE AND GROW</b></p> <p>Students use their knowledge of change and data handling processes in dealing with data and with statistics in which uncertainty is involved.</p> <p><b>SPACE</b></p> <p>Students describe and analyse mathematically the spatial features of objects, environments and phenomena.</p> <p><b>ALGEBRA</b></p> <p>Students use algebraic symbols, diagrams and graphs to understand, to describe and to reason.</p> <p>They are expected to do 19 learning outcomes.</p>	<p><b>WORKING SCIENTIFICALLY</b></p> <p><b>INVESTIGATING</b></p> <p>1. Students investigate to answer questions about the natural and technological world using reflection and analysis to prepare a plan to collect, process and interpret data to communicate conclusions, and to evaluate their plan, procedures and findings.</p> <p><b>COMMUNICATING SCIENTIFICALLY</b></p> <p>2. Students communicate scientific understanding to diverse audiences for a range of purposes.</p> <p><b>SCIENCE IN DAILY LIFE</b></p> <p>3. Students select and apply scientific knowledge, skills and understandings across a range of contexts in daily life.</p> <p><b>ACTING RESPONSIBLY</b></p> <p>4. Students make decisions that include ethical consideration of the impact of the processes and their products of science on people and the environment.</p> <p><b>SCIENCE IN SOCIETY</b></p> <p>5. Students understand the nature of science as a human activity.</p> <p><b>UNDERSTANDING CONCEPTS</b></p> <p><b>SCIENCE AND BEYOND</b></p> <p>6. Students understand how the physical environment on Earth and its position in the universe impact on the way we live.</p> <p><b>ENERGY AND CHANGE</b></p> <p>7. Students understand the scientific concept of energy and explain that energy is vital</p>	<p><b>INTEGRATION, COMMUNICATION AND PARTICIPATION</b></p> <p>1. Students investigate the ways in which people interact with each other and with their environments in order to make informed decisions and implement relevant social action.</p> <p><b>PLACE AND SPACE</b></p> <p>2. Students understand that the interaction people have with places in which they live is shaped by the location, patterns and processes associated with natural and built features.</p> <p><b>RESOURCES</b></p> <p>3. Students understand that people attempt to meet their needs and wants by making optimum use of limited resources in entrepreneurship.</p> <p><b>CULTURE</b></p> <p>4. Students understand that people form groups because of their shared understandings of the world, and, in fact, they are influenced by the particular culture as formed.</p> <p><b>TIME, CONTINUITY AND CHANGE</b></p> <p>5. Students understand that people, actions and values are shaped by their understanding and interpretation of the past.</p> <p><b>NATURAL AND SOCIAL SYSTEMS</b></p> <p>6. Students understand how systems provide order to the dynamic natural and social relationships occurring in the world.</p> <p><b>LOCAL RESOURCES</b></p>	<p><b>TECHNOLOGY PROCESSES</b></p> <p>1. Students apply a technology process to create or modify products, processes, systems, services or environments to meet human needs and make opportunities.</p> <p><b>MATERIALS</b></p> <p>2. Students select and use materials that are appropriate to addressing solutions to technology challenges.</p> <p><b>INFORMATION</b></p> <p>3. Students design, adapt, use and present information that is appropriate to achieving solutions to technology challenges.</p> <p><b>SYSTEMS</b></p> <p>4. Students design, adapt and use materials that are appropriate to addressing solutions to technology challenges.</p> <p><b>ENTERPRISE</b></p> <p>5. Students create and realise opportunities through the development of innovative strategies designed to meet human needs.</p> <p><b>TECHNOLOGY SKILLS</b></p> <p>6. Students apply organisational, operational and manipulative skills appropriate to using, developing and adapting technology.</p> <p><b>TECHNOLOGY IN SOCIETY</b></p> <p>7. Students understand how cultural beliefs, values, attitudes and ethical problems are interconnected in the development and use of technology and enterprise.</p>

WA Society & Environment Learning Outcomes

(<http://www.curriculum.wa.edu.au/files/pdf/societyenv.pdf> p.4)

Society & Environment Learning Outcomes		
<p><b>INVESTIGATION, COMMUNICATION &amp; PARTICIPATION</b></p> <p>1. Students investigate the ways in which people interact with each other and with their environments in order to make informed decisions and implement relevant social action.</p>	<p><b>PLACE AND SPACE</b></p> <p>2. Students understand that the interaction people have with places in which they live is shaped by the location, patterns and processes associated with natural and built features.</p>	<p><b>RESOURCES</b></p> <p>3. Students understand that people attempt to meet their needs and wants by making optimum use of limited resources in enterprising ways.</p>
<p><b>CULTURE</b></p> <p>4. Students understand that people form groups because of their shared understandings of the world, and, in turn, they are influenced by the particular culture so formed.</p>	<p><b>TIME, CONTINUITY AND CHANGE</b></p> <p>5. Students understand that peoples' actions and values are shaped by their understanding and interpretation of the past.</p>	<p><b>NATURAL AND SOCIAL SYSTEMS</b></p> <p>6. Students understand that systems provide order to the dynamic natural and social relationships occurring in the world.</p>
<p><b>ACTIVE CITIZENSHIP</b></p> <p>7. Students demonstrate active citizenship through their behaviours and practices in the school environment, in accordance with the principles and values associated with the democratic process, social justice and ecological sustainability.</p>		

An example of geography in the WA curriculum

(<http://www.curriculum.wa.edu.au/pages/framework/framework10b6.htm>)

'...Systems provide order to the dynamic natural and social relationships occurring in the world' and describe the requisite skills:

- students identify and describe the elements of natural systems such as soil, vegetation, landforms, water and fauna ...
- [T]hey recognise natural and human factors such as floods, fire, earthquakes, over-grazing, soil depletion and deforestation which contribute to an imbalance in the system.
- Students are then able to describe how equilibrium is re-established in systems. They further describe how people can act to sustain these systems. The study of

these systems will vary from local contexts (e.g. small wetlands) through to global contexts (e.g. tropical rainforests).

For early adolescence, it states:

- Students examine the factors and processes that shape and change the characteristics of natural and built features within places.
- They identify and account for similarities and differences between places and begin to understand the nature of spatial associations and variations over the earth's surface.
- Students need to analyse and represent spatial data in a variety of ways, including, for example, using atlases and maps and interpreting maps and photos to identify relationships between phenomena.
- there is a range of factors, processes and values that influences the interdependence of people and places, that changes occur in people's use of the natural environment over time; and that patterns of settlement and agricultural and urban land use change.
- Students are encouraged to reflect on plans of action and past actions in terms of the value positions underlying them, including their commitment to the principles of ecological sustainability.
- They investigate the various positions and views held by people on issues. They offer explanations as to why individuals and groups may hold different views on issues that include the care of places.
- They can apply their understandings about the consequences of human modifications to the natural and built features and predict future consequences of planned modifications to places (WA Curriculum Framework, 1998, pp. 270-8).

The introduction to the *natural and social systems* section details understandings for the students: 'that systems provide order to the dynamic natural and social relationships occurring in the world' and describe the requisite skills:

- students identify and describe the elements of natural systems such as soil, vegetation, landforms, water and fauna ...
- [T]hey recognise natural and human factors such as floods, fire, earthquakes, over-grazing, soil depletion and deforestation which contribute to an imbalance in the system.
- Students are then able to describe how equilibrium is re-established in systems. They further describe how people can act to sustain these systems. The study of these systems will vary from local contexts (e.g. small wetlands) through to global contexts (e.g. tropical rainforests).

For early adolescence, it states:

- Students examine the factors and processes that shape and change the characteristics of natural and built features within places.
- They identify and account for similarities and differences between places and begin to understand the nature of spatial associations and variations over the earth's surface.

- Students need to analyse and represent spatial data in a variety of ways, including, for example, using atlases and maps and interpreting maps and photos to identify relationships between phenomena.
- Students further learn that there is a range of factors, processes and values that influences the interdependence of people and places, that changes occur in people's use of the natural environment over time; and that patterns of settlement and agricultural and urban land use change.
- Students are encouraged to reflect on plans of action and past actions in terms of the value positions underlying them, including their commitment to the principles of ecological sustainability.
- They investigate the various positions and views held by people on issues. They offer explanations as to why individuals and groups may hold different views on issues that include the care of places.

They can apply their understandings about the consequences of human modifications to the natural and built features and predict future consequences of planned modifications to places (WA Curriculum Framework, 1998, pp. 270-8).