Volume 56 No1 2024

The Geography Teachers Association of NSW & ACT Inc.

GEOGRAPHY BULLETIN

PROJECTS • REPORTS • RESOURCES • ARTICLES • REVIEWS

IN THIS ISSUE:

GEOGRAPHY BULLETIN

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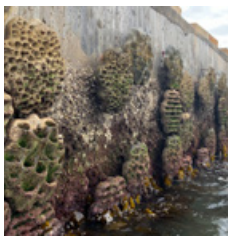


Back Cover - www.livingseawalls.com.au/australia

The Geography Bulletin is a quarterly journal of The Geography Teachers' Association of NSW & ACT Inc. The 'Bulletin' embraces those natural and human phenomena which fashion the character of the Earth's surface. In addition to this it sees Geography as incorporating 'issues' which confront the discipline and its students. The Geography Bulletin is designed to serve teachers and students of Geography. The journal has a specific role in providing material to help meet the requirements of the Geography syllabuses. As an evolving journal the Geography Bulletin attempts to satisfy the requirements of a broad readership and in so doing improve its service to teachers. Those individuals wishing to contribute to the publication are directed to the 'Advice to contributors' at the back of this issue.

Volume 56 No 1 2024

EDITOR: Diana Gearside

CONTENTS

Editorial

Diana Gearside

Welcome to Edition 1 of the *Geography Bulletin* for 2024. In this issue, we celebrate passionate geography educators and high achieving students, provide feedback on consultation into the future direction of geography education K-10 and focus on fascinating projects that have successfully connected students to real geographical issues in their local community.

Look further inside this edition for more information, resources, inspiration and teaching and learning ideas.

- The recipients of prestigious excellence in teaching awards from the Professional Teachers' Council NSW and the GTA NSW & ACT are profiled, Top 10 HSC 2023 students who achieved outstanding results celebrated, and the Young Geographers Awards recognised.
- Louise Swanson, James Heafey and a team from Sydney Secondary College, Balmain campus present The Balmain Foreshore Project, an initiative to provide a specialised program involving more challenge and highly differentiated learning to extend and engage high potential and gifted students in Year 10.

  It involves the development of a cross-curriculum unit of work, incorporating critical thinking and focusing on research and hands-on application of research to plan to rehabilitate a section of Balmain foreshore on school grounds.

  This is a very exciting project that allows the collaboration of students, teachers and external stakeholders, like Transurban, in a real-world project with real-world, measurable outcomes and promotes a sense of active citizenship in the local area.
- Bianca Mangioni and Sophie Robb generously share another engaging hands-on learning experience, Changing Places: Green Space Enhancement Project, this time for Year 9. In their words "creating a project where theoretical knowledge collides with the real world, sparking curiosity and excitement."
- Martin Pluss provides a second article in a series Place-Based Geography: Hornsby that explores ways of engaging students in their local area to enhance understanding of Geography in their local context.
- Kathy Jones from Fieldwork Connections examines the pros and cons of the use of smartphones in fieldwork.
- Catch up on feedback from Alaric Maude and the GTA NSW & ACT on the Draft HSIE syllabus K-6 and 7-10 resulting from the NESA Consultation Round 1 and 2.

Thank you, again, to all the authors for kindly contributing their articles, resources and activities which will support geography teachers.

GTA is grateful for all contributions to the *Geography Bulletin*. If you have an article, resource, activity that you would like published please submit your contribution to the GTA NSW & ACT Office by email gta.admin@ptc.nsw.edu.au. The Guidelines for Contributors can be found on page 73.

Editorial

I am delighted to be appointed the Executive Officer GTA NSW & ACT and look forward to engaging in many wonderful ways with the Association's members. My life's work has been primarily education and I have a genuine soft spot for Geography. I have a Human Geography degree, have taught senior Geography and I have also been an HSC marker. I deviated a little by becoming a Learning and Support teacher in both primary and secondary schools as I witnessed students struggling to engage with learning and wanted to support them to develop life-long skills and capability.

I have also held administrative and management positions, most recently with a Not-for-Profit organisation managing the delivery of a literacy program to students in disadvantaged schools. I have led professional learning for educators too and hope to combine all my skills in my new exciting role. I am looking forward to becoming an efficient and valuable asset to the GTA team.

Diana Gearside
Executive Officer – GTANSW & ACT

Presidents Report

Katerina Stojanovski

Dear Members,

Welcome to 2024. Our focus for this year is to strengthen our Governance and focus on the sustainability of the Association in the future. This year we welcome our new Executive Officer, Diana Gearside and graphic designer, Rachel Peddar. We say farewell Jill Sillar, our graphic designer for many years.

Welcome Diana Gearside

I am delighted to introduce to you Diana Gearside, Executive Officer GTA NSW & ACT. Diana has a wealth of experience in Geography Education. She is a qualified Geography Teacher, HSC marker and she has a degree in Human Geography. More recently Diana held management positions leading professional learning. Diana is a capable and efficient Administrator. Since her commencement in the April school holidays, Diana has immersed herself in GTA activities learning how the Association operates while at the same time getting to know Councillors and learning about Association business. Diana is a valuable asset to our team and membership.

Farewell Jill Sillar

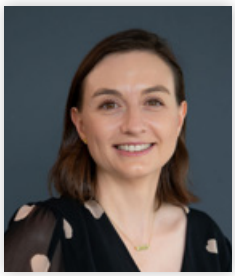
I would like to take this opportunity to farewell Jill Sillar who has been our graphic designer for many years. Jill has designed many of our promotional materials including, professional learning flyers, banners, webpages, certificates etc. Jill's creativity has ensured The *Bulletin* is always well received by our members. On behalf of GTANSW &ACT we thank Jill for her many years of dedication, work and support of GTANSW &ACT. We wish you all the best in the next chapter of your life.

Jill Sillar

Welcome Rachel Peddar

I would like to introduce to you Rachel Peddar our new Graphic Designer. Rachel has seamlessly taken the task of adding her creativity to redesign our *Bulletin* and update our promotional materials. We look forward to a continuing productive relationship as you familiarise yourself with all things Geography.

Katerina Stojanovski
President GTANSW & ACT



Rachel Peddar

GTA NSW & ACT Awards

Fellowship of the Geography Teachers Association NSW & ACT

Dr Susan Caldis

Dr Susan Caldis has made outstanding contributions to Geography Teachers Association of NSW and ACT (GTA NSW & ACT) and more broadly to Geography Education in Australia for almost 30 years. Susan has been a Councillor of GTA NSW & ACT since 2011 and her current position is Vice President (Immediate Past President).

Susan has demonstrated an unwavering commitment to Geography Education. Her career commenced as a Geography teacher 28 years ago and she is a committed advocate for best-practice Geography Education. Susan makes time to support teachers locally while simultaneously advocating for the discipline at a national level and international level.

Susan's expertise is unique due to her involvement in Geography Education at many levels and this involvement supports the objectives of GTA NSW & ACT. Susan has generously given her time to support the Association over the last 25 years. Susan joined GTA as a personal member in the Year 2000 and for 10 years she led the HSC lectures for GTA in Sydney CBD, Wollongong and the Riverina. During this time, Susan was the Northern Beaches network member for Geography teachers in the NSW Department of Education Schools. In the school context, Susan voluntarily mentored preservice teachers from Macquarie University during their practicum. Susan became well-known in the community and developed a reputation as an effective and enthusiastic Geography teacher.

During her time on Council since 2011, Susan has been President twice (2013-2016 and 2019-2022). Her leadership was grounded in policy and evidence-based practice through the national framework, *Geography: Shaping Australia's Future* (2018) and GEOG Standards. Susan made the Association more accessible to teachers and, as a result, more teachers joined the Council. Susan led and has been involved in numerous Council initiatives including presenting at Annual and Regional Conferences, contributing to the *Geography Bulletin* journal, leading Association responses to NESA curriculum reviews, strengthening GTA NSW & ACT's connections to Academia and forging close relationships with the Geographical Society of New South Wales.

She introduced and led from the Academy/from the classroom webinar program and the STEM conference. Susan regularly recruited new teachers to join and actively participate in the Association's Council. Susan valued the the work of fellow Councillors and ensured they were recognised for their ongoing volunteer efforts by writing and submitting their nominations for awards. Susan was available and present as she mentored fellow Councillors and the Executive as they undertook their roles for the first time, which built their capacity and confidence as they learned the workings of Council. She was visible and available to support, listen and provide wise counsel. Susan has written chapters for several textbooks including *Global Interactions 2* for the new HSC Course and Year 7-10 (Australian Curriculum) and *Fieldwork Unlocked*.

Susan completed her PhD in Geography Education at Macquarie University. Her research centred on the experience of pre-service teachers in the profession. Susan was selected to be involved in the Outstanding Educator in Residence program in Singapore (2019) and 2024 (online).

Susan is the current Chair of the Australian Geography Teachers Association (AGTA). Susan joined the AGTA Board in 2013 as Secretary. Initiatives that Susan has led at the national level include leading the STEM Symposium and GeoNight. This provided the vital links between the national conversations in Geography and New South Wales Geography. Susan's involvement in AGTA gave New South Wales teachers opportunities to understand the importance of a national view of Geography as the Australian Curriculum was being published. Susan was determined for New South Wales to be part of national discussions in Geography which involved, making the connection into Academia, Geography and

GTA NSW & ACT Awards

STEM and supporting the out-of-field teaching community. Susan showed how the national framework *Geography: Shaping Australia's Future* (2018) could be used in New South Wales by highlighting the relevance of Geography and STEM, awareness of out-of-field teachers, connecting with Academic Geographers and advocating for quality preservice education. Susan encouraged national and State-based associations to talk to one another through her involvement on the AGTA Board, the Institute of Australian Geographers, (IAG), Geographical Society of New South Wales and GTA NSW&ACT. Susan was instrumental in fostering connections between Academic Geography and School Geography by creating a Geography Education conference stream in the IAG Conference in its fourth year. Each year they have a combination of Australian and International presenters from Australian and International backgrounds working for Geography Education, who work for school-based and initial teacher education. In September 2023, Susan was invited to join the Academy of Science's National Committee for Geographical Sciences.

Susan is involved in Geography at an international level. In 2023, she was commissioned as an adviser for the Social Science Curriculum for Timor-Leste and between 2021 and 2023 commissioned to write the Social Science Curriculum for Vanuatu. This included lesson plans, resources, programs and professional learning modules for teachers.

Susan has been recognised for her work. She is the recipient of several prestigious awards.

- Geoff Connolly Award: contribution to the *Geography Bulletin*: GTA NSW & ACT
- Outstanding Professional Service Award: in recognition of her long-term involvement and active contribution to professional associations: Professional Teachers Council NSW
- James Sturgiss Exceptional Service Award: recognising exceptional service over a significant period to PTC and professional associations; Professional Teachers Council NSW
- Maconald Holmes Medal: An award for the distinguished contribution to the field of geographical education in Australia: Geographical Society NSW.

Susan is a worthy recipient of the Fellowship of the GTA NSW & ACT.

Geoff Conolly Memorial Award

Christina Kalinic

Each year GTANSW & ACT recognises contributions to the *Geography Bulletin*, the association journal. Nominees for this award have met one of the following criteria.

- Contributed one meritorious article written explicitly for the *Geography Bulletin* during the current year
- Made several contributions over several years that may include the sharing of classroom teaching resources.

Christina Kalinic has been a regular contributor of material for the GTANSW & ACT *Geography Bulletin* over the past four years. Teachers in schools need quality teaching resources that they can use in their classrooms immediately or that can be adapted for their school situation. Christina is to be commended for several quality teaching resources she has shared to support other classroom teachers. These include "Natural Hazards Documentary Series Assessment Task In 2020", "Dollar Poverty", "Queen of Katwe" and "Oreo plate tectonics" in 2021 and "The supply chain", "Distribution and characteristics of biomes" and "Investigate the Rainforest Biome in 2022" and "Using Scaffolds, Frameworks and Templates" in 2023.

Christina's generosity, the quality of the resources she has shared and her contribution to education through the *Geography Bulletin* is recognised today with the Geoff Conolly Memorial Award of which Christina is a worthy recipient.

Brock Rowe Award

The Brock Rowe Award, an award for excellence in teaching geography in schools, is granted jointly by the Councils of the Geography Teachers Association of New South Wales & ACT Inc. (GTA NSW & ACT) and the Geographical Society of New South Wales Inc. (GS NSW), annually to persons who have demonstrated consistently, over a period, excellence in the teaching of geography in schools.

The nomination is made by a teaching colleague and requires the endorsement of the school principal (or school executive) and is a testament to a teacher's dedication to student outcomes and collegial respect.

Congratulations to Simone Babic, winner of the 2023 Brock Rowe Award.

Simone Babic

Simone has been a valued Geography teacher and leader at the College for over 20 years. Simone has a warm and engaging rapport with her geography students, utilising drama, role plays, ebooklets and a variety of technology. Students in her classes say she is so enthusiastic—especially about pneumatophores and biomes. Her students enjoy Geography and achieve in that subject because of Simone's wealth of knowledge and tireless dedication to helping them understand even the tricky stuff!

It is because of Simone's dedication that the profile of Geography across the College has been consistently high. Participation rates in HSC Geography are well above state averages. For example, in 2023 the state average participation rate was 7.45%, the College participation rate was 3 times greater at 20.95%, This is a trend that can be traced back over the past 15 years, with Simone being the main senior geography teacher at the College.

Simone has mentored many geography teachers at the College. Junior Geography classes are taught by both Geography and History teachers, and Simone is always willing to support these teachers, especially around the teaching of geography skills. Furthermore, Simone has mentored a number of beginning teachers at other schools across Sydney, who are teaching Stage 6 Geography for the first time.

Simone has contributed continuously to the development of geography teaching. She has been a HSC Geography marker and Senior Marker for many years. She has led professional development sessions for Sydney Catholic Schools around specific aspects of Geography teaching and syllabus implementation. Currently Simone is the Supervisor of Marking for the Higher School Certificate Geography paper, a position she fulfilled throughout the challenges of pandemic lockdowns and which continues this year.

Simone has represented Sydney Catholic Schools to review the current NESA Senior Geography syllabus, prior to its publication. She has been engaged in evaluating programs written by the Sydney Catholic system of schools and advising and supporting program writers on possible improvements.

Simone shares her resources and strategies willingly within and outside our school. She has developed fieldwork programs for the new Geography course that support and engage students in the study of coasts and cultural integration. She will often bring another geography teacher along to fieldwork, so they can learn how to deliver it effectively.

Simone has demonstrated consistently, over a period of time, excellence in the teaching of geography within our school and has supported many other teachers to become better skilled, passionate geography teachers just like she is.

Brock Rowe Award

Congratulations to the nominees for the Brock Rowe Award for 2023 Matthew Carroll and Katie Kovacevic. They are worthy nominees and role models within the teaching profession.

Matthew Carroll

Matthew is recognised for his pedagogical expertise and his ability to use innovative teaching methods to inspire and engage his students. He has a way of making geographical concepts digestible for students, fostering understanding and enthusiasm for the subject.

More than that, Matt actively mentors colleagues and his approachable demeanour and willingness to listen to, and support, other teachers enhances the professionalism and magnifies the cohesion within the school and broader educational community.

Katie Kovacevic

Katie has identified fieldwork "'gaps'" in her students' knowledge and has championed fieldwork skills to improve learning outcomes, reaching out to other faculties within the school community to develop relevant on-site fieldwork projects. Her dedication to the subject area has resulted in steady growth of the Stage 6 cohort.

Katie has provided professional learning activities for "'new to geography'" teachers, including pre-service teachers, and willingly contributes to the preparation of programs and new content to guide professional development and capability.

She is a leader within the faculty and is a key contributor to the co-curricular life of the of the school community.

PTCNSW Awards

Marie Bashir Medal

Lorraine Chaffer

Lorraine Chaffer has been a committed member of the Geography Teachers Association of NSW and ACT (GTA NSW & ACT) for almost 20 years. Lorraine's focus has always been the provision of Professional Learning that reaches across career-stage requirements. She has also demonstrated a passion for the creation of quality teaching resources.

Lorraine's sustained and distinguished contributions to geography education, curriculum development and pedagogical innovation have significantly enhanced the quality of geography education in schools.

Lorraine's transformative leadership of GTA NSW & ACT, her ongoing conceptualisation, design and delivery of professional learning, her focus on the needs of teachers and students in regional New South Wales, her active involvement with the NSW Education Standards Authority during the development of the New South Wales K-10 and Stage 6 Geography Syllabus and supporting resources, are testament to the scope of her contribution and influence.

During Lorraine's time on the Association's Council, she has held important roles including President (2017–2019), *Geography Bulletin* Editor (2014–2022), Annual Conference convenor (2017–2021), convenor of the HSC Preparation digital package (2020–present), and Stage 6 Conference Convenor (2022–present). She has also been a presenter at state and national conferences, coordinating and leading the regional conversations for the new Stage 6 Geography syllabus, and coordinating author of *Powerful Geography 1 and 2 – Case studies for senior students*.

At the national level, Lorraine has made an active and highly-valued contribution to the Australian Geography Teachers Association (AGTA) as a Director (2017–2019) and a Nominated Director (2020–2021). Within this forum, Lorraine has demonstrated the same vision and passion for geographical education as demonstrated at the state level.

Lorraine's enormous contribution is widely recognised, being the recipient of multiple awards. In 2021, she was awarded GTA NSW & ACT Life Membership and was made a Fellow in 2009. She received the Brock Rowe Award for excellence in the teaching of Geography (2013) and the 2016 Geoff Conolly Award for an outstanding contribution to the *Geography Bulletin*. In 2017, Lorraine received the Professional Teachers Council NSW's Outstanding Service Award and, in 2020, the Council's Exceptional Service to the Profession Award. In 2022, Lorraine received the prestigious Macdonald Holmes Medal for her outstanding contribution to geographical education in Australia.

As GTA NSW & ACT President, Lorraine always applied the perspective of a classroom teacher—"always a Geography teacher." In so doing, she has demonstrated how to engage with teachers and enhance the Association's relevance. For example, as Editor, Lorraine reinvented the *Geography Bulletin*, ensuring each edition had a range of classroom-ready materials, so keeping foundational geographical knowledge in an accessible form for those inexperienced in the teaching Geography.

Lorraine is an accomplished author having developed numerous highly-regarded educational resources that include textbooks and a diverse range of supplementary resources commissioned by a range of government agencies, Western Sydney University, and non-government organisations.

Lorraine has provided transformative leadership of GTA NSW & ACT and continues to enhance the Association's professional standing and the quality and scope of its support for geographical education in New South Wales and the Australian Capital Territory. Lorraine's endless pursuit of enabling quality teaching, learning and assessment of Geography, for all students, by all teachers, is thoroughly documented and widely acknowledged within the geography education community.

Outstanding Professional Service to the Association

Michael Da Roza (Councillor, ACT representative)

Michael is a caring, collaborative, and committed member of Council for the Geography Teachers Association of NSW and ACT (GTA NSW & ACT). He joined as a Councillor in 2015. Since then, Michael has enthusiastically and seriously approached the role of representing ACT geography teachers through being their local contact person, being responsible for registering Association professional learning with the Territory accreditation institution, and leading discussion with Council about the specific curriculum, resource development and networking needs in geography teachers in the ACT.

Michael joined Council as an expert geography teacher and subject leader from the ACT with extensive leadership experience in developing cross-curriculum priorities across subjects at a national scale. Michael's ability to engage with a range of interest groups in a scholarly and meaningful way, and to keep all ideas at and on the table during intensive discussion, is evident in the way he steers conversations and suggests possible ways forward during Council meetings and Planning Days. He actively contributes to strategic planning and envisioning of processes to maximise efficiency and relevance of Association's work. Michael is enabled by his scholarly thinking, classroom practice and his curriculum development experience to effectively contribute to curriculum reviews and assist with the Association's written submissions to relevant authorities. Whilst the ACT context is always front and centre, he is mindfulness about how ACT-specific needs and concerns fit within the context of both a national and NSW-focused perspective.

Michael is diligent and proactive in his behind-the-scenes work for Council. Such work includes proofreading articles for the *Geography Bulletin*, and scanning the website for relevance to ACT membership, reviewing curriculum resources and professional learning workshops for their fit-for-purpose nature in an ACT context, and being available for all set-up and pull-down activities connected with the running of in-person events.

Each year, Michael represents the ACT at two national board meetings for the Australian Geography Teachers Association. During 2023, he attended Geography's Big Week Out which is the lead-in event for the International Geography Olympiad. Michael is leading the planning and preparation for NSW and ACT to host the nationally-focused Geography's Big Week Out during 2024 in the ACT.

Throughout almost a decade on Council, Michael has proven himself to be consultative, reflective and evidence-informed in his decision-making. At all times, Michael demonstrates care for people and for the work of the Association He is an active and enthusiastic supporter of both traditional and newly-conceptualised Association events. Michael generously offers his time and insights to support geography teachers both within the ACT and NSW. He actively participates in Council initiatives and is the first to offer support and encouragement to "get the job done". In making it a priority to engage, be engaged, and make it a priority to celebrate the success of others on Council, Michael has made an exceptional contribution to the work of the Association and is a worthy recipient of the Award for Outstanding Professional Service to the Association.

Outstanding Beginning Teacher Award

Rebecca Sutcliffe (Vice President)

Rebecca is an enthusiastic, collaborative, and proactive member of Council of the Geography Teachers Association of NSW and ACT (GTA NSW & ACT) who joined as a Councillor during her final year of study in an initial teacher education program, and within four years has moved into the role of Vice President. Rebecca is a thoughtful and effective contributor to many aspects of Association's work, including being an excellent minute-taker during Council meetings. In addition to taking on a guest editor role for the *Geography Bulletin* and writing outstanding articles focused on Stage 5 Geography and enrichment for fast-finishers, Rebecca actively contributes to strategic planning and envisioning of processes to maximise efficiency and relevance of Association work. She leads and supports a small team in monitoring, posting, and responding to posts across Association social media platforms. Rebecca also often co-hosts online events, such as the HSC Review or webinars, and is a willing workshop presenter and assistant organiser of conferences.

Rebecca joined GTA NSW & ACT Council in 2020 as a Teacher Education Student and is currently in her fourth year of teaching. She has embraced the roles of Councillor and Vice President. Being a career-change teacher, Rebecca frequently draws on her previous career expertise in finance and project management to solve pinch-points of efficiency and effectiveness in Association activities. She confidently led the development of a role description and recruitment process for a paid Professional Officer and has been instrumental in reviewing all processes to ensure the best decisions are made for the future direction of the Association.

During 2023, Rebecca has been proxy for the President and represented GTA NSW & ACT at two national board meetings for the Australian Geography Teachers Association. Rebecca is also an active "behind the scenes" contributor to planning and preparation for NSW and ACT to host the nationally focused Geography's Big Week Out in 2024 which is the lead-in event for the International Geography Olympiad.

Throughout the four years on Council, Rebecca has proven herself to be reliable, decisive and solutions-focused. She willingly offers her time and expertise to support geography teachers across sectors and career stages, and to support the work of the Council and Executive team. In a short timeframe, and at a career-stage when focus is usually on self and seeking support from others, Rebecca has turned this around to actively engage with experts from the field and initiate development of a reciprocal relationship of sharing, learning and enrichment to enable the Association to remain relevant in representing the professional interest of geography teachers. In doing so, Rebecca has made an exceptional contribution to the work of the Association and is a worthy recipient of the Award for Outstanding Beginning Teacher.

Geography 2023 HSC Results

The GTA NSW & ACT Council congratulates the top ten students and their teachers for outstanding results achieved in the 2023 HSC Examination.

1. Hailey Cerneaz, Brigidine College St Ives
   Teacher: Danielle Ballesty
2. Edward Zahra, Cranbrook School
   Teacher: Ewan Uncles
3. Will Rodgers, Cranbrook School
   Teacher: Rob Bell
4. Alexander Wilson, Cranbrook School Rob Bell
5. Nicholas Hansen Weeks, Sydney Grammar School
   Teacher: Brett Marturia
6. Lorenzo Daniel Lombardo,
   Macarthur Anglican School
   Teacher: Rebecca Fitzpatrick
7. Lily Wendler, St Clare's College
   Teacher: Karen King
8. Etienne Perry, Oxford Falls Grammar School
   Teacher: Adam Cotsios
9. Ruby Harding, Roseville College
   Teacher: Rebecca Sutcliffe
10. Leonard Kelly, Fort Street High School
    Teacher: David Latimer

2023 Young Geographer Award Winners

At the end of last year, the Young Geographer Award (YGA) team marked the 2023 nominations with over 100 entries across the three categories. The YGA team would like to thank all teachers that supported as well as entered their student's work into the competition. The standard of entry for 2023 was incredibly high and it was great to see students from across the whole of NSW and ACT engage with geographical inquiry. Below are the winners for 2023 from each category. Congratulations to them all.

NESA Senior Geography Project (SGP) / IB Internal Assessment Award / ACT Equivalent Project

	Name	School	Title
1	Emily Eyre	St John's College, Woodlawn	An assessment of the impact of Alstonville Wastewater Treatment Plant on Maguire's Creek.
2	Georgie Roediger	MLC School	To what extent does authenticity effect the sphere of influence of food and cultural tourism – looking at the comparison of Westfield and Burwood Chinatown?
3	Sophie Bishop	Stella Maris College	How have Blue Groupers in Cabbage Tree Bay Reserve been ongoingly impacted by human recreation?

Geographical Research Award

	Name	School	Title
1	Rosie Slater	Arden Anglican School	How has the intensification of the Epping Precinct affected liveability?
2	Emma Green	Hunter School of Performing Arts	Environmental Impacts of Music Festivals and Concerts.
3	Jessica Mallam	Wollondilly Anglican College	How liveable is Razorback?

Geography In Stem Award

	Name	School	Title
1	Ahmed Laanani and Tanveer Ta-Seen	Canterbury Boys' High School	Water in the World-Sydney Olympic Park (SOP).
2	Luke Wrecket	Orange High school	Proposal to combat coral bleaching on the Great Barrier Reef.
3	Charlotte Ellis	Wenona	Living seawalls in Sydney Harbour.

In addition to receiving a certificate, winners of each category have won $500 in prize money with 2nd place receiving $250 and third place $100. The 2024 nominations will open in Term 2 and will be advertised on the GTA's social media, website and in the *Geography Bulletin*. It would be great to see even more nominations across NSW and ACT in 2024.

In 2024, we have adapted the teacher award creating a new category to recognise the creativity and knowledge of the implementation of fieldwork within the classroom. Participating teachers are asked to submit evidence regarding how they implement fieldwork into their teaching and throughout the school. This evidence could include assessment task, fieldwork booklet, or teaching program. In addition to the evidence, they are to write a 500-word summary that examines how they successfully incorporated fieldwork into their teaching practice by referring to the evidence they have submitted.

Warm regards

Kieran Bonin, Young Geography Award Coordinator

Balmain Foreshore Project

Louise Swanson and James Heafey

Sydney Secondary College, Balmain Campus

Image 1 - Aerial picture of SSCBC Foreshore

Introduction

The Balmain Foreshore Project is an initiative to provide a specialised program involving more challenge and incorporates highly differentiated learning to extend and engage high potential and gifted students in Year 10. It involves the development of a cross-curriculum unit of work, incorporating critical thinking and focusing on research and hands-on application of research to plan to rehabilitate a section of Balmain foreshore on school grounds.

The following staff contributed to this project: Louise Swanson, Mitch Arvidson, James Heafey, Raheela El-Rakshy, Dr Chris Brunner, David McDermott, and Thomas Quinne. The project was trialed at the end of 2022 for a short period with Year 10 2022, then fully implemented with a new group of Year 10 students in 2023. It is anticipated that this will be an ongoing program for one Year 10 class each year moving forward. While the main objective of the Balmain Foreshore Project will remain the same, there may be small shifts of emphasis each year.

Teaching and learning

The project resulted in the creation of a specific teaching and learning program for the Stage 5 Enrichment class which focuses on the core subjects of Geography and Science, but draws on expertise developed in various subjects. The project engages students in practical, hands on learning, creates a community connection by involving students in the monitoring and rehabilitation of a local environment, meaningfully engages students with wider political and community discussions and issues, and provides a solutions focus - not focusing only on problems, but how students can bring about positive change and be active citizens.

Balmain Foreshore Project

Project Overview - Enriching the Balmain Foreshore

Why?	What?	How?	Result
What is the issue to be addressed?	What is the strategy to address the issue?	How will the strategy be supported?	The outcome of the project
Enrichment	On-site Environmental Sustainability	Professional networks	Program Renovation
The SSC Balmain Enrichment program requires a more specialised program involving more challenge and differentiation to extend and engage students.	A cross-curriculum unit of work will be developed, incorporating critical thinking and focusing on research and hands-on application of research to rehabilitate a section of Balmain foreshore on school grounds.	Interagency professional learning networks will be developed to draw on expertise to access research to support the development of learning activities, and build teacher capacity.	Creation of a specific teaching and learning program for Stage 5 Enrichment which focuses on core subjects of Geography and Science.

Real world issues

The Balmain Foreshore Project provides opportunities for students to engage in multi-week projects which address environmental issues in our community. The plan of the project is for students in Years 9 and 10 in Geography topics such as Biomes and Environmental Change and Management to engage in a single monitoring and rehabilitation project. Each year group and each year will have the opportunity to choose a focus from issues such as marine pollution, sustainable moorings, seawall panels, Intermediate Bulk Container aquaponics, seagrass planting, or crayweed planting.

Active citizenship

In the Environmental Change and Management topic in Geography, students are required to propose how individuals can contribute to achieving environmental sustainability for the environment. The section of school property along the water's edge allows public access to the Bay Walk and is a thoroughfare accessed by members of the public. The project and associated installations provide a unique opportunity for our school to contribute to environmental sustainability, teach students about their community responsibilities, and inform the public about environmental issues affecting the local community. Towards the end of 2023, members of the local community approached involved teachers to make monetary donations and offer their waterfront property for similar projects.

In addition, an expression of interest was promoted calling for interested students to become part of the Balmain Foreshore Management group. This group of students were more actively involved in decision-making, planning and implementation of the project and worked with a group of teachers to ensure the continued progress of the project, even outside of the programmed unit of work. These students gained a unique understanding of the complexities of dealing with multiple levels of government, different groups and organisations in trying to achieve goals.

Professional Learning Networks

The project has been facilitated by targeted professional learning of a group of teachers through creating a professional learning network with staff in a number of organisations to draw on expertise and access research to support the development of learning activities, and build teacher capacity. Advice was sought from a range of experts in the initial phase including the climate curator from the Australian Museum, the Climate Council, and the Australian National University. In addition to making direct professional connections, staff have used social media to learn about related

programs and initiatives such as Operation Posidonia, Operation Crayweed and Operation Straw. As the project developed, the team sought advice from and collaborated with the Project Manager at Living Seawalls, Managing Director at the Harding Miller Foundation, and a number fo staff at the Australian National Maritime Museum. These connections were imperative in developing skills and knowledge of our teachers, providing feedback and guidance on our project and engaging our students and school with exciting and innovative projects in our community.

Project funding

Initial funding of several thousand dollars was provided from the school Parents and Citizens for purchase of educational resources and an underwater drone. The project team applied for and the school received a $10,000 Community Grant from Transurban for the continuation of the Balmain Foreshore Project in 2023. There were three main, large expenditures in the proposal – the installation of Living Seawall panels, a backsaver crane and signage.

Funds were allocated to purchase and install Living Seawall panels on the seawall on school property in an attempt to improve water quality and encourage greater biodiversity in the local waterway. Additionally, funds were allocated to install a backsaver crane to assist in moving watercraft from the school grounds into the water more easily, to enable better student access to the water for environmental investigations such as water testing and more extensive use of the underwater drone. Large signage is being installed to inform students and the public about the purpose of Living Seawalls and the crane, and includes student learning activities in Geography and Science to encourage continued learning into the future about the topic of environmental change and management in a local context.

Risk Assessment

It is important to note that a lot of time and effort was spent throughout the project on assessing risks and making judgements about the appropriateness of activities for both staff and students. Underwater drones were used, as the risk of students snorkeling in the waters near the school was deemed too high due to no shark netting and data from shark tagging and reports of bull sharks. Students were only allowed to be involved in the installation of the seawall panels in a very limited way, and detailed Workplace Health and Safety discussions took place to ensure the safety of staff involved in the installation.

Project Description

Trial Activities

In Term 4, 2022, a range of trial activities was run for the Balmain Foreshore Project, following the end of formal assessment tasks for Year 10 in Term 4. This time period was chosen for the trial activities because it is a low risk, low stakes period, and enabled teachers to experiment without impacting on report results, exams, etc. These included individual, hands on activities, excursions and a guest presenter. Only limited teaching of content occurred during the trial due to limited time available. In this trial period, students assessed the focus area, which is on the border of the school. They have completed an environmental assessment and undertaken field sketches.

These trial activities were undertaken to study the Balmain Foreshore in the context of examining Environmental Change and Management (Year 10) of Sydney Harbour and Parramatta River. It relates to the Living World Topic in Science as well as a few components of the Chemical World.

Implementing the project

The first full implementation of the project occurred during the second half of Term 1, 2023. It resulted in a separate teaching and learning program for the Year 10 Enrichment class, including different content and learning activities. The students also had a differentiated assessment task.

Teaching and learning activities have included:

- Sustainability Workshop with Australian Museum and discussions about how the project will operate
- Participation in Clean Up Australia Day, including a rubbish count and analysis
- Guest Speaker from Rozelle Interchange
- Weed assessment on site and some weed removal
- A full day of fieldwork and smaller fieldwork activities – water testing, field sketches, underwater and aerial drone activities, initial surveys of local mangroves
- Living Seawalls workshop

Balmain Foreshore Project

Sustainability Workshop

Students participated in a workshop with Dr Jenny Newell, the climate change curator at the Australian Museum. The group was involved in a discussion of the global context of environmental change and management including climate change and the sensitivity of environments, global actions that address climate change and personal responsibility around environmental issues. They also explored how the Balmain Foreshore Project, a local initiative, fits into this wider context, and how they can make a positive contribution to their community.

Image 2 - Students participating in the Sustainability Workshop

Rozelle Interchange Presentation

Charles Scarf, Environmental Manager with Rozelle Interchange & Western Harbour Tunnel spoke about their project, geology of the site and the environmental impact process they had to follow to get approval. This provided students with a broader context of human impacts on the catchment, and related to a contentious issue within the community.

Image 3 - Students participating in the Rozelle Interchange presentation

Balmain Foreshore Project

Overall site assessment, weed assessment and Clean Up Australia Day

Balmain Campus has been lucky to have an ongoing bushcare group who work on the slope, and sandstone cliffs leading down to the water's edge to conserve and restore this rare patch of remnant bushland. Students undertook an initial assessment of this area, and highlighted concerns about rubbish which could enter Balmain Cove and the weeds growing between the remnant bushland and Balmain Cove. Students participated in Clean Up Australia Day, completed a rubbish count and analysis and completed a weed assessment on site and some weed removal.

Image 4 - Overgrown foreshore area

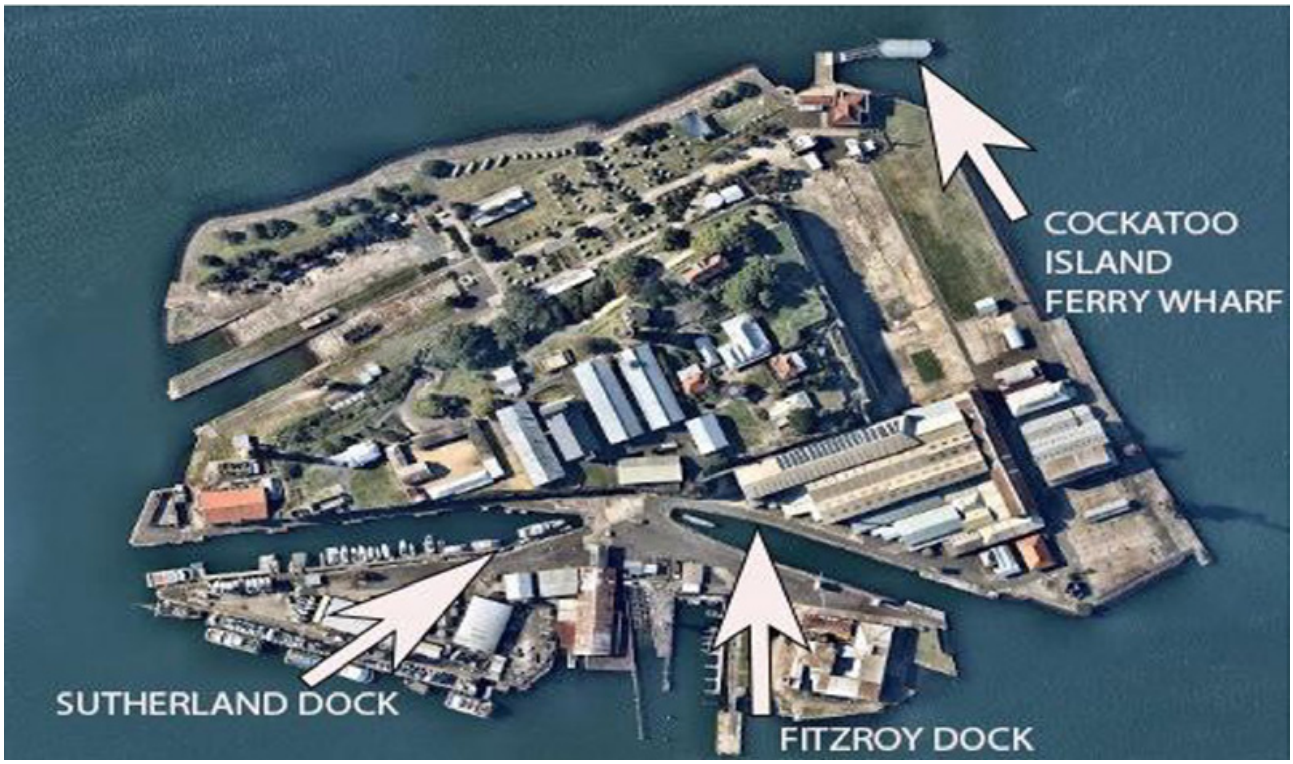
Image 5 - Foreshore debris includes bicycles

Fieldwork

The students undertook a full day of fieldwork and a few shorter sessions, which included water testing, field sketches, underwater and aerial drone activities around the Bay Walk and on Cockatoo Island. Students went on an excursion to Cockatoo Island to learn about the history of the harbour and the different ways that the harbour has been used, and also visited East Balmain Wharf to look at Living Sea Walls.

Image 6 & 7 - Students visiting Cockatoo Island

Balmain Foreshore Project



Site map 1 - Image highlighting the location of the sample sites for Sutherland & Fitzroy docks as well as the Cockatoo Island Ferry Wharf. Photo courtesy of Nearmap, 2023.

Images 8 & 9 - Students about to undertake fieldwork on local mangroves and one of the fieldwork sites.

Balmain Foreshore Project

Students undertook monitoring of local mangroves using GPS mapping, photography and observation. The site maps below indicate the locations where samples were taken with areas of litter concern highlighted with a star symbol. The table below details the geographical locations and highlights the water conditions of each location.

Site map 2 - Image highlighting mangrove sample sites 1, 2 & 3 as well as areas of litter concern within the Balmain Foreshore Project area. Image courtesy of Google Maps, 2023

Site	GPS	pH	Total Nitrite (ppm)	Total Nitrate (ppm)	Phosphates (mg/L)	Ammonia (ppm)*
Mangrove 1	33°86'91"S 151°14'11"E	7.8	0	0	Not tested	0.25
Mangrove 2	33°86'76S 151°14'40"E	7.6	0	20	Not tested	0.25
Mangrove 3	33°86'70"S 151°14'57"E	8.2	0	0	Not tested	0.25
School Wharf	33°85'77"S 151°16'92"E	8.2	0	0	Not tested	0.25
Cockatoo Island Ferry Wharf	°°	8.1	0	0	0.2	1.0
Sutherland Dock	°°	6	0	2.5	0.2	0.5
Fitzroy Dock	°°	8.2	0	0	0.1	0.25

*Table 1 - Raw data collected from sample sites within the Balmain Foreshore Project catchment area. Areas highlighted trigger Australia New Zealand Environment and Conservation Council limits. *For water, 1ppm = approximately 1 mg/L of contaminant, 1ppb = approximately 1 ug/L (Boguski, T 2006)*

Balmain Foreshore Project

Whilst data collected indicated some areas of concern it is important to note that the ANZECC guidelines do not have lower or upper concentration limits for wetlands and as such the class measured limits against the lower and upper concentration limits for estuarine conditions. The testing was conducted during low tide amongst highly disturbed urban mangrove systems, working dry docks, active ferry terminals and a public wharf at the school boundary. It is also of importance to note, for transparency, that the water testing kits used were for household fish tanks and future purpose fit testing kits should be acquired to allow for accuracy and reliability of testing and as such, although the results should be viewed as alarming, they are unreliable.

Groups of students undertook aerial surveys of the focus area with the school's drones. These are intended to be used by students in future year groups to undertake comparisons to determine change over time. In total, around 20 aerial photos were taken as well as some video footage.

Image 10 - A student receiving instruction on using the aerial drone.

Images 11, 12 & 13 - Aerial photographs of the project site on the grounds of SSC Balmain Campus

By using both aerial and underwater drones, students could observe mangrove distribution, seagrass and seaweed distribution close to the school site.

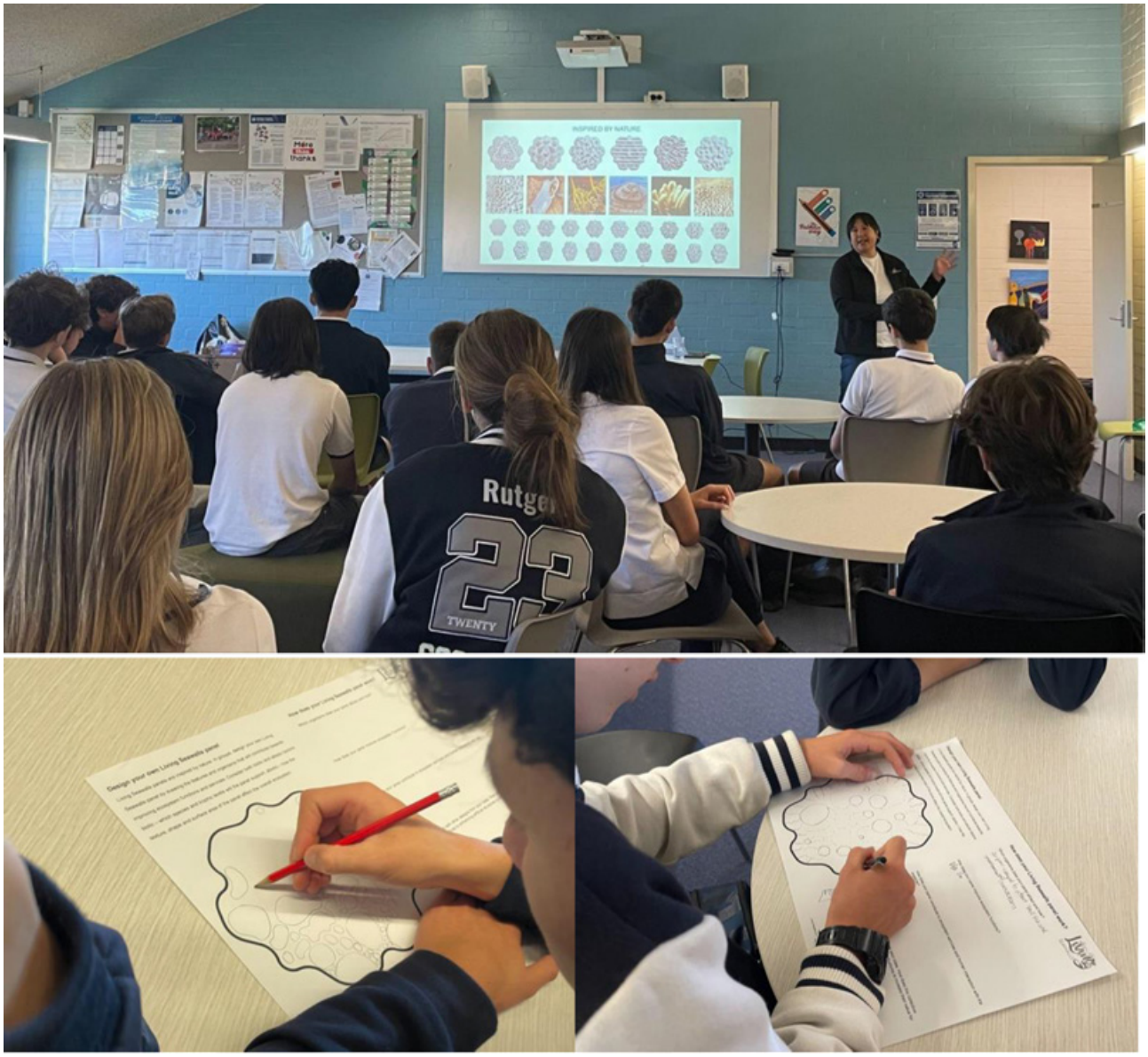
Images 14, 15 & 16 - Students and their teacher kayaking from one of the field test sites

Balmain Foreshore Project

Living Seawalls workshop

Students attended a workshop with Dr Aria Lee, Project Manager of Living Seawalls. Students learnt about the research and development behind the concept of Living Seawalls, the locations where they can be found around Sydney Harbour and globally, and the ecological benefits of Living Seawalls. Part of the workshop included students designing their own seawall panels.

Living Seawalls are concrete panels which have been designed in collaboration with the Reef Design Lab and the Sydney Institute of Marine Sciences. They have a variety of textures and crevices which, when attached to a sea wall to encourage the habitation of a diverse range of aquatic organisms, to improve water quality and encourage greater biodiversity.



Images 17, 18 & 19 - Students participating in the Living Seawalls workshop

Balmain Foreshore Project

Seawall - Pre-installation activity

Students collected baseline data to identify the diversity of species currently inhabiting the existing concrete seawall. Students worked with Dr Rosie Steinberg, from Macquarie University, to study and narrow down the site where the first batch of seawall panels were to be installed.

Baseline data of sessile (fixed) and mobile organisms in the selected test areas were recorded. After conducting quadrat sampling at the tidal areas bordering the school, the students determined the best location for the seawall panels. Alongside the 2023 Year 10 students, were the Year 9 Enrichment students. The purpose of involving the Year 9 students was to provide them with a basic introduction and familiarity with the project and site prior to involvement when they move into Year 10. The intention moving forward is for the project to include a longitudinal study to investigate change over time in species diversity. Future students will be able to track the progress of the initiative with reference from data collected at the end of 2023.

Images 20, 21, 22 & 23 - The existing seawall (above), and student participating in the pre-installation surveys

Balmain Foreshore Project

Seawall installation

The Living Seawall panels were installed by our General Assistant, Miguel Perez with support from our project staff team, and some students in the Project Management Team. They were very heavy and difficult to move and affix. Given that the work was outside of the scope of the usual work for those involved, on reflection it would have been more efficient to hire contractors to undertake the installation, but it would also have been much more costly.

Images 24 & 25 - Installation of the Living Seawall panels

Image 26 - The Living Seawall panels installed

Balmain Foreshore Project

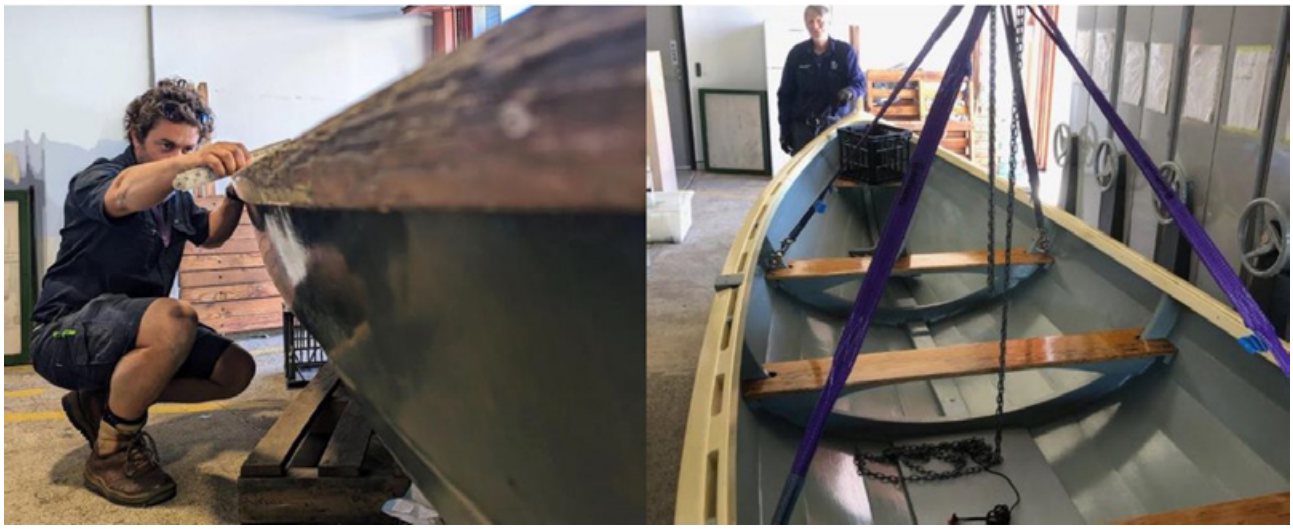
Snorkeling - Cabbage Tree Bay, Manly

The Year 10 Enrichment class participated in a snorkeling excursion at Cabbage Tree Bay Aquatic Reserve in Manly as a conclusion to their involvement in the Balmain Foreshore Project. We were unable to allow the students to snorkel at our project site due to the risk of bull sharks and regular low visibility also made it less desirable. Cabbage Tree Bay was chosen as an alternate excursion site as it had Living Seawall panels installed in 2018. The excursion was a fun event that aimed to consolidate all the learning that occurred over 2023. Students were taught basic snorkel survival skills and introduced to the various sea life thriving in a healthy marine ecosystem. Students were able to view established sea wall panels, artificial reefs and re-established fields of seagrass. Whilst visibility was not the greatest due to the environmental factors of the day, students were still able to identify a Wobbegong shark, Gropers and various school fish.

Image 27 - Students snorkeling at Cabbage Tree Bay

Boat restoration and crane installation

As part of a previous program, several years ago Work Education students, working under the guidance of the Australian National Maritime Museum built a wooden St Ayles Skiff. The boat was donated to the school with the intention of it being used by students to explore environmental aspects of the foreshore. During the Balmain Foreshore Project, the Australian National Maritime Museum maintained and restored the student-built skiff, and returned it to the school as part of a celebration for the project at the end of the year. To make the boat more user friendly for our students and enable better use in environmental education, part of the Balmain Foreshore Project involved the installation of a crane with extendable boom to allow the boat to be easily moved into and out of the water.



Images 28 & 29 - Restoration and maintenance of the student-built St Ayles skiff by the Australian National Maritime Museum.

Balmain Foreshore Project

Image 30 - Delivery of the St Ayles skiff by the Australian National Maritime Museum to the school's pontoon

Image 31 - The backsaver crane

The Balmain Foreshore Project is an example of differentiation in teaching of high potential and gifted students. Our aim in implementing this project was to provide a specialised teaching and learning program involving more challenging activities and assessment strategies to extend and engage our Enrichment students. The Balmain Foreshore Project provided a unique opportunity for our school to contribute to environmental sustainability, teach students about their community responsibilities, and inform the public about environmental issues affecting the local community.

References

Australian and New Zealand Environment and Conservation Council. (2000). *National Water Quality Management Strategy: Australian and New Zealand Guidelines for Fresh and Marine Water Quality*. https://www.waterquality.gov.au/sites/default/files/documents/anzecc-armcanz-2000-guidelines-vol1.pdf

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The Geography Teachers Association of NSW & ACT Inc.

The 2024 GTA NSW & ACT

Young Geographer Awards

Registration opens June 2024 & closes Friday 4 October 2024

The Young Geographer Awards invites students in NSW and the ACT to demonstrate engagement with Geography, the discipline and with the tools and skills of Geography through the creation and conduct of an inquiry-based research project. Although it is not essential, teachers are encouraged to incorporate the research and construction of the project into their teaching programs to help support students.

Visit www.gtansw.org.au for entry forms and more information.

Prizes

Prizes for the winning entries in any category are:

- **1st Prize $500**
- **2nd Prize $250**
- **3rd Prize $100**

Award Categories

Geographical Research Award

This award allows students to demonstrate original geographic research on any topic from the Australian Curriculum or NSW K-10 Geography Syllabus. Students will identify an inquiry focus and should conduct both primary and secondary research to investigate this topic. Category submissions will be judged against entries in the same Stage.

Geography in STEM Award

This award allows students to demonstrate geographic research on any topic from the Australian Curriculum or NSW K-10 Geography Syllabus. However, a significant STEM contribution must be present in the final product and Geography must drive the project. The STEM contribution may be explicitly evident in the collection of primary data, the tools used for analysis of data and/or in the final presentation and communication of the research.

NESA Senior Geography Project (SGP) / IB Internal Assessment Award / ACT equivalent project

This award recognises excellence in the NSW Senior Geography Project (SGP) or International Baccalaureate Internal Assessment (IA) Projects. Those who study Geography in the ACT may also submit Geography research projects of a similar scope.

GTA NSW & ACT Geography Teacher Award

This award is for teachers that inspire 'Young Geographers' and recognises the creativity and knowledge of the implementation of fieldwork within the classroom. Participating teachers are asked to submit evidence regarding how they implement fieldwork into their teaching and throughout the school. This evidence could be an assessment task, fieldwork booklet, teaching program etc. In addition to the evidence, they are to write a 500 word summary that examines how they successfully incorporated fieldwork into their teaching practice by referring to the evidence they have submitted.

Project Specifications

The projects submitted for all categories should:

- Be less than 3000 words when written or under 10 minutes in an audio-visual format.
- Incorporate appropriate primary and secondary research for the inquiry topic.
- Demonstrate excellent research skills.
- Demonstrate excellent communication of geographical information using a variety of tools and skills.
- Demonstrate the capacity for active citizenship from the undertaken research.

All award entries must be submitted digitally as either Acrobat PDF files, websites or suitable audio-visual files.

Award Timeline

2024 competition closing date: Friday 4 October

Each school is able to submit a maximum of four (4) entries per category. There is no cost for entry to the competition.

Judging will take place between Term 4 2024 and Term 1 2025. Members of GTA NSW & ACT are encouraged to apply and participate as a member of the judging panel. The judging is a valuable Professional Development event and participation in the judging process, for example SGP marking, will help teachers gain perspective about their own classroom practice and student achievement.

Prize winners will be notified by March 2025. Prizes will only be awarded when suitable entries are available. All competition entrants will receive a YGA Certificate of Participation.

Changing Places: Green Space Enhancement Project

By Bianca Mangioni and Sophie Robb - Newcastle Grammar School

Get ready for an adrenaline-packed journey into the realm of Year 9 Geography! Breaking free from the post-exam slump, we embarked on a mission to transform learning into a hands-on exploration that resonates with our students. Creating a project where theoretical knowledge collided with the real world, sparking curiosity and excitement.

Our Year 9 Geography students had spent Semester Two exploring the topic of Changing Places through a range of exploration activities and case studies.

This article unveils the secrets behind the Green Space Enhancement Project Excursion with an explanation of the key concepts. This will allow teachers to re-create and adapt this learning opportunity, whilst also providing a sneak peek into the activity booklet that activated prior knowledge, sparked their curiosity, and kept them engaged throughout the entire day.

The Aim

After heavy exploration of large-scale changing places, we thought it was necessary to develop the significance of Changing Places in a local setting that had significance to our students. We also thought it was necessary to deepen their understanding of geographical processes, fieldwork and encourage inquiry skills.

The task aimed for the students to engage in primary research (through fieldwork) to understand how the local council had responded to the changing urban dynamics of Newcastle. Students were exposed to the plans the council has prepared to overcome the social, environmental and economic challenges while ensuring a sustainable future for the growing regional centre. Students were to analyse the current strategies employed to revitalise places in Newcastle. Groups were tasked to use these findings and their own knowledge to create an A3 proposal to the council for the redevelopment of another urban green space in the area.

Students were provided with a note from the 'local council' (a.k.a. the teachers) to set the scene of the excursion.

Welcome, Urban Planners of Tomorrow!

Congratulations on being selected for a unique opportunity to be part of the Urban Green Spaces Enhancement Project. In this exciting scenario, you are not just students; you are valued consultants employed by the City Council to breathe new life into our local urban green spaces. Your mission, should you choose to accept it, is to embark on a hands-on excursion to experiment, reflect, and take action on innovative solutions to elevate the quality of a designated urban green space.

Your Role: City Council Consultants
Imagine yourself as the expert minds behind the revitalisation of our community spaces. Your task is to envision enhancements that will transform the local urban green space into a vibrant, welcoming hub for everyone in the neighbourhood. The City Council is looking to you for creative and practical ideas that address key aspects such as inclusivity, amenities, comfortability, and safety. Most importantly, your aim is to invite local citizens to stay, play and be entertained.

The Challenge: A Real-World Urban Planning Endeavour
As consultants, your work goes beyond theory and enters the realm of real-world urban planning. You are about to undertake a fieldwork excursion to observe, document, and analyse the urban green space of Foreshore Park. Your findings will serve as the foundation for a proposal that aims to make a lasting impact on the community.

Why Does It Matter?
Urban green spaces are more than just patches of grass; they are the beating hearts of our neighbourhoods. They are places where people gather, unwind, and build connections. By enhancing these spaces, you have the power to shape the experiences of countless community members, making a tangible difference in their daily lives.

Your Journey Begins: The Urban Green Spaces Excursion Booklet
This booklet is your guide on this exciting journey. It contains step-by-step instructions, valuable insights, and tools to help you navigate the fieldwork, analysis, and proposal creation process. So, put on your consultant hats, grab your notebooks and cameras, and get ready to contribute to the transformation of the City's urban green spaces.

Your expertise is not only welcomed but crucial to the success of this endeavour. The City Council is counting on you to unleash your creativity and make a lasting impact on the future of our community spaces.

Best of luck, consultants, and may your proposals inspire positive change in our city!

Figure 1: Letter from the 'council'

Changing Places: Green Space Enhancement Project

Pre-Work

As a Deep Learning school, students were encouraged to actively engage in the dimension of Critical Thinking through an exploration of "experimenting, reflecting, and taking action". Students engaged in group Critical Thinking Puzzles such as "How many squares in the following shape?" and "Connect the dots" to start developing language of experimenting and reflecting. This was completed in the lesson prior to the excursion as it is a key strategy that is needed when conducting research in the field.

Students were inspired by promotional videos from futuristics cities such as *Neom* (Video Link: https://www.youtube.com/watch?v=0kz5vEqdaSc) and *Telosa* (Video Link: https://www.youtube.com/watch?v=W5Z8XZVdm50) to understand the need to manage and plan for Australia's urban future. They were given the opportunity to experiment and reflect on ideas created by others to develop their critical and creative thinking skills.

With an understanding of the aim of the excursion, students were tasked to create a mind map on how they could experiment, reflect and take action during the excursion in their data collection and output creation.

The Excursion

As it was essential for students to understand the significance of urban planning, an urban sociologist, Duncan McDuie-Ra (PhD Professor of Urban Sociology at Newcastle University) was invited to start off our exploration excursion to set the scene for the students in terms of how cities function around the world and the importance of considering spaces for people to stay, play and be entertained. Establishing this learning partnership with the University of Newcastle is an element of Deep Learning that we wanted to leverage. Students appreciated the lecturer's depth of knowledge and passion, which set the scene for the excursion. Now that they had built their foundational knowledge (throughout the course, pre fieldwork and the lecture), they were able to apply their understanding to the real world.

To ensure students understood the expectations and requirements at each location of the excursion, a mission was provided to the students (Figure 2).

Your Mission

Location	Task
The Station	***Aim:*** You are to assess the effectiveness of the revitalisation strategies employed by the Newcastle City Council. ***Key Questions:*** Do you think The Station is an effective use of space? Does it bring the community together? Does it build connections? Is it inclusive and safe? Is it a hub for business and people? Does it maintain its historical significance?
Foreshore Park	***Aim:*** Conduct fieldwork to determine the effectiveness of the green space Determine what the positives and negatives of this space. Make a judgement on its condition, inclusivity, safety, comfortability. ***Key Questions:*** What needs to be revitalised to be a Stay – Play – Entertain space? Are there any historical components that need to be preserved? Does it meet the needs of the current population of Newcastle? What changes need to be made in order for it to meet the future population of Newcastle? ***Key Locations:*** Railway Carriage Shed, Playground, Sandhills Community Garden, frog pond and surrounds.
School	***Task:*** Construct your A3 Map Proposal for the council. ***Steps:*** 1. Using the map provided in your booklet, construct a revitalised map of your NEW Foreshore Park. 2. Once you have an idea, construct your map using the document provided on your Year 9 Geography Schoolbox pages or the hardcopies provided. Remember that maps need a KEY to explain each component of your proposal. 3. Once completed, you will print your presentation on 1 A3 page for evaluation. 4. You will need to score the other groups over Week 8.

Figure 2: Mission provided to students on the day of the excursion to ensure they understood the aim for each location of the day

We broke up the excursion into two parts: an already revitalised area and the proposed area to be revitalised. We wanted students to explore an area that was already revitalised so they were able to assess the effectiveness of that space by observing who was able to access the space, how people were using the space and whether it met the necessary requirements for it be considered an Urban Green Space.

At the second location, students used fieldwork tools to obtain primary research by observing, measuring, collecting and recording data of the space. The booklet created encouraged students to analyse the social, historical and environmental aspects of the space. Students were supplied with a satellite image of the area, a section to create a precis sketch and a table to undertake an audit of the facilities and amenities that exist within the space (see Figure 3).

Activity 2: Amenities Audit

AMENITY	DISTANCE TO CLOSEST...	CONDITION		
Toilet		Poor	Good	Excellent
Drinking Station		Poor	Good	Excellent
Charging Stations		Poor	Good	Excellent
Shaded spaces		Poor	Good	Excellent
Seating area		Poor	Good	Excellent
Cafés and eateries		Poor	Good	Excellent
BBQs		Poor	Good	Excellent
First Aid		Poor	Good	Excellent
Public Phones		Poor	Good	Excellent
Bins		Poor	Good	Excellent
Equipment		Poor	Good	Excellent
Play Spaces		Poor	Good	Excellent
Parking		Poor	Good	Excellent

Activity 3: Analysis of community spaces

Are there places for people to gather, to play, to stay and to be entertained? What elements are encouraging community connection? What needs to be improved? Are the spaces inclusive?

Community Gardens	Playground	Tramsheds

Figure 3: Example of some the fieldwork activities completed by the students at the second location

Changing Places: Green Space Enhancement Project

The Output

Upon returning to school, students were given the opportunity to study their fieldwork analysis from the day and brainstorm effective strategies they had seen either through their experiences from the day or prior case studies to start developing key ideas for the Urban Green Space Enhancement Project proposal to the council.

Students were given the scoring card (Figure 4) and explanation (Figure 5) to assist them in establishing a goal for their proposal.

Feedback Evaluation for Newcastle's Urban Green Spaces Enhancement Project

CATEGORY	RATING				
	Poor	Fair	Good	Very Good	Excellent
Inclusivity	1	2	3	4	5
Amenities	1	2	3	4	5
Comfortability	1	2	3	4	5
Safety	1	2	3	4	5
Natural Features	1	2	3	4	5
Vibrancy	1	2	3	4	5
Community Experience	1	2	3	4	5
Play Elements	1	2	3	4	5
Historical Elements	1	2	3	4	5
Cultural Inclusion	1	2	3	4	5
Total Score					**/ 40**

Figure 4: Scoring Card for the Urban Green Space Enhancement Project

Category Explanation

Inclusivity	Spaces intentionally designed to welcome and accommodate individuals from diverse backgrounds, abilities, and demographics, fostering a sense of belonging and accessibility for all members of the community.
Amenities	Variety of facilities and services that enhance the overall experience, such as picnic areas, toilets and other features that contribute to the functional aspects of the space.
Comfortability	Design elements that promote a sense of ease and wellbeing, including factors like well-maintained seating, shading, cleanliness that contribute to a pleasant and relaxed environment for visitors.
Safety	Ensuring the safety of all users by implementing measures that prevent accidents and injuries. This includes well-maintained paths, appropriate lighting, and clear signage.
Natural Features	Natural elements within a green space, including diverse flora and fauna, geological formations, water bodies, and ecosystems, contribute to its ecological history and environmental significance.
Vibrancy	Dynamic and lively atmosphere, characterised by vibrant coloured equipment and public art.
Community Experience	The collective history of social gatherings, shared traditions, and the evolution of community engagement, reflecting the space's role as a hub for communal identity.
Play Elements	Multiple elements of a space that inspire people of all ages to engage in physical activity, such as: playgrounds, ovals, skatepark and pools.
Historical Elements	Historical elements of a green space encompass features such as Newcastle's convict history such as the metalworks, coal mining, and ports.
Cultural Inclusion	Cultural elements encompassing our Awabakal and Worimi peoples as well as consideration for our multicultural society and migrant population.

How you rate each category:

Poor: ☆ Indicates a very low or unsatisfactory consideration. Significant issues or shortcomings.
Fair: ☆ ☆ Suggests an average or acceptable consideration. Some positive aspects, but notable room for improvement.
Good: ☆ ☆ ☆ Represents a solid and satisfactory consideration. Generally positive, with a few areas that could be enhanced.
Very Good: ☆ ☆ ☆ ☆ Signifies an above average and enjoyable consideration. Notable strengths with only minor areas for improvement.
Excellent: ☆ ☆ ☆ ☆ ☆ Reflects an outstanding and exceptional consideration. Virtually flawless, exceeding expectations in all aspects.

Figure 5: Explanation of Components of the Scoring Card

Changing Places: Green Space Enhancement Project

Students had one hour to complete their proposal and hand it in for judging. The A3 proposals were converted into a PowerPoint presentation (see Figures 6, 7 and 8) with an attached Microsoft Form to allow all students in Year 9 and a range of staff members to vote on the proposals. In future, we hope to further our Learning Partnerships by establishing connections with the council to allow the council to vote on the proposals.

Figure 6: Example of group output

Figure 7: Example of group output

Figure 8: Example of group output

We have had many students ask throughout the week when the finalists will be announced, and it has been great to receive their feedback from the day.

Some of the feedback included:

> *"The day was far better than I expected, there was a good balance of activities for us to complete and time for us to explore. I felt like I was learning with my group at our own pace, and I wanted to make the park better because I use it."*
>
> *"I never thought about what the park had and didn't have. It made me realise the importance of having a park for everyone to have fun but also relax. I wish they could make my proposal into real life."*

Place-Based Geography: Hornsby

Martin Pluss

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Cobah Road newest section of road. Image Source: Martin Pluss

Introduction

This is the second article in a series about engaging in your local area to enhance students' understanding of Geography in their local context. The first article (Pluss, 2023) examined Hornsby Shire geographical initiatives including the Community Strategic Plan 2022–2032, Disability Inclusion and Social Inclusion Plan and the Draft Flood and Risk Management Strategy.

This article focuses on place-based geographical projects and initiatives. Hornsby Shire is 455 square kilometres and is made up of dozens of suburbs regional – rural and urban – and as such has specific place-based and regional geographical issues to be addressed.

The geographical issues addressed in these places came from reading the documents and attending council meetings discussing these places in 2022. In fact, many of these places still have community members making representation at the time of publication. Northholm Grammar students have been kept up to date with council initiatives through the place-based studies of Byles Creek, the Rural Lands Strategy, the Hornsby Town Centre Master Plan, parking in Brooklyn, the Cherrybrook Station Precinct and through active citizenship concerning the quality of local roads.

Byles Creek

Byles Creek is in Beecroft and its protection has been an issue of geographical concern for a number of decades. Most Local Government Areas (LGA) in which schools are located would have creeks and rivers of environmental significance which need to be managed by their respective councils.

Agenda Item 6 in the May Council meeting considered the Draft Byles Creek Planning Study. The report assessed the sustainability of current planning controls to minimise residential development on the Byles Creek Corridor and to provide recommendations to better protect the unique environment. The consultation period between September and November 2021 received 168 submissions. The key issues raised included the financial impact on property values, current planning controls, and the study area boundaries.

Of interest to the geographer would be the environmental value of the corridor. There is the critically endangered ecological community Blue Gum High Forest, regionally significant Coachwood Rainforest, and the locally significant Blackbutt Gully Forest. Threatened fauna habitats include the Powerful Owl, Gang Gang Cockatoo, Red-crowned Toadllet, the bent-wing bat and microbats. The habitat for the Brittle Midge Orchid and Dean's Tea Tree is threatened.

Place-Based Geography: Hornsby

The study also provided geography students the opportunity to see what can be done to address geographical issues. Suggestions include to rezone low density residential within the study area to E4 Environmental Living and to increase the minimum lot size for E4 zoned land to forty hectares. The final two hundred plus page report was submitted to council at the December meeting.

Rural Lands Study

As well as individual places in Hornsby, with significant geographical issues, there are subregions of the Shire which have geographical place-based considerations. The June meeting's Agenda Item 8 addressed the Rural Lands Study which was a product of significant consultation.

Of particular interest to the students, not least of which Northholm Grammar is located in this area, is the geographical breakdown of the region and the land usage. The study provided a framework to explain the possible future of places surrounding the school. Many students live in these locales or at the very least pass through them on their travel to and from school.

The geographical regions include the Riverlands bordering the Hawkesbury River from Wiseman's Ferry to Brooklyn, the sand belt agriculture along the lowlands, Sandstone Plateau Ridgeline, Berowra Valley North and South, Galston Plateau, Northern Ridgeline, and the villages of Galston, Glenorie and Middle Dural.

These rural lands are subjected to the pressure of increased population and the need for water, sewage, and roads infrastructure, facilities and services and housing, all placing pressure on rural lands and their communities.

The consultation period for the plan was September to November 2020 and there were 323 submissions. Most were supportive but of immediate geographical interest to students were concerns about reducing lot sizes to two hectares in the Sandstone Plateau Ridgeline of Fiddletown and parts of Arcadia. The different land uses in these locations include rural zone function centres, cafes, restaurants, artisan foods and drink premises, garden centres, a tourist zone for kiosks, markets, and plant nurseries.

Furthermore, broader issues discussed and researched by students include housing, lifestyle opportunities, support for local businesses and agriculture, tourism, and market gardening. This is complemented by associated concerns of the impacts on rural character and scenic quality through traffic infrastructure, over development, rural productivity, underdevelopment, and lack of opportunities.

Hornsby Town Centre Master Plan

Hornsby has a significant built up area to host 150 000 plus people. Hornsby Town Centre Master Plan was Agenda Item 8 in the July Meeting. This is partly driven by the state government housing targets and the Council's desire to meet these targets. The targets for additional housing include in the Short Term (2016–2021) 4310 dwellings, Medium Term (2021–2026) 3800–4200 dwellings, and (2026–2036) TBC by the State Government.

Many school students commute from this area of the Shire and make use of the services and facilities in this location. The focus is to revitalise the commercial core, better integrate Westfield Hornsby, attract mix use residential development on the east side of the railway, support the health-related land uses associated with the hospital, improve walking and cycling connections, reduce the impacts of traffic movements, promote walking and cycling, prioritise public domain upgrades, place-making initiatives, and a new civic space.

Hornsby Town Centre - Six Maps

Place-Based Geography: Hornsby

Brooklyn Parking Management

Brooklyn is on the northern boundary of the Shire on the banks of the Hawkesbury River and two kilometres from the M1 Freeway. It is a concentrated village due to the river to the north and the sandstone ridge to the south. It is a hub for people to travel to work by train and road who live in the village and those residents who live on the river. These two groups of community members, as well as an increasing number of tourists, park their cars in the confined location of the village.

In addition, Brooklyn is a unique natural environment rich in both European and Aboriginal heritage combined with a waterfront village atmosphere. Agenda Item 2 in the August Meeting was to focus parking concerns in the village and provided a good case study for focused student research.

For example, in a small village there are a number of pinch points to study. These include Brooklyn Village Centre, Dangar Road Wharf Car Park, Lower Mckell and Parsley Bay Car Park and Upper McKell Car Park. Geographical issues to investigate include what to do with river residents' cars who park in Brooklyn? What use can be made of Crown Land? Would timed parking make a difference?

Brooklyn - Six Maps

Cherrybrook Station Precinct

Agenda Item 11 in the September meeting focused on the Cherrybrook Station Precinct. This is a geographical case study of multiple stakeholders on the boundary of two LGAs and a State Government project. The boundary between Hills and Hornsby Shire Councils is Castle Hill Road with the Station located in Hornsby.

There is a twenty-year place management strategy in place, a desire to rezone government land adjoining the station to facilitate a mixed use precinct with local retail, community facilities, public space and new dwellings. For this to happen a number of issues need to be resolved including boundary interface issues, open space network, design excellence, sustainability and affordability provisions, traffic and parking, implementation, and funding.

Cherrybrook Station - Six Maps

Active Citizenship

Over the years some of the more powerful presentations I have seen at council meetings have been by students. They must prepare to talk for three minutes to get their message across and make an impact.

Whether it is an eleven year old boy addressing the council about the redevelopment of a park in North Epping so it could assist his local football team's training, or a teenage girl suggesting local-based strategies the council could employ to address climate change, the common element is student engagement in active citizenship.

Place-Based Geography: Hornsby

Such initiatives can be tried at the school level/local community.

Northholm Grammar is located on Cobah Road on a ridge which acts as a watershed between Colah Creek to the North and Calabash Creek to the South. Due to increased traffic, road steepness and a lot of rain in 2022 it became necessary to start engaging with Hornsby Council to address the issue of potholes on the road.

The school community was encouraged to raise the issue with the council, which was done through letters and public addresses at a council meeting. I am not able to share what other members of the community did, but I can share what I said at the council meeting. As a teacher, it is not difficult to model appropriate active geographical citizenship which students can employ in their own local areas.

Hornsby Council Address

My name is Martin Pluss. On Monday evening while thinking of the address I had a brake quickly while on Cobah Road – the focus of my address. But first let me back track.

I speak to you tonight as a teacher of Northholm Grammar who uses the road for commuting to school and I also share the concerns of our Principal, Mr Christopher Bradbury.

I have traveled on this road for nine years and JP my wife who has worked at Northholm for thirty-eight years. Since we drive separately that is 46 years of commuting experience on this three km section of Cobah Road. JP alone has made 10 trips a week, for 40 weeks a year, over 37 years for a total of 14 800 trips. At 3 km each trip this is one person's 44 400 km of experience of Cobah Road.

I also speak as someone who is committed to our broader community and as you're aware I have spoken at Council Meetings on a number of occasions in that spirit. Through this community interest, I have come to understand there are competing community needs, many priorities and budget constraints.

Moreover, I have lived in this community, have run the trails at the end of Bloodwood and Peebles Roads for several years and have witnessed the increase in the volume and changed nature of community road usage out of school hours.

The council's yearly operational plan focuses on a liveable, sustainable, productive and collaborative Shire. Northholm's approach is to work within this strategic framework, resist the temptation to be reactive, and follow due process rather than expect a quick solution.

It's because of this that the Council has a delivery and operational program to articulate what it will do strategically and over time with the resources available. Hence, Northholm Grammar's approach has been to seek integration into these strategic processes rather than to just randomly agitate, rally and expect an overnight solution.

In the spirit of liveability for local residents, sustainability and collaboration may I make a request to consider looking into the maintenance of Cobah Road.

On Monday night I was met by an 18 wheeler semi-trailer on the other side of the road as it turned into Cobah Road – that was a first. This is reflective of the increased traffic on the road, the changing nature of the traffic and a significant contributing factor to the decline of the condition of the road.

The topography of the area is contributing to the increase in potholes. There is steeper gradient and narrower road as it climbs the ridge which runs to Bloodwood Road. This contributes to Cobah Road's declining condition. May I request it be considered as a budget line in the current Operational Delivery Plan.

Then I followed up the address with an email offering our students help with the initiative.

Thank you for the work that you and your staff do for the local community.

I would like to follow up the address I made at a previous Council Meeting. I addressed the Council in relation to supporting an initiative to improve Cobah Road.

I would like to offer a selection of our geography students to be part of the process, perhaps in a site meeting during your planning or whatever you deem appropriate and safe according to your risk management plan.

There are many geography students who could build a career in councils. I can think of several students who would benefit from the development of their awareness, knowledge and understanding of the work the council undertakes.

These include an awareness of the value of community consultation, practical application, the enhancement of practical knowledge of concepts of gradient/aspect over a varied topography and an understanding of how the natural and built environment can be sustainably managed.

Hopefully, also, this initiative, when promoted through the school community, would highlight the good work of the Council in terms of consultation and working closely with the community.

Place-Based Geography: Hornsby

Cobah Road Corner Verges. Image Source: Martin Pluss

Cobah Road Gravel Verge. Image Source: Martin Pluss

Cobah Road Photos Hill Grass Verge. Image Source: Martin Pluss

Cobah Road transition to new guttering. Image Source: Martin Pluss

Cobah Road new style of gutter. Image Source: Martin Pluss

Cobah Road newest section of road. Image Source: Martin Pluss

Conclusion

In conclusion, this article is a point in time analysis of Hornsby Council deliberations and community consultation. The focus is on community issues of concern in different places in the Shire. It will be easy to find similar information in your local area which engages you and your students. Moreover, you can take a deeper dive into this information through the tables, maps and photos provided.

A place-based research approach to your local area can provide insights and resources which are most relevant for the teaching and learning of Geography. Moreover, there are also LGA elections in September 2024, so there will be interesting issues for your research.

By the way, as the photos indicate, I can confirm that Cobah Road, Arcadia has been improved due to the active citizenship of the local community.

Tables

Hornsby Council Meetings 2022

February 2022
- Agenda Item 5 Sydney North Planning Panel and Hornsby Planning Panel – Local and Community Members.

March 2022
- Agenda Item 3 Draft Community Strategic Plan 2022–2032.
- Agenda Item 5 Design Excellence Panel – Panel Members.

April 2022
- Agenda Item 6 Dual Naming and Renaming of Council Facilities Policy.
- Agenda Item 7 Disability Inclusion Plans (Social Inclusion).

May 2022
- Agenda Item 4 Realignment of Suburban Boundary between Middle Dural and Glenorie.
- Agenda Item 6 Byle's Creek Planning Study –a Reporton Submissions.
- Agenda Item 7 Onsite Sewage Management System Policy.

June 2022
- Agenda Item 8 Draft Rural Lands Study.

July 2022
- Agenda Item 4 Draft Disability Inclusion Action Plan.
- Agenda Item 6 Planning Proposal Old Northern Road.
- Agenda Item 7 Planning Proposal 7 City Road Pennant Hills.
- Agenda Item 8 Hornsby Town Centre Master Plan.

August 2022
- Agenda Item 2 Deferred Report Car Parking Management Brooklyn.
- Agenda Item 7 Hornsby Aboriginal and Torres Strait Islander. Consultative Committee (HATSIC) Membership.
- Agenda Item 12 Expression of Interest – Provision of Renewable Energy Infrastructure.

September 2022
- Agenda Item 7 Healthy Aging Hornsby.
- Agenda Item 8 Arts and Culture Advisory Group.
- Agenda item 11 Exhibition of Cherrybrook Station Precinct and State Significant Planning Proposal.

October 2022
- Agenda Item 5 Hornsby Shire Draft Flood Risk Management Strategy and Plan.
- Agenda Item 6 Public Domain Guidelines and Improvements Beecroft Town Centre.

November 2022
- Agenda Item 1 Hornsby Shire Council Report 2021–2022.

December 2022
- Agenda Item 6 Draft Healthy Aging Hornsby Strategy.
- Agenda Item 8 Mark Taylor Oval Indoor Cricket Lease.
- Agenda Item 9 Community Events Grants Program.
- Agenda Item 10 Planning Proposal Byle's Creek.
- Agenda Item 11 Agri Tourism Planning Reforms.
- Agenda Item 14 Proposed Co-location of Telecommunications Facilities at Normanhurst.

Place-Based Geography: Hornsby

Hornsby Population and Dwelling Growth 2022–2036				
Year	***Hornsby Population***	***Percentage Growth***	***Dwellings***	***Percentage Growth***
2022	159 138		56 904	
2032	174 894	9.9	64 247	12.9
2036	179 582	12.8	66 632	17

Places: Wards of Hornsby and Suburbs	
Ward A Suburbs	Asquith, Arcadia, Berowra, Berowra Heights, Brooklyn, Berrilee, Calabash, Cowan, Canoelands, Dangar Island, Dural, Fiddletown, Forest Glen, Glenorie, Galston, Glenhaven, Hornsby Heights, Laughtondale, Mt Colah, Mt Kuring-gai, Maroota, Middle Dural and Singletons Mill.
Ward B Suburbs	Hornsby, Normanhurst, Pennant Hills, Thornleigh, Wahroonga, Waitara, Westleigh.
Ward C Suburbs	Beecroft, Castle Hill, Cheltenham, Cherrybrook, North Epping, West Pennant Hills.

References

Hornsby Map Reference
https://profile.id.com.au/hornsby/about

Download a Report for the Key geographical Characteristics of Hornsby
https://profile.id.com.au/hornsby/reports-by-area

Hornsby Business Papers
https://businesspapers.hornsby.nsw.gov.au/

Hornsby Shire Facebook Page
https://www.facebook.com/HornsbyCouncil/

Pluss, M (2023) "Understanding local Geography through your local government area: Hornsby Shire" *Geography Bulletin*, *55*:3, pp35-40.

Fieldwork and Smartphones

Kathy Jones, Fieldwork Connections

I am in two minds about the current ban on phones in schools. On the one hand it is one less distraction in the classroom, however, smartphones can be an important educational tool and students need to be taught how to use them responsibly and to their fullest potential.

I was made aware that phones can be used in class for educational purposes and have had some success, taking my students outside the classroom for fieldwork. I must stress that it is important to set clear expectations with the students before telling them to get out their phones for fieldwork because we all know they can, and will, take advantage of the opportunity.

Table 1 outlines some easy-to-use free apps that I use on my iPhone for data collection. I am sure there would be similar apps for Android phones. Some of these may seem a little self-explanatory but it is good to see them all in one place. They could also be useful for students when planning senior fieldwork and the Geographical Investigation.

For more simple fieldwork ideas in schools and staff Professional Development Seminars please contact kathy@fieldworkconnections.com.au

Kathy Jones is a Geography teacher and the Director of Fieldwork Connections, an educational fieldwork consultancy. Kathy runs professional development seminars to support teachers of geography in fieldwork and skills as well as designing simple field investigations for teachers to run on schoolgrounds and senior fieldwork investigations aligned to the new Stage 6 syllabus.

Fieldwork and Smartphones

Table 1 Smartphone Apps for Fieldwork

Data collection tool	Smartphone App (for iPhone)	Fieldwork ideas and Syllabus links
Identification of animals and plants	iNaturalist Google Lens (in the separate Google app.) BirdCount – Birdlife Frog ID NSW Weedwise	Collecting insects in different ecosystems to identify trophic levels (Sustainable Biomes). ID invasive plant species along a creek line (Env.Ch&Mngt). ID bird species and number in the schoolgrounds (Env.Ch&Mngt). ID Frogs from their calls in the local creek (WW).
Sound meter	Decibel Meter	Measure traffic noise levels along different roads (P&L).
Light meter	LUX Lightmeter	Measure light intensity and add air temperature with a thermometer around the school to investigate micro-climates (P&L).
Photograph to annotate	Camera	Modern day field sketch. Annotate on computer.
Compass	Compass app	Basic direction (aspect). Orienteering compass is better so students learn the skill to use a compass with bezel. Wind direction (aeolian processes, L&L, EnvCh&Mngt).
Latitude and longitude coordinates	Compass app Google Maps – drop pin, info in white section at bottom of screen.	Use during fieldwork, data collection, and locations.
Navigate a suburb	Google Maps – blue circle with a right turn arrow in bottom right corner. Enter your destination, select person walking icon.	Students use on fieldwork to navigate around a suburb or to take public transport (CP).
Site or place location	Google Maps – drop pin, in white section at bottom of screen select 'Save', create 'new list' and save your location with a symbol. Google My Maps (different to Google Maps).	Locate your sample/data collection locations on a map. Site photographs can also be added in Google. Google My Maps and other sampling information to use in fieldwork report.
Air and shipping routes	Flightradar24 TrackashipUniversal	Students ID planes flying over school and collect data on where they are going (Interconnections).

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*

- *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 classrooms*) 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

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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 E*ducation Working Papers,* No. 161. OECD Publishing. https://www.oecd-ilibrary.org/education/harnessing-spatial-thinking-to-support-stem-learning_7d5dcae6-en

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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.

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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.

Geography Teachers' Association of NSW & ACT Feedback on the Draft (HSIE) K-6 and Geography 7-10 Have your say Round 2 consultation for Geography

The Geography Teachers' Association of NSW & ACT (GTA NSW & ACT) is pleased to provide a response to the 2024 Have your say Round 2 consultation for Geography Years K-6 and 7-10. GTA NSW & ACT acknowledges that NESA has consulted extensively with the wider community to produce a high quality draft syllabus document for Geography K-6 and 7-10. We welcomed the opportunity to participate in the second round of focus groups to provide qualitative feedback on the changes made as a result of the Round 1 Have your say period. The general consensus from GTA NSW & ACT Council and members is the refinements made have strengthened the syllabus.

The comments listed include feedback from GTA NSW & ACT Councillors and members. A detailed analysis of the Draft (HSIE) K-6 and Geography 7-10 syllabus was undertaken by Associate Professor Alaric Maude. Alaric's feedback is included in Appendices 1 and 2.

Feedback on Draft 7-10 Geography Syllabus

Strengths

GTA NSW & ACT Councillors and members have indicated they like the following aspects:

- Refinements made have strengthened the syllabus
- Links to the concepts and skills in each content heading
- Skills and tools are easier to follow and the content areas are logical, clear and specific
- Detailed examples of fieldwork are provided
- Focus on indigenous culture and perspectives, reduced content is good
- Syllabus layout is clear and logical
- Content is broadly the same as current syllabus
- Sustainable Biomes incorporates food and food security
- Improved topic on Biomes and Sustainable Agriculture.

Areas where further improvements could be made:

- Syllabus could have a better balance between physical vs human geography (with not enough physical)
- For students in some regional and rural areas, their populations have been significantly altered. Could this be recognised in the urban unit of stage 5 instead of focusing on an Australian city. This would be more relevant to focus on for some places
- Can aquaculture be considered as an agricultural practice in Stage 5 Biomes and Sustainable Agriculture?
- Provide a detailed glossary
- Refer to Appendix 2 for additional comments.

Other general comments

GTA NSW & ACT Council and our members would like to see more support and guidance through the suggested examples.

GTA NSW & ACT and our members look forward to being able to look at the teaching advice that will accompany the final version of the syllabus.

Indigenous perspectives need to be authentically integrated and this will require funding. There will need to be meetings with local stakeholders to provide professional learning to staff. Teachers will need to give up their time to work with Indigenous Peoples to ensure the knowledge relates to the local nation and is not general or tokenistic.

Feedback on Draft (HSIE) K-6 Syllabus

Strengths

GTA NSW & ACT Council and our members welcome the refinements made as they have significantly improved the syllabus. GTA NSW Councillors and members have indicated they like the following aspects:

- Explicit inclusion of maps, graphs and data for each stage of learning.

Feedback on the Draft (HSIE) K-6 and Geography 7-10 Have your say Round 2 consultation for Geography

- Including geographical tools within dot points will encourage the integration of skills, tools and content – e.g., describing settlement patterns in Australia using satellite images.
- Good connections are made to English and Mathematics for each content heading.
- Explicit lists of content to cover in each topic – e.g., locating the seven oceans and five continents.
- Integration of content points and expanded examples.

Suggestions for further improvements

- On page 25, change the last dot pint to 'Research and explain how people and agencies manage places when extreme weather events occur'.
- Refer to Appendix 1 for additional comments.

Other Comments

GTA NSW & ACT Council and our members look forward to being able to look at the teaching advice that will accompany the final version of the syllabus.

The syllabus encourages teachers, where possible, to establish and maintain relationships with local Indigenous groups in order to effectively deliver content (pages 10 and 11). Could the NSW Aboriginal Education Consultative Group (AECG) receive funding to ensure that Aboriginal communities are fairly compensated for their time and knowledge sharing?

Thank you for the opportunity to provide feedback for HSIE K-6 and Geography 7-10 Have your say Round 2.

Appendix 1

Comments on the HSIE K-6 Draft syllabus Round 2 consultation

Associate Professor Alaric Maude

Early Stage 1

p. 15

In the content for 'Places can be located and described using geographical information', the dot point 'Locate land, water and Australia using world maps, globes and images' is very vague. Does 'land, water' mean locate the land masses and oceans of the world, which is in Stage 1. If it doesn't mean that, what does it mean?

The dot point 'Compare natural and human features of Australian coastal and inland places using Tier 2 and Tier 3 vocabulary' is also vague. Is the aim to compare the features of inland places with coastal places, or to compare places that are located in both inland and coastal areas? The focus in Early Stage 1 should be on places that students know.

The dot point 'Recognise that Aboriginal and Torres Strait Islander Peoples connect to Country and Place and the features of both in a variety of ways' would be much more appropriately located under the content heading of 'Aboriginal Peoples are connected to Country' on p. 16.

p. 17

Only one of the dot points describing the content for 'People show their connection to places using geographical information' is about showing people's connections with places. This section of content lacks coherence.

p. 17

The content under the heading 'People care for Australia's water environments' is too big and too disparate to make a manageable topic, because it includes rivers, lakes, beaches and oceans. In Stage 1, it would be better to focus on local water environments and how they are used.

p. 21

The content under the heading 'People use geographical information to understand environments' includes items that have nothing to do with the heading. Some dot points are about physical environments, but others are about Aboriginal methods of mapping, cultural environments (e.g., the Sydney Opera House), settlement patterns and the features of countries of the world. The last of these ('Compare countries of the world and their features') is impossibly broad and unfocused.

Feedback on the Draft (HSIE) K-6 and Geography 7-10 Have your say Round 2 consultation for Geography

The first content item under the same heading is: 'Identify and compare climate zones of Australia using choropleth maps showing temperature, humidity, vegetation and seasonal rainfall, and display data in column graphs.'

This statement is confusing. To develop a basic understanding of Australian climates, students should study maps of temperature and rainfall, but these are isoline maps, not choropleth maps. The seasonality of rainfall is also important, but is best shown by graphs. Climate 'zones' should be climate 'types' (such as Mediterranean), as these can then be compared with similar types in other continents. Climate types are best illustrated by graphs of monthly temperatures and rainfall. Köppen, in footnote 48, is a climatic classification which corresponds with types of vegetation, not a vegetation classification.

p. 22

The heading 'People have responsibility to care for Australia's environments sustainably' needs rethinking. Grammatically it means that the care should be sustainable, not the environments, which is probably not what was intended. Other problems with the content are:

1. The dot point 'Describe ways people organise places into spaces for different purposes' is not about managing environments for sustainability, but about managing places. It belongs to the second block of content on p. 25.
2. Conservation of environments is not identical to sustaining the functions of environments that support human lives. For example, the dot point 'Identify strategies that minimise waste and make the most of resources to sustainably conserve environments' is about making the use of resources sustainable into the future, and not about conserving environments.
3. The dot point 'Investigate sustainable food practices used by Aboriginal and Torres Strait Islander Peoples to protect Australia's environment' duplicates content on the previous page. Also note that Aboriginal people did not use these practices to protect environments, but to ensure the sustainability of the resources on which they depended. This is correctly described on p. 21. Some of these practices significantly changed Australian environments.

p. 25

The first Outcome is 'A student describes ways Aboriginal Peoples have maintained their Cultures, heritages and identities over time.'

There is nothing in the geography content to explain how they have done this. The same outcome is in the history syllabus on p. 27, where it is more appropriate, and where there is some explanation of how this was done. In the geography syllabus, the emphasis is on caring for Country, as is appropriate. The outcome statement should be changed.

p. 25

The second block of content has the heading 'People organise and manage places using geographical information', but of the four dot points of content only the last is about how people manage places. The others are rather mundane descriptive tasks that are of limited interest. It would be far better to use this section of the syllabus to get students examining how their own place is managed and organised.

p. 26

The first content heading is 'People can sustainably protect global environments.' Grammatically this says that people can sustain their protection of global environments, which is again not what was intended. Other problems with the content are:

- The first two dot points are not about protecting environments or sustainability. They belong somewhere else
- Footnote 75 gives the Amazon as an example of land clearing. Australia is a better example, and one for which we are responsible
- The content continues the mistake of thinking of sustainability as protecting environments.

What is missing from the syllabus?

- The concept of climate, and how climates are described
- The definition of a place
- Study of the students' own places—such as what they are like, their characteristics (which is more than features), where activities within them are located and why, how they are changing, and how they are managed

Feedback on the Draft (HSIE) K-6 and Geography 7-10 Have your say Round 2 consultation for Geography

- The use of Australian Bureau of Statistics population statistics for small areas (such as QuickStats) to describe what places are like.
- An explanation of the meaning of sustainability. The draft syllabus still shows a complete, but not uncommon, misunderstanding of the meaning of sustainability. Sustainability is not about protecting environments, but about sustaining the ways that environments support us. These ways may involve changing the environment rather than protecting and conserving it.

General comment

Too many blocks of content are too big, too unfocused and too lacking in coherence to be teachable. They need to be divided into smaller blocks similar to the structure in some of the ACARA curriculum.

Appendix 2

Comments on HSIE 7-10 Draft syllabus Round 2 consultation

Associate Professor Alaric Maude

p. 17

Footnote 2 includes a number of practices that are not relevant to the protection of landscapes and landforms.

p. 19

The dot point 'Different perceptions of the liveability of places on a range of scales from local to global' needs clarification. If the task is to study the liveability of individual places, then it is at the same scale, so does 'local to global' mean studying places in other countries? If so, this is not a change of scale. A change of scale would be to study the liveability of a suburb or town, then of a region, and then of a country, which is probably not what is intended.

p. 20

The dot point 'Global variations in environmental, agricultural, industrial, domestic and cultural values of water resources' is far too big a topic.

In the dot point 'the nature and extent of physical and economic water scarcity around the world' the terms 'physical and economic water scarcity' should be defined in a footnote.

p. 22

The same comment about scale discussed above for page 19 applies to these dot points:

- Personal, recreational and cultural connections that link individuals to people, places and environments at a range of scales
- Trends in trade flows that connect people and places at a range of scales.

pp. 22 and 23

The content on trade needs serious rethinking:

- It has nothing about the effects of interconnections and trade flows on people, places and environments, yet the syllabus states that geography is 'the study of people, places and environments, and their interrelationships'. The focus in the draft is on describing the networks and not their geographical effects.
- Trade flows, and production and consumption, are not topics likely to excite the interest of young people. The theme of interconnection covers much more contemporary issues such as the effects of digital interconnections on Australian cities, retailing, and people's personal networks. It also includes the study of the spread of pandemics, and the effects of international trade on environments, and on the carbon emissions for which individual countries are responsible.

p. 23

In the two dot points below, 'sustainable practices' are practices that are sustainable, and 'sustainable management' is management that can be sustained. Neither of them means practices or management that make the production and consumption of the selected product or service environmentally sustainable, which is what is intended.

Feedback on the Draft (HSIE) K-6 and Geography 7-10 Have your say Round 2 consultation for Geography

- Sustainable practices for managing the impacts of the selected product or service
- Perspectives of different groups on the sustainable management of the selected product or service.

p. 27

Map work for Stage 4 includes the following tasks:

- locate features on a map using area and grid references
- calculate the local relief between 2 points using spot heights and contour lines
- determine altitude of a location using contour lines
- determine the steepness of a slope by describing gradient using shading, spot heights, colour, and contour lines.

This is a lot of busy work that students do not need in order to understand the topics they are studying. Geography should be focusing the limited time in schools on higher level tasks, such as interpreting maps, and using them to ask questions and hypothesise about the answers.

p. 30

The section headed 'Towards food security' needs to include more than sustainable practices (which should also be 'sustainability practices'). Food security is also affected by poverty, conflicts, climate change, competition for agricultural land from other uses, and policies that favour exports over local food production.

p. 32

The dot point 'Diverse strategies for the effective management of sustainable urban places' also says what it probably is not meant to say. Sustainable urban places are urban places that can be sustained into the future. Australian cities seem to be doing that without much progress in the items in footnote 18.

p. 35

In the section headed 'Human wellbeing and development' the addition of development may be confusing. The footnotes suggest that there is no difference between them, but these dot points:

- The nature of human wellbeing around the world
- Characteristics and spatial patterns of development at a global scale.

imply that there is a difference. This needs to be clarified for teachers.

p. 36

This dot point 'Factors that influence human wellbeing in Australia, including cultural heritage, language and identity' completely misses the geography of human wellbeing in Australia, in particular the influence of location and the places people live in. Think of the educational differences between advantaged and disadvantaged Australian suburbs, or the effects of remoteness. Location and place are geographical concepts, and should be used more in a geography syllabus.

p. 36

These dot points should focus on local level or place-based initiatives to be geographical:

- Initiatives to improve human wellbeing in Australia and other countries
- Perspectives on initiatives to improve human wellbeing
- The role of culture, heritage and community in enhancing wellbeing
- The role of Aboriginal Community-controlled organisations in enhancing wellbeing.

p. 40

Stage 5 mapwork, which includes the following tasks, is again busy work that has no intellectual content and is not needed for students to understand the content of Stage 5:

- locate features on a map using area and grid references
- measure distances on a map using a ratio scale
- calculate area on a map using a ratio scale
- calculate the local relief between 2 points using spot heights and contour lines
- determine altitude of a location using contour lines
- identify the aspect of a slope using contour lines
- calculate the gradient of a slope as a ratio
- construct a cross-section from a topographic map.

The Geography Teachers Association of NSW & ACT Inc.

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Posters have been sourced from organisations including the Geological Society (UK), Visual Capitalist and Graphic News. GTA NSW & ACT has also commissioned some posters.

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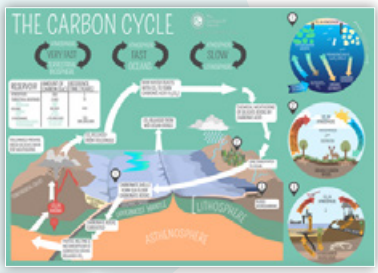

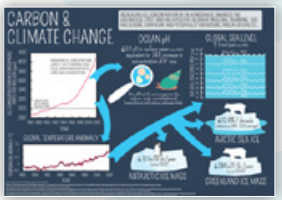

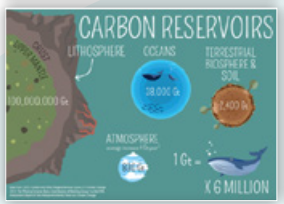

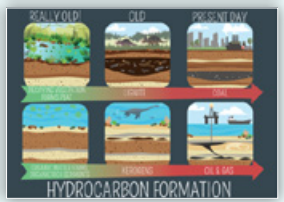

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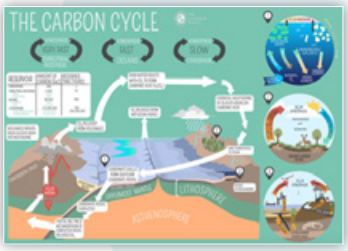

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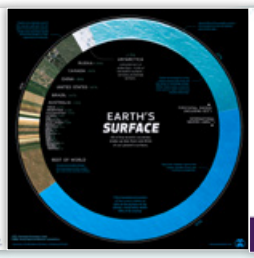

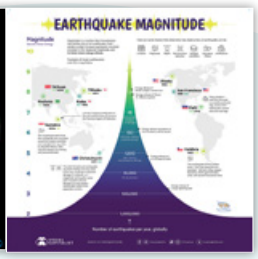

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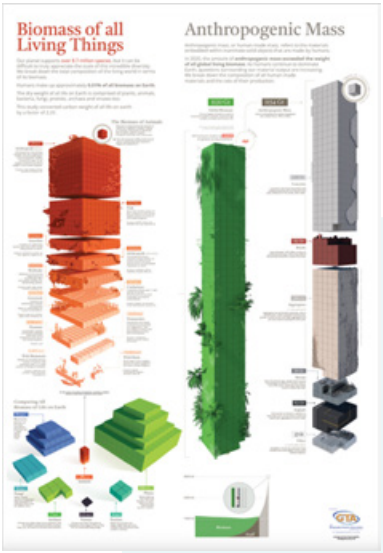

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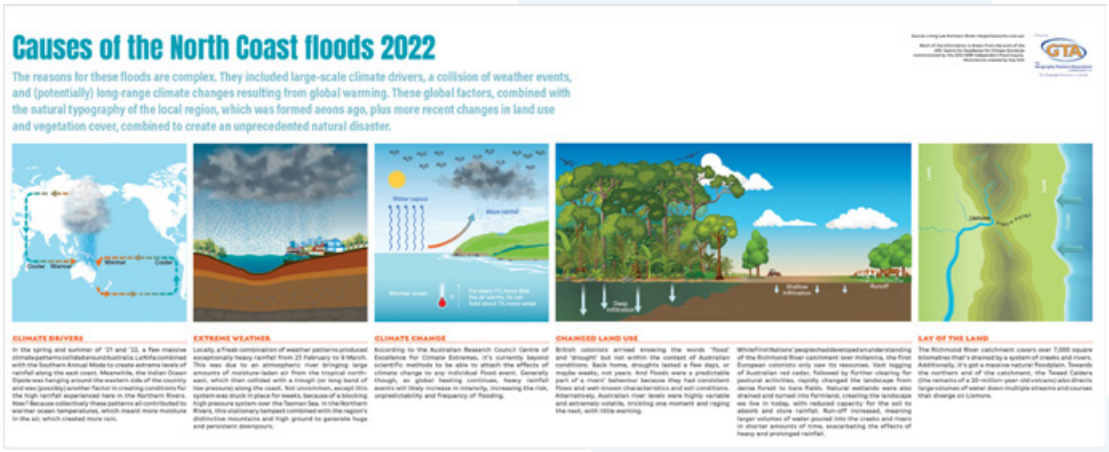

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Advice To Contributors

Geography Bulletin guidelines

1. *Objective:* The *Geography Bulletin* is the quarterly journal of The Geography Teachers' Association of NSW & ACT Inc. The role of the Geography Bulletin is to disseminate up-to-date geographical information and to widen access to new geographic teaching ideas, methods and content. Articles of interest to teachers and students of geography in both secondary and tertiary institutions are invited, and contributions of factually correct, informed analyses, and case studies suitable for use in secondary schools are particularly welcomed.

2. *Content:* Articles, not normally exceeding 5000 words, should be submitted to the GTA NSW & ACT Office by email gta.admin@ptc.nsw.edu.au

   Submissions can also be sent directly to the editor: Katerina Stojanovski (gta.admin@ptc.nsw.edu.au)

   Articles are welcomed from tertiary and secondary teachers, students, business and government representatives. Articles may also be solicited from time to time. Articles submitted will be evaluated according to their ability to meet the objectives outlined above.

3. *Format:* Digital submission in Word format.
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   - Every illustration needs a caption.
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   Diagrams created using templates should be saved as an image for ease of incorporation into the *Bulletin*.

   All assessment or skills tasks should have an introduction explaining links to syllabus content and outcomes. A Marking Guideline for this type of article is encouraged.

4. *Title:* The title should be short, yet clear and descriptive. The author's name should appear in full, together with a full title of position held and location of employment.

5. *Covering Letter:* As email with submitted articles. If the manuscript has been submitted to another journal, this should be stated clearly.

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7. *References:* References should follow the conventional author-date format:

   Abbott, B. K. (1980) *The historical and geographical development of Muswellbrook* Newcastle: Hunter Valley Press.

   Harrison, T. L. (1973a) *Railway to Jugiong* Adelaide: The Rosebud Press. *(2nd Ed.)*

8. ***Spelling*** should follow the *Macquarie Dictionary*, and Australian place names should follow the Geographical Place Names Board for the appropriate state.

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