GTA NSW & ACT Response to the '2023 Have your say' K-6 consultation for Geography

From Associate Professor Alaric Maude

Comments on the New South Wales draft syllabus for K-6

Extracts from the syllabus are in italics.

1. The integration of disciplines

The draft syllabus states that it has adopted an integrated approach to Human Society and its Environment (HASS). It claims that such an approach 'capitalises on the complementary nature of history and geography and leads to deeper learning', and refers to an article by Ruth Reynolds as the evidence base for this claim. This is a puzzle, as the article has nothing about the complementary nature of history and geography, or about how their integration produces deeper learning. The main recommendation in it is that the focus of the HASS subjects in primary school should be on active citizenship. Another puzzle is that the draft syllabus largely separates geography and history under separate content headings, and it is difficult to identify much real integration. Some clarification is needed.

2. Comments on the content statements

Early Stage 1

Content

Places can be located and described using geographical information

- Locate places and features of places using information from maps, globes or images
- Compare natural and human features of bushland, coastal, remote, rural or urban places
- Recognise that Aboriginal and Torres Strait Islander Peoples connect to Country and its features in a variety *of ways.*

Comment

In Early Stage 1, the focus should be on the place or places that children live in and belong to, and on what they are like, such as their features, as it is in the Australian curriculum. The draft syllabus goes well beyond this in the first and second dot points. Students need to understand the features of their own place before they compare them to other places.

Non-Aboriginal or Torres Strait Islander children also connect to places. They have special places, favourite playgrounds, preferred beaches, and their families may have lived in the area for several generations. These connections are not of the depth of those of Aboriginal or Torres Strait Islander people, but they are important and should not be ignored.

Why isn't the third dot point above in the content below, where it complements 'Identify reasons people connect with places'?

People care for places and each other

- Identify reasons people connect with places
- Describe own connections to places
- Identify and describe how people care for places.

Comment

The first two dot points are not about caring for places and each other. They should be in Stage 1 as a development of the significance of their place to children.

Stage 1

Content

People show their connection to places using geographical information

- Locate Australia in relation to hemispheres, continents, oceans and countries of the world using maps
- Identify and locate Australian states and territories using maps

Comments on the New South Wales draft syllabus for K-6

- Locate and represent places in Australia of personal *significance using maps, photographs, oral descriptions* and sketch maps
- Describe reasons people are connected to places in Australia or other countries
- Describe the unique ways Aboriginal and Torres Strait Islander Peoples map Country.

Comment

This content does little to develop student's familiarity with their place, and their attachment to it. There is nothing about the important relationships between place and children's identity and sense of belonging. See Appendix 1.

In the fourth dot point is 'reasons' the best word? Isn't the point more about how people are connected to places?

People care for Australia's water environments

- Describe natural and human features of Australian beaches, lakes, oceans and rivers
- Compare the ways people use Australian water environments
- Explain the ways people can use and care for water responsibly and sustainably.

Comment:

This is a lot for Stage 1. The first dot point is particularly large, and is not needed for the rest of the content area.

The footnote for the third dot point lists *Turn off taps,* collect rainwater to use on the garden, make sure rubbish doesn't go into drains as ways to use water responsibly and sustainably. Apart from the last, these will do little to care for Australia's water environments.

There is a mismatch between the content heading and the three dot points.

Stage 2

Outcomes

A student:

- explains connections between people and places using geographical information
- describes the interactions between Aboriginal Peoples and their environments.

Comment

There is nothing in the content that relates to the first outcome.

People identify environments using geographical information

- Identify and locate a major desert, mountain range, river, ocean trench and volcano of the world
- Compare places of environmental or cultural importance in the world
- Explain the importance of managing and conserving environments.

Comment

The heading does not describe the content, which goes well beyond identifying environments. What is the educational value of the first dot point? The second and third points require more than geographical information to answer.

People use and value Australia's environments

- *Describe ways people organise places for different* purposes
- Identify land uses in Australia by comparing maps
- Explain how reserved lands in New South Wales are managed at Mungo National Park, Kosciuszko National Park, Wollemi National Park and Barrington Tops *National Park.*

Comment

The first dot point is not about how people use and value Australia's environments, and the examples suggested (*Outdoor table in a shady area, playing field away from* buildings, toilets near the classroom) are very simple.

The second dot point would be relevant if it was about the relationships between environments and land use. In Stage 2 the focus should be on environments that students know personally, and can observe.

Stage 3

People organise and manage places using geographical information

- Collect and present data to describe ways cities, towns and suburbs in Australia are organised
- Locate and represent cities, towns and suburbs in relation to other places in Australia
- Describe how people organise places to enhance healthy, sustainable lifestyles
- Research and explain how people manage places where natural environmental events occur
- Propose strategies to manage a local place where *natural environmental events occur.*

Comments on the New South Wales draft syllabus for K-6

Comment

The suggestions for the first dot point (Number of features, orientation of features, distance between features or services) have nothing to do with the ways cities, towns and suburbs are organised.

The second dot point has nothing to do with how people organise and manage places.

For the fourth dot point a footnote suggests that this is about *'School plans for storms, floods or bushfires, following advice from agencies'*. Why these are called a 'natural environmental event' rather than an 'environmental hazard' or a 'natural hazard' is a puzzle.

Overall, the content is a very limited selection of the ways people organise and manage places.

People can protect global environments

- Research and present information about places in the world where human activity has had an impact on the environment
- Research how people actively engage to protect global environments.

Comment

Students should be finding out how the environments in which they live are being protected before they look at distant places, and learning how they could be involved.

People of Australia are global citizens

- *Research a significant contribution made by an* Australian individual or group in the humanities, *sciences, sport and wellbeing fields*
- Explain the ways Australia is connected to the Asia-*Pacific region and the world*
- Use data to describe how diverse cultures contribute to Australian society
- Identify reasons people have migrated to Australia.

Comment

Only the second dot point is about Australia's global roles, but it teaches students nothing about the world they are connected to.

3. Outcomes

These are the outcomes associated with geography in the draft syllabus:

Early Stage 1: identifies and locates places people connect with using geographical information

Stage 1: describes features, locations and connections people have with places using geographical information

Stage 2: explains connections between people and places using geographical information

Stage 3: explains the responsibilities, connections and contributions people have with places using geographical information.

Comment

These focus on the location and features of places and people's connections with them. There is nothing to excite children's imagination and curiosity about the people who live in them, their ways of life, and what these places are like. There is also nothing about the effects of these connections on places.

4. Geographical information

The outcomes listed above all specify the use of geographical information. What this information might be is unclear. The link to geometric measures and data in Mathematics suggests that geographical information is about how to describe location and how to display and interpret numerical data. If this is what is meant it is a very limited view of the scope of primary school geography. What about qualitative information about what places are like, and why they are like they are, and what people feel about them?

5. Understanding their own place

Geographical studies of the place in which students live, that also include how to explain what it is like, how and why it is changing, and how that change is managed, can develop students' sense of local citizenship. Some of this is in the draft syllabus, but there is nothing about how to explain the characteristics of a place. This knowledge is essential if students are to understand the content on organising and managing places.

Comments on the New South Wales draft syllabus for K-6

6. Global knowledge

These are the content statements that relate to global knowledge.

Early Stage 1

- Describe own connections to places (The footnote suggests 'Family, culture, proximity, familiarity, curiosity, imagination').

Stage 1

- Locate Australia in relation to hemispheres, continents, oceans and countries of the world using maps
- Describe reasons people are connected to places in Australia or other countries (The footnote suggests 'Place of birth, travel destination, family origin, cultural connection').

Stage 2

- Identify and locate a major desert, mountain range, river, ocean trench and volcano of the world
- Compare places of environmental or cultural *importance in the world.*

Stage 3

- Research and present information about places in the world where human activity has had an impact on the environment (The footnote suggests 'Amazon Rainforest – land clearing, Antarctica – tourism, Great Barrier Reef – pollution')
- Research how people actively engage to protect global environments
- Explain the ways Australia is connected to the Asia-*Pacific region and the world* (The footnote suggests 'Neighbouring countries, Commonwealth Games, aid and trade, technology').

Comment

Students should have sufficient knowledge of the world to enable them to follow events, such as sporting activities, disasters, conflicts and other happenings reported in the media, as they become increasingly aware of them. They should also understand the ways that their place and their lives are connected with people and places around the world through trade, migration, history, and cultural and other influences. World knowledge is also needed to challenge children's stereotypes about other places and people, which they absorb at an early age from their family, peers and the media.

The draft syllabus has a focus on connections with places, but students will learn little about those places. The syllabus will give students little overall knowledge of the world, only some scattered examples of a desert, a country, or an environment affected by human activities. They will have no knowledge of world climates and biomes, or of world peoples and religions, or of the demographic and economic differences between countries, or of the continents and major countries of the world. All this is basic knowledge required to understand the world in which they live, and how it is changing, and is an important foundation for informed global citizenship.

7. Environmental knowledge

Students will gain little systematic knowledge of the environment from the draft syllabus. They will not learn the concept of climate (and it is not in the Science curriculum) or anything about the climates of the world. They will not learn anything about vegetation and its role in the environment (also not in Science), although this is in the Australian curriculum. Instead, they will learn something about water, which is well covered in Year 7. Importantly, they will not learn much of the ways they depend on the environment to support their lives and wellbeing. Without this understanding they may not appreciate the meaning and importance of sustainability.

8. Sustainability

These are the content statements that relate to sustainability.

Early Stage 1

- Identify and describe how people care for places (The footnote suggests 'Following rules, gardening, cleaning, planting native plants to care for native animals, using a park').

Stage 1

- Explain the ways people can use and care for water responsibly and sustainably (The footnote suggests 'Turn off taps, collect rainwater to use on the garden, make sure rubbish doesn't go into drains').

Stage 2

- Explain the importance of managing and conserving environments (The footnote suggests 'Manage pollution, tourism, weathering and erosion for sustainability').

Stage 3

- Research and present information about places in the world where human activity has had an impact on the environment (The footnote suggests 'Amazon Rainforest – land clearing, Antarctica – tourism, Great Barrier Reef – pollution')
- Research how people actively engage to protect global environments.

Comment

This is an inadequate and shallow treatment of a core aspect of school education. Nowhere in the syllabus are students taught what sustainability means. It is a frequently misunderstood term, and can be politically controversial. In the Science curriculum sustainable is defined as: 'Supporting the needs of the present without compromising the ability of future generations to support their needs.' This is a very vague definition, and cannot be used to decide if the use of a water resource, for example, is sustainable. Without knowing what sustainability means for renewable resources, waste disposal, biodiversity, etc, how can students evaluate whether the actions they think of or discover will improve sustainability?

There are also some additional examples of sustainable practices that can be suggested to teachers, such as restrictions on fishing, establishment of marine protected areas, protection of beach dunes, and regulations on the disposal of wastes. The first two are similar to Aboriginal methods to maintain the sustainability of renewable resources. Students should also investigate the problems of electronic waste and food waste, two sustainability issues in which they may be part of the problem.

9. Spatial intelligence

The draft syllabus has a lot of rather mundane content on locating places, features and other phenomena, and some on the use of maps, but I can't find anything on skills, so have added Appendix 2 to describe what geography could add to the curriculum.

Overall comment

The draft syllabus has little that will engage students and excite their curiosity. It has a lot on location, but not much on what the place at a location is like. It has a lot on description, but nothing about causal explanation, so its intellectual level is quite basic. There is also no mention of any of the 7 geographical concepts in the Australian curriculum, other than sustainability. Concepts such as place, space and interconnection can be taught in primary school, and are specified in the Victorian curriculum.

Appendix 1: Place attachment and personal development

Becoming familiar with the place you live in, and developing an attachment to it, contributes to the emotional development of children. Little and Derr (2018, p. 15) write that 'much like with human attachment, children gain a sense of their self-worth and self-identity from attachment to place,' while Jack (2015), a British social work academic, concludes from research in the UK that 'place continues to play an important role in the development of personal identity, feelings of security and a sense of belonging in the modern world' (p. 417). Place attachment also contributes to children's resilience and coping ability, especially in times of displacement and natural disaster (Little & Derr, 2018). The foundations for this attachment are formed in middle childhood, during the primary school years, and geography has a role in this. Spencer (2005, p. 305), a psychologist, argues that in 'doing geography' with children, the primary school teacher is facilitating 'the child's very personal development of self-identity which will shape much of their lives, their values, sense of belonging and self-worth.' This occurs through the development of a child's familiarity with, and sense of attachment to, their place. He concludes that:

> It is clear that the plausible, intuitively persuasive, case for the importance of place in the development of a complete, rounded self-identity has begun to be made. And it is also clearly arguable that the subject of geography, and its early-years teaching, can have a major role to play in partnership with parents and peers and personal exploration of the neighbourhood (Spencer, 2005, p. 308).

A geography that teaches students about their own place and what it is like, how it supports their lives, and how they are connected to it and to the people who live it, can help to develop their sense of belonging and attachment.

Jack, G. (2015). "I may not know who I am, but I know where I am from": The meaning of place in social work with children and families. Child & Family Social Work, 20, 415–423. https://doi.org/10.1111/cfs.12091

Little, S., & Derr, V. (2018). The influence of nature on a child's development: Connecting the outcomes of human attachment and place attachment. In A. Cutter-Mackenzie, K. Malone & E Barrat Hacking (Eds.), Research handbook on childhood nature. Springer. https://doi.org/10.1007/978-3-319-51949-4_10-1

Spencer, C. (2005). Place attachment, place identity and the development of the child's self-identity: Searching the literature to develop an hypothesis. International Research in Geographical and Environmental Education, (14), 305–309. https://doi.org/10.1080/10382040508668363

Appendix 2: Geography and spatial intelligence

Primary school geography that includes the construction, use and interpretation of maps, helps to develop children's spatial intelligence, which is a separate type of intelligence to mathematical and verbal (Ness et al., 2017). Spatial intelligence, or the ability to think spatially, is important in everyday life, but is also used in mathematics, several fields of science, architecture, engineering, urban planning and geography. Furthermore, skill in spatial thinking is positively correlated with competence in mathematics and some branches of science (Newcombe, 2017), while in a recent article Judd and Klingberg (2021) report strong evidence that spatial cognitive training improves mathematical learning in children.

Geography has a role to play in this training as Liben, a psychologist, argues that 'geography education in general, and map education in particular, can have an important place in developing spatial thinkers' (Liben, 2017, p. 221). When children make models of familiar places, or draw maps, or interpret photos taken from the air, they are developing their spatial thinking skills. When they interpret maps of geographical phenomena, such as vegetation or population distribution, they are learning to perceive patterns that they can try to explain, which is another set of spatial thinking skills. One aspect of this spatial thinking has been described as survey knowledge – the ability to think about multiple relations among locations based on the information provided by an aerial photograph or map. As Davies and Uttal (2007) argue, maps facilitate students' thinking about spatial relations, as 'maps can become "tools for thought", allowing children to encode spatial relations in an efficient, integrated manner that is difficult, and sometimes impossible, to gain from direct experience or from linguistic descriptions' (p. 233).

On the other hand, electronic navigation programs, which provide only point to point information (and which may be verbal rather than visual), may fail to develop this ability to perceive spatial relations and think spatially. This is because, when children are following a designated route, they are not observing the space through which this route passes, or the relative location of places within this space, and they are not developing cognitive maps of places. However, when students use a map to find their way through unfamiliar territory, such as when orienteering, they are forced to think spatially, and to relate what they interpret from the map with what they observe on the ground.

Primary school geography should be designed to develop these skills.

Davies, C., & Uttal, D. H. (2007). Map use and the development of spatial cognition. In J. M. Plumert & J. P. Spencer, (Eds.), The emerging spatial mind. Oxford University Press.

Judd, N., & Klingberg, T. (2021). Training spatial cognition enhances mathematical learning in a randomized study of 17,000 children. Nature Human Behaviour, 5 1548–1554.

Liben, L. S. (2017). Education for spatial thinking. In K. A. Renninger & I. E. Sigel (Eds.), Child psychology in practice, Vol. IV. John Wiley. https://doi.org/10.1002/9780470147658.chpsy0406

Ness, D., Farenga, S. J., & Garofalo, S. G. (2017). Spatial intelligence: Why it matters from birth through the lifespan. Routledge.

Newcombe, N. (2017). Harnessing spatial thinking to support STEM learning. OECD Education Working Papers, No. 161. OECD Publishing. https://www.oecd-ilibrary.org/education/harnessing-spatial-thinking-to-support-stem-learning_7d5dcae6-en

The Geography Teachers Association of NSW & ACT Inc.

HSC Geography Exam Preparation Resource Package

MEMBER ONLY OFFER

Downloadable 2020 - 2022 HSC lecture videos by topic.

These lectures can be used at any time until the NEW HSC is examined in 2025 after which they will be obsolete.

The lectures can be used with HSC classes for teaching topics or for revision throughout the year.

Teachers new to teaching the HSC course might use the lectures for their own professional learning.

Three topic showreels can be purchased as a full set OR individually and in any order throughout the year.

ECOSYSTEMS AT RISK

- Biophysical Interactions
- Vulnerability and Resilience
- Management and protection
- Evaluating management
- Alpine, GBR and GSR Case Studies
- Full topic overviews x 2

9 Presentations: $300 plus GST

URBAN PLACES

- Urban Dynamics - Sydney, Campbelltown
- Urban places including Megacities and World Cities
- Urban places topic overview

4 Presentations: $100 plus GST

PEOPLE AND ECONOMIC ACTIVITY

- Overviews and Exam advice (2020 & 2021)
- Viticulture, Cocoa, Tourism case studies
- Tamburlaine Enterprise

6 presentations: $200 plus GST

FULL SET: $500 PLUS GST

Click here to register

Concepts in primary school

From Associate Professor Alaric Maude

Why are concepts important?

Geography has a wide range of concepts with a wide range of functions. The simplest are substantive or descriptive ones that help students to make sense of a collection of facts by integrating them into a single idea. The concept of weather, for example, integrates the concepts of temperature, rainfall, wind and sunshine into a single idea. More complex concepts describe processes by integrating several smaller ideas into one or two words. The concept of 'climate', for example, combines data on seasonal variations in precipitation, temperature and evaporation for places and regions, so that the term 'Mediterranean climate' tells one what types of weather to expect throughout the year. The concept of urbanisation combines ideas about how economic change, migration and urban development change the spatial distribution of population and economic activity in a country, which in turn contributes to profound economic, social and political changes. Similarly, the concept of weathering describes a process in which rock is broken into smaller fragments by mechanisms such as freezing and thawing, heating, chemical solution and penetration by the roots of plants.

It is also argued that concepts such as these help students to retain factual information longer because they have had to process it through the framework of a concept (Erickson, Lanning & French, 2017, p. 13), while the concept in turn will remind them of the information it integrates. Abstract concepts learned from one set of facts, such as inequality, can also be applied to a wide range of other facts that illustrate the same idea (Marschall & French, 2018, 13–14).

Chalmers, Carter, Cooper, and Nason, 2017 add further support for the value of concepts, which they call big ideas, in this passage from an article on STEM education:

> Much support for the educational efficacy of incorporating big ideas of and about STEM into the design of curriculum emanates from cognitive science. Within the field of cognitive science, it has been known for many years that the understanding of big ideas (a) leads to more flexible and generalizable knowledge use, (b) improves problem-solving, (c) makes it easier to make sense of and master new facts and procedures, and (d) facilitates transfer of knowledge (p. 27).

More importantly, concepts are essential to the intellectual development of students because, as Young argues, this development 'is a concept-based not a content-based or skill-based process' (Young, 2010, p. 25). Similarly, Little writes that 'within a concept-focused structure, the attention can be given to reasoning and meaning-making rather than to … a "parade of facts"' (Little, 2017, p. 44).

Concepts are what makes geography 'geographical'

The seven concepts in the Australian Geography are at a higher and more abstract level than those described above, and they have the important function of making geography a distinctive subject. They give the subject coherence, linking the different topics studied in school geography through shared concepts and the ways of thinking they produce, as explained by the UK Geographical Association:

> Geography is a content-rich subject and concepts provide an underlying structure. Many topics in geography exemplify the same conceptual understanding, so it is important for learners to understand concepts so that they do not see geography as an accumulation of 'content' and 'facts' (Geographical Association, n.d.).

They describe themes that continually recur in geographical research, such as the interrelationships between people and their biophysical environment (which combines the concepts of environment and interconnection), or the spatial changes that accompany economic development (which is informed by the concept of space). They also guide the questions that geographers ask. The concept of space, for example, informs the common question 'where, and why there?', while the concept of place prompts the question 'why is this place like it is?' Combined with the analytical concept of time, the latter question becomes 'how is this place changing, and why?' They provide frameworks for organising and analysing information. For example, the concept of space underlies the common geographical method of organising data by mapping them and then looking for regularities or patterns in the spatial distributions produced. Similarly, the concept of interconnection underlies analyses that identify the interrelationships between phenomena, such as within an ecosystem or between places, while the common method of exploring possible causal relationships by comparing spatial distributions is also an application of the concept of space.

Concepts in primary school

> Geography's key concepts provide distinctive ways of viewing and interrogating the world. For example, the processes and patterns of socioeconomic change as nations develop will be perceived differently by different disciplines. An economist is likely to focus on changes in the structure of the economy, a political scientist on changes in political institutions, and a sociologist on changes in class structures, personal beliefs, or gender relations. A geographer, on the other hand, is likely to study the causes and consequences of the spatial changes that both result from and contribute to national socioeconomic change, such as urbanisation, internal and international migration, and the development of new economic regions and cities. In the study of health, a medical scientist might focus on the effects of individual characteristics such as age, sex, and occupation on health outcomes, while a geographer might study the effects of the physical and social environment of the place in which people live (a place-based perspective), or of accessibility to health services (a spatial perspective), on their health. The ways of thinking of different disciplines consequently influence how they perceive and study the same phenomena.

The seven concepts are what makes geography 'geographical'. Place, space, environment and interconnection in particular develop ways of thinking that are not taught in other school subjects.

Which concepts are appropriate for primary school?

All the Australian curriculum's seven concepts — place, space, environment, interconnection, scale, change and sustainability — can be used in primary school, but only if they are unpacked into more specific ideas that students can follow. This unpacking is explained here.

> The key concepts are complex and very abstract ones, and unlikely to make much initial sense to students. To understand them it is first essential to recognise that they are ideas that we think with, not objects that we study. For example, while places are parts of the Earth's surface that have been defined, named and given meaning by people, the concept of place is about ways of thinking that are based on the significance and influence of places. Second, they are not substantive concepts like 'city' or 'climate', which are about the substance of geography, but are meta-concepts, or concepts about concepts. Consequently, they are difficult to define in a single sentence because they have more than one dimension. As 'complex assemblages of interconnected smaller ideas' (Michael, 2017, p. 37), to borrow from work on key concepts in physiology, they must be unpacked for students to gain a clear idea of what they mean and how to use them. For example, the concept of space includes eleven different ideas—absolute location, relative location, distance, time-space convergence, accessibility, centrality, proximity, remoteness, spatial distribution, diffusion, and the organisation of space—as well as four different ways of conceptualising space. Space, like the other core concepts, is consequently a simple word that covers many ideas, and all of these need to be understood before a student can adequately comprehend the meaning of space in geography.

As an example, here is a set of statements that describe the main ideas within the concept of place.

1. Places are parts of the Earth's surface that have been identified and given meaning by people, but these identities and meanings may differ between cultural and social groups.
2. Each place is unique in its characteristics and relationships with other places, and consequently the outcomes of similar environmental and socioeconomic processes may vary between places, and similar problems may require different strategies in different places.
3. Places provide people with the services and facilities needed to support and enhance their lives, but unequally between places and between people within places.
4. The characteristics and location of a place have an influence on the health, educational attainment, aspirations and economic opportunities of its population.
5. For many people, attachment to a place or places is important for their identity and sense of belonging, but increasing mobility and the use of telecommunication technologies may be expanding the number of places to which people feel an attachment.
6. Places can be used as laboratories for the analysis of the interrelationships between environmental and human variables, and causal relationships can be investigated through a controlled comparison of places.
7. Place provides a conceptual framework for a range of social, economic and environmental initiatives.

Concepts in primary school

These statements describe the various ways in which places, as the geographical context in which we live our lives and events happen, influence our lives and these events, and they are expressions of ways of understanding the concept of place. Note that this is an example of how a key geographical concept could be unpacked, and not necessarily how it should be. There is no definitive or correct way to unpack the concepts, and teachers can develop ones that they think are most appropriate for their situation.

In primary school, only statements 1, 3 and 5 are likely to be relevant to the content of the curriculum.

The difference between space and place

The difference between space and place is sometimes unclear, and academic geographers sometimes use the terms loosely, so it may help to try to differentiate between them. As a geographical concept, space is about location, distance, spatial distribution and spatial organisation, and their influence on the environment, people and societies. Place, on the other hand, is about the characteristics of the areas of the Earth's surface we identify as places, and their influence on environmental and human processes and phenomena. Very simply, space is about 'where', and place is about 'what is there'.

Teaching the concepts

Concepts should not be taught on their own. Instead, Eleanor Rawling (2007) advises that:

> The key to using big concepts in a teaching and learning situation is first to build a thorough understanding of the simpler ideas in a variety of contexts. To understand space, for example, it is useful to have first understood ideas about location, distribution, pattern, interaction, distance and scale and to have studied these ideas in the context of a variety of physical and human features (p. 24).

Similarly, Margaret Roberts (2023) writes:

> During their practice of geography, students will gradually develop understanding of its key concepts of place, space, environment and interconnection and its many substantive concepts e.g., erosion, ecosystems, globalisation, and urbanisation. It is through repeated encounters with key and substantive concepts, applied at a range of scales in different local, national and global contexts, that students deepen their conceptual understanding (p. 75).

When teachers should discuss the major concepts depends on the content of the curriculum. For example, if students have identified the activities in their place, located them on a pictorial map and discussed why they are located where they are (which is an item that has been in the curriculum), teachers could explain that location is part of the concept of space. Space is the big idea that includes location. Later in primary school. students could be examining the spatial distribution of climates or vegetation, and teachers could discuss how spatial distribution also belongs to the big idea of space. Over time, students should gain some understanding of what the big conceptual ideas mean, but they will do so through an accumulation of factual knowledge, and not by being taught the concept separate from factual knowledge.

Concepts in primary school

This table lists examples of content that could be in a primary school geography curriculum, because they have mostly been in past Australian curriculums, and the major concepts they illustrate.

Concept	Content
Place	The places people live in and belong to, and why they are important to them. The Country/Place in which the school is located and the importance of Country/Place to Aboriginal and Torres Strait Islander Peoples. Places as parts of Earth's surface that have been named and given meaning by people, and people's attachments to them. Why their place is like it is, how it is changing and how change is managed.
Interconnection	People's interconnections with places in Australia and the world. The interconnections of Aboriginal and Torres Strait Islander Peoples with Country/Place. The relationship between climate and vegetation. The main characteristics of the geography of the continents of South America and/or Africa, the location of their major countries and the interconnections of these countries with Australia. The main characteristics of the geography of the continents of Europe and North America, the location of their major countries and the interconnections of these countries with Australia. The geographical diversity of the Asia-Pacific region, the location of its major countries and their interconnections with Australia.
Space	The representation of Australia as states and territories and Countries/Places (0rganisation of space). Activities in the local place, such as retailing, recreation, manufacturing, farming, education and commercial, and reasons for their location. The influence of distance on the frequency with which they visit other places. The concepts of climate and climate change, and the characteristics and location of the main climatic types in Australia and the world, such as the temperate, Mediterranean and arid climates. The characteristics and location of the main types of vegetation in Australia and the world, such as forest, woodland, savannah, grassland and desert. Differences in the economic, demographic, social and cultural characteristics of countries across the world.
Change	The natural and constructed features of places, how they change and how they can be cared for. Why their place is like it is, how it is changing and how change is managed.
Sustainability	The meaning of sustainability and its application to the use of natural resources and the management of waste. The custodial responsibility Aboriginal and Torres Strait Islander Peoples have for Country/Place and how it influences their sustainability practices.

Concepts in primary school

Concept	Content
Environment	Comparing Aboriginal and Torres Strait Islander Peoples' and European seasonal calendars. The concept of climate. The functions of vegetation in the environment. The functions of the environment that support people's lives and wellbeing. The impacts of bushfires on environments and communities and how people can respond through prevention, preparedness, response and recovery.
Scale	How places can be spatially represented from local to national scales.

References

Chalmers, C., Carter, M., Cooper, T., & Nason, R. (2017). Implementing 'big ideas' to advance the teaching and learning of science, technology, engineering, and mathematics (STEM). *International Journal of Science and Mathematics Education, 15*, 25–43. https://link.springer.com/article/10.1007/s10763-017-9799-1

Erickson, H. L., Lanning, L. A., & French, R. (2017). *Concept-based curriculum and instruction for the thinking classroom* (2nd ed.). Corwin.

Geographical Association (n.d.). *Concepts in geography*. Geographical Association.

Little, C. (2017). Designing and implementing concept-based curriculum. In L.S. Tan et al., *Curriculum for high ability learners*. Springer Nature.

Marschall, C., & French, R. (2018). *Concept-based inquiry in action: Strategies to promote transferable understanding*. Corwin.

Michael, J. (2017). What does it mean to 'unpack' a core concept? In J. Michael, W. Cliff, J. McFarland, H. Modell, & A. Wright, *The core concepts of physiology* (pp. 37–44). Springer.

Rawling, E. (2007). *Planning your key stage 3 geography curriculum*. Geographical Association.

Roberts, M. (2023). Powerful pedagogies for the school geography curriculum. *International Research in Geographical and Environmental Education, 32*, pp. 69–84. DOI: 10.1080/10382046.2022.2146840

Young, M. (2010) The future of education in a knowledge society: The radical case for a subject-based curriculum. *Journal of the Pacific Circle Consortium for Education, 22*, 21–32. http://programs.crdg.hawaii.edu/pcc/PAE_22__1__final_10.pdf

Sponsorship & Exhibitor Prospectus

Australian Geography Teachers Association Conference
Darwin, Northern Territory, 2 - 4 October 2024
DoubleTree Esplanade Darwin

A copy of the AGTA Sponsorship and Exhibitor Prospectus can be accessed here.

Invitation to sponsors

Opportunities to support our inaugural Darwin conference

Previous conferences in other cities have attracted 150 to 200 attendees, but we know the additional cost to travel to Darwin and lingering uncertainty from the pandemic may impact on numbers. We believe the 2022 AGTA conference numbers in Hobart reflect the likely attendance pattern for our conference - 125 people. Already, the opportunity to explore Northern Australia is already generating excitement in geography teachers across Australia, and we have already approached geography bodies in Singapore and Indonesia to encourage international participation. We will be actively promoting our conference to maximise our - anc–your - rea–.

We are likely to include some virtual sessions because we know many educators in remote parts of the Northern Territory and Australia can struggle to access face-to-face professional learning. Our sponsorship packages make it easy for our sponsors and exhibitors to engage with both our physical and virtual attendees.

We hope you will consider supporting us to make the inaugural Darwin conference a success!

Invitation to exhibitors

As October can be a time of change in the weather, all of our exhibitor spaces are inside and in high-traffic areas close to the lecture theatre and catering spaces. Conference attendees will have the opportunity to mingle with exhibitors, where they can learn about products, services or organisations that can assist them in their teaching. Exhibitors may also include relevant items in the conference tote bags.

In addition to a physical presence, exhibitors will have the option to have a page on the conference app, which includes your logo, links, contact details and the ability to include a PDF attachment.

PWe are currently liaising with the venue regarding the set up of the exhibition area, so the following are subject to change. Please let us know if you have any specific requirements.

- Exhibitors will be provided with a trestle table with two chairs available
- The cost will include catering for one attendee, with an additional cost for extra people
- You will be required to provide evidence of Public Liability Insurance
- WiFi will be available
- Power will be available upon request
- Please bring everything with you that you need, including resources, banners etc. We will not be able to support with photocopying etc. at or prior to the event .

Exhibitors may like to register for social events and are very welcome to do so.

Allocation of exhibition stands will be done by the conference organising committee, based on sponsorship inclusions and date of application.

Registering your interest

We will be accepting online registrations from sponsors and exhibitors. If you are unwilling or unable to use the online platform, please contact the conference convener, Steve Hawkins at hello@ghtant.org.au for alternative arrangements.

https://agta24.au/

Please contact Steve Hawkins if you require any further information or to discuss your sponsorship.

hello@ghtant.org.au

Photo credits: Conference images are from the 2019 Festival of Teaching, which the conference conveners organised and are used with permission. It reflects how our conference will look. Images of Darwin and other locations are used under license from Canva.com.

Comments on the New South Wales draft Geography syllabus for 7-10

From Associate Professor Alaric Maude

These comments begin with a statement from the draft syllabus, in italics, followed by a comment.

The draft syllabus:

focuses on the interactions between people, places and *environments at different scales to increase students' knowledge of the world around them.*

Comment

Is this a helpful description of geography? I am quite unclear about what it means. And what does the addition of 'at different scales' mean? Does the subject study environments at a global scale, which would mean viewing the world as a whole environment. Does studying people at a global scale mean studying people in other parts of the world. If so, this is not a change of scale?

Thinking geographically

Thinking geographically is central to what students learn in Geography. It is about being able to apply knowledge and conceptual understanding to new settings so students can think geographically about the world. Outcomes include knowledge and understanding of places and environments across a range of scales, and the interactions between people, places and environments. Students think geographically by using geographical concepts as they *engage in inquiry, using geographical tools.*

Outcomes and related content are grouped into the following:

- characteristics and features of places and environments
- processes that form and transform people, places and environments
- perspectives of people and organisations on a range of geographical issues
- management of places and environments for sustainability
- Aboriginal Cultures and Histories.

Comment

Does geography really study the processes that form and transform people? The syllabus switches between 'places and environments' and 'people, places and environments'.

Geographical tools for Stage 4

Students:

- locate features on a map using area references and grid references
- use a linear scale to calculate distance and area
- calculate the local relief between two points
- determine altitude and aspect of a location using contour lines
- determine the steepness of a slope by measuring the angle and describing gradient.

Comment

This is a lot of busy work that students do not need to understand the topics they are studying. Geography should be focusing the limited time in schools for higher level tasks. And does anyone use area references and grid references? The emergency services use latitude and longitude.

Landscapes and landforms

Outcomes

A student:

- locates and describes diverse features and characteristics of a range of places and environments
- explains the processes that change people, places and environments
- *explains different approaches to the management of* places and environments, for sustainability
- describes how Aboriginal Peoples interact with Country
- selects and applies geographical concepts and tools to acquire, process and communicate geographical information.

Comment

These outcomes can be achieved without any study of landscapes and landforms, so what is their point? How would students demonstrate that they had achieved them? I have the same comment for all the outcomes in the syllabus.

Comments on the New South Wales draft Geography syllabus for 7-10

Place and liveability

Perceptions of liveability

- Nature of place and liveability

Comment

The footnote to this content line is: Place and liveability are factors that affect quality of life. The nature of a place, such as location, topography and climate, can impact quality of life, or the liveability of that place.

This is a very limited set of factors, especially as the unit also studies accessibility to services and facilities, social connectedness and environmental quality.

Physical and human processes that impact on environmental quality and on the liveability of places across *a range of scales.*

Comment

How can students examine a range of scales? The places in this unit are at a local scale, the places people live in, so they can't be at a range of scales.

The footnote to this content line is: Natural processes may include natural hazards, environmental conditions and climate change. Human processes may include population *pressures, conflict and land degradation.*

This is too limited. What about atmospheric pollution, noise, poor drainage, to list only a few? And can all these influences on environmental quality be classified as 'processes'? Most of them are not.

Water in the world

Global distribution of water resources.

Comment

The footnote to this content line is: The quantity, quality and variability of water resources around the world and the *geographic processes associated with these differences.*

This is a very large topic. It would be feasible to compare water resources by continents, which will reveal how limited Australia's water resources are. It is also important that students examine the water resources of their own area, and understand the combined effects on these resources of precipitation and evapotranspiration. The concept of the water balance is a vital one for Australians to understand.

Interconnections and trade

Interconnections

- Personal and cultural connections that link individuals to people and places at a range of scales
- Technologies that connect people to each other and to goods and services.

Comment

The footnote to this content line is: Online social networks, digital media platforms, electronic funds transfers, online commerce and/or increasing access to internet services. Methods used to deliver goods and services such as digital products. Containerised cargo shipping, changing *transport technologies and/or flight volumes.*

The syllabus misses the opportunity to have students examine their own use of digital technologies, the extent to which these overcome the physical constraints of distance, and their impact on retailing and service provision. There are interesting arguments here about how much face-to-face contact continues to be important.

Trade flows as a global connection

- *The nature and spatial patterns of trade flows*
- *Trends in trade flows that connect people and places at a range of scales.*

Comment

These are large topics to cover in schools, and not central to a geographical interest in the effects of trade on both producing and consuming places.

Geographical concepts for Stage 5

Place

Students develop an understanding of the significance and characteristics of places, such as:

- *the effect of local and global geographical processes,* such as urbanisation, migration and climate change, on *a tangible place and an intangible place.*

Comment

What is an intangible place? Places are defined by people, but they consist of material objects.

Comments on the New South Wales draft Geography syllabus for 7-10

Geographical tools for Stage 5

Students:

- identify and interpret contour lines
- locate features on a map using area references and grid references
- use scale to calculate distance and area using a ratio
- calculate the local relief between two points
- determine altitude and aspect of a location using contour lines
- calculate the gradient of a slope as a ratio
- determine aspect, altitude, direction and bearings between two points
- *determine the density of a specific feature on a map.*

Comment

Same as for Stage 4. Better to focus on the spatial technologies in the syllabus. And most of these skills have no application in the content of the units in Stage 5.

Food production

Environments produce food

- Environmental impacts of food production.

Comment

The footnote to this content line is: Environmental impacts on food production may include land clearing, *deforestation, overfishing, water scarcity, increasing salinity,* or methane produced as a by-product of cattle farming.

Should 'impacts on' be 'impacts of'? Environmental impacts could also include soil erosion, land degradation and loss of biodiversity.

Factors influencing food production

- *Factors that influence the demand for food.*

Comment

Some explanation may be needed about how this influences food production. Otherwise, it could be part of the content later on food security.

- Environmental, social, economic and technological *factors that influence the supply of food in Australia* and Asia.

Comment

The footnote to this content line is: *Influences on food* production could be explored through a case study, such as *on wheat production, which is affected by drought, demand* for westernised diets and commodity prices, or a discussion *about genetically modified crops. Other examples may* include sugarcane or rice.

An appropriate geographical approach would be to examine how Australian farmers manage the limitations of the Australian environment (climate and soils) through new methods of agriculture.

Food security

- Nature and patterns of food security.

Comment

What are patterns of food security?

- Sustainable practices for achieving food security globally.

Comment

Sustainable practices are presumably about the methods used to produce food. Food security requires much more than this, because it is affected by poverty, conflicts (think of the effects of the war in Ukraine on the food security of African countries) and trade policies. Food security is also threatened by climate change, competition for agricultural land from other uses, and policies that favour exports over local food production.

Changing places

Changing human settlement patterns

- Causes and impacts of urbanisation
- Global trends and spatial patterns of urban, rural and remote places
- Factors that connect Aboriginal Peoples to a wide range of human environments
- Opportunities and challenges of living in a variety of urban, rural and remote places, including for Aboriginal and Torres Strait Islander Peoples.

Comment

This is a rather unfocused set of content. Is it about urbanisation, which would be enough to cover? Or is it about what it is like to live in different types of settlements, which is another large topic. The third dot point has nothing to do with the content heading, whereas something on the urbanisation of the Aboriginal population would.

Comments on the New South Wales draft Geography syllabus for 7-10

Migration

- Reasons for and impacts of international migration to Australia.

Comment: The footnote to this content line is: International migration of people due to a variety of factors – labour markets, family and humanitarian. This has resulted in changes to available skills, cultural identity, religious diversity and population growth.

An important geographical impact is that most migration is to the major cities, and is a major cause of their growth.

General comment on Changing places

The syllabus completely misses a major part of the Australian curriculum for this unit, which is to recognise that Australia's population is highly concentrated in 5 state capitals, and to explore the causes and consequences of this most distinctive feature of Australia's human geography.

Environmental change and management

Environmental change

- The role and importance of natural environments.

Comment

There are no natural environments, as all have been altered to some extent by human actions. The point of the term Anthropocene is that humans are now the dominant influence on the world's environments.

The footnote to the content line is: The value of biodiversity, cultural functions and ecoservices in natural environments.

The environment has four roles: as a source of food and materials, a sink for wastes, a set of ecosystem services, and its aesthetic, recreational and spiritual values.

- Human-induced environmental changes across a range of scales over time.

Comment

Same comment about 'range of scales'.

Environmental management

- Assessment of the sustainability of environments and their management

Comment

Sustainability is not about the sustainability of environments, but about the sustainability of the environmental functions that sustain us.

The footnote to this content line is: Measures of sustainability may include biodiversity, or changes in carrying capacity or vertebrate numbers. This is an inadequate guide for teachers.

More relevant measures are things like rates of soil erosion, levels of soil organic matter, levels of water tables, trends in fish stocks, eutrophication of water, increased land degradation, etc.

An environmental case study

- Customary and contemporary environmental management strategies to enhance sustainability in the selected environment.

Comment

The footnote to this content line is: Existing or proposed management strategies may include local-scale to global-scale management actions or applications of traditional Knowledges and contemporary research used to enhance sustainability, such as Indigenous Land and Sea Ranger programs, responses to deforestation in the Amazon or Inuit *responses to climate change in the Arctic.*

The Australian curriculum used to include a set of management strategies that illustrated geographical concepts, such as establishing reserves and corridors to preserve biodiversity (a spatial strategy); ecosystem-based management (an environmental strategy); environmental instead of engineering solutions (an environmental strategy); and urban and transport planning to reduce energy consumption (a spatial strategy). These help students to see the usefulness of the subject's ways of thinking.

Human wellbeing

Human wellbeing and development

- Causes and impacts of spatial variations in human wellbeing.

Comment

The footnote to this content line is: Factors include access to natural resources, sociocultural disadvantage, political *conflict or stability, histories of injustice, debt legacies and* corresponding impacts.

Comments on the New South Wales draft Geography syllabus for 7-10

The content described is very large and very vague. It could mean explaining the differences between countries in human wellbeing, which is a big and complex task. At Year 10 level, it should be enough to establish what the major differences are across the world.

- *Factors that influence human wellbeing in Australia,* including cultural heritage, language and identity.

Comment

Is this about differences between people in wellbeing, which is what 'cultural heritage, language and identity' might imply to teachers? Or is it about spatial differences, following on from the previous content line? If it is the latter, what about location and the places people live in? Think of the educational differences between advantaged and disadvantaged Australian suburbs. Location and place are geographical concepts, and should be used more in a geography syllabus.

Improving human wellbeing

- Initiatives to improve human wellbeing in Australia and other countries
- Perspectives on initiatives to improve human wellbeing at a given scale
- The role that connection to culture, heritage and community plays in enhancing wellbeing
- The role of Aboriginal Community-controlled organisations in enhancing wellbeing.

Comment

To be more geographical, these initiatives should focus on local level or place-based initiatives.

Overall comment on human wellbeing

The original Australian curriculum for this unit developed an understanding of the concept of scale by examining wellbeing at an international level (differences between countries), national level (differences between states in India) and a local level (differences between local areas within a city or regional area in Australia. The last also got students to look at socioeconomic inequalities within their own area.

Some general comments

1. There is nothing in the syllabus to help teachers to integrate geographical tools with the content. Tools should only be taught when they are needed to understand or examine some aspect of syllabus content, or to present the results of an investigation. Otherwise, they are a waste of precious time.

2. The content units are insufficiently focused and coherent. To try to illustrate this, here is an alternative way of organising the unit on Environmental change and management:

- human-induced environmental changes and their effects on the sustainability of environmental functions
- geographical approaches to understanding the causes and consequences of a selected environmental challenge
- the influence of people's environmental worldviews on their support for environmental sustainability
- Aboriginal and Torres Strait Islander Peoples' approaches to custodial responsibility and environmental management
- geographical approaches to the management of the selected environmental challenge.

This structure also has specific mention of geographical ways of studying the topic.

This is an alternative for Human wellbeing:

- the concept of human wellbeing and ways of measuring it, and how these can be applied to measure differences between countries
- reasons for and implications of spatial differences in human wellbeing at a regional scale, using India as a case study
- reasons for and implications of spatial differences in the human wellbeing of Aboriginal and Torres Strait Islander Peoples at regional and local scales
- reasons for and implications of spatial differences in human wellbeing in Australia at a local scale
- the role and responses of international and national government and non-government organisations in improving human wellbeing at a local or regional scale.

This structure focuses on spatial variations in wellbeing, at three levels of scale., so it illustrates the concepts of space and scale.