GEOGRAPHY BULLETIN

People and Places

The Geography Teachers Association of New South Wales Inc.

Volume 54 No1 2022

IN THIS ISSUE:

PROJECTS • REPORTS • RESOURCES • ARTICLES • REVIEWS

EXECUTIVE 2022

GEOGRAPHY BULLETIN

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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.

GEOGRAPHY BULLETIN

Volume 54, No 1, 2022
EDITORS: Lorraine Chaffer

EDITORIAL

Welcome to the first edition of the Geography Bulletin for 2022 and thank you to the following contributing authors for sharing your expertise and advice.

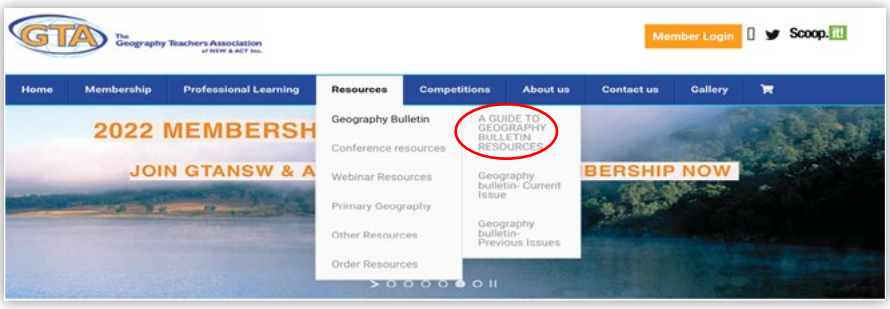
- **Kathy Jones** for *Simplifying the Science.* A guide to collecting fieldwork data for the Year 11 SGP.
- **Edmund McGrath** for *All about Urban Planning for Year 11 & 12 Geography students.*
- **Kieran Bonin** for his insightful review of *Why Study Geography* by Alan Parkinson including references to careers linked to Geography.
- **Cameron Menzies** for his 2021 *Conference Reflection* and how he used information gained from a presentation by Adrian Shipp on Place and Liveability in his own school context.
- **Christina Kalinic and Katerina Stojanovski** for *The Supply Chain* for Stage 4, Interconnections. Christina and Katerina also generously shared their tips for *Using Flashcards in Geography.*
- **Rebecca Sutcliffe** for *Urban Settlement Patterns* for Stage 5.
- **Stephanie Bowden** and **David Proctor** for articles on Human Wellbeing. In *Human Wellbeing and Children* Stephanie explains how her school approaches this topic while David provides teaching ideas for kinaesthetic learners that can be used when teaching this topic.
- **Martin Pluss** for *First Nations Peoples, Australia: building awareness, knowledge and understanding.* Martin has also contributed *Local Geography: Fieldwork at school*
- **Lorraine Chaffer** and **Lynne Strong** for explaining how the Action for Agriculture program *The Archibull Prize* embeds careers, knowledge about an agricultural industry and the Sustainable Development Goals in a cross curricular program that includes Geography in *Geography, Agriculture and Careers.*

An invitation to contribute

Please consider contributing to the *Geography Bulletin* to share the wonderful resources and activities you use in your classroom with your colleagues. Contributors receive free classroom posters and are automatically considered for the annual **Geoff Conolly Award** for contributions to the *Geography Bulletin.* Contributing to a journal is a professional learning activity with many benefits, particularly for those in, or seeking, leadership positions. A guide to contributing authors can be found on the website. .

Accessing past bulletin resources

Did you know that on the GTA website there is a document titled A GUIDE TO GEOGRAPHY BULLETIN RESOURCES that contains direct links to articles published in GTA Bulletins since 2015. After logging in, use the guide to see what articles have been written for the topic(s) you are teaching. Links will take you directly to the PDF which you can download or print and share with your students. Many articles are resources with student activities. Find this document using the RESOURCES TAB at the top of the website.



Lorraine Chaffer

As an example of hyperlinked articles in the guide, the following table is a collation of all of the articles that relate to fieldwork published since 2015.

Lorraine Chaffer

Editor

A GUIDE TO GEOGRAPHY BULLETIN RESOURCES: FIELDWORK

FIELDWORK	
Fieldwork equipment and its use + Apps for fieldwork PPT by Lorraine Chaffer **** All topics 7–10***	Volume 52, No 4, 2020 Volume 52, No 4, 2020
Geography comes alive through fieldwork by Susan Caldis	Volume 47, No 1, 2015
A Geography lesson out of every window: Fieldwork in 50 by Susan Caldis	Volume 52, No 4, 2020
Fieldwork: Choosing a suitable fieldwork site GeogSpace resources collated by Lorraine Chaffer	Volume 48, No 4, 2016
Low-cost fieldwork in a pandemic + Kolombo Creek Fieldwork PPT by Fleur Farah **** Water in the World***	Volume 52, No 4, 2020 Volume 52, No 4, 2020
Year 7 Fieldwork: Investigating an environment by Grace Larobina **** Developing Fieldwork Skills in Year 7***	Volume 48, No 3, 2016
Assessment Task: Newcastle Grammar School **** Place and liveability***	Volume 52, No 1, 2020
Investigating soils with fieldwork by Jen Robinson **** Sustainable Biomes***	Volume 52, No 4, 2020
Using Geographical Fieldwork to tackle misconceptions about place by David Latimer **** Changing Places***	Volume 53, No 1, 2021
Inquiry based fieldwork: Is Sydney's 'Central District City' a liveable and sustainable city by Sharon McLean **** Changing Places / Environmental Change***	Volume 51, No 2, 2019
Fieldwork activities: Changing Places by Louise Swanson **** Changing Places***	FW Volume 50, No 2, 2018 FW Volume 50, No 2, 2018
Differentiating geography fieldwork to address students' needs by Louise Swanson	Volume 48, No 3, 2016
Keeping it local by Kay Dunbar **** Environmental Change***	Volume 51, No 3, 2019
Minnamurra River: From source to sea ***** Appendix 2 Fieldwork Data Collection sheets*** **** Environmental Change***	Volume 51, No 3, 2019 ** Volume 51 No 3, 2019
Investigation environmental change on the south coast by Chris Main **** Environmental Change***	Volume 52, No 4, 2020

A GUIDE TO GEOGRAPHY BULLETIN RESOURCES: FIELDWORK continued

Fieldwork: Urban Places: Urban Dynamics Case Study 1: Barrangaroo by Grace Larobina	Special HSC Edition, No 1, 2018
Fieldwork: Urban Places: Urban Dynamics Case Study 2: Sydney by Grace Larobina	Special HSC Edition, No 1, 2018
Urban Dynamics of change at Sydney Olympic Park, Newington, Rhodes and The Waterfront by Jaye Dunn	Volume 52, Special Edition, 2020
Incorporating Fieldwork references into HSC answers by Lorraine Chaffer	Special HSC Edition, No 1, 2017
Fieldwork Essentials by Louise Swanson	1. Special HSC Edition, No 1, 2018
1. Preparing for Fieldwork	
2. Conducting Surveys and Interviews	2. Special HSC Edition, No 1, 2018
3. Basic fieldwork tools and techniques **** Tourism***	3. Special HSC Edition, No 1, 2018

VIRTUAL FIELDWORK and VIRTUAL EXCURSIONS

GTA NSW & NSW Great Southern Reef SR Google Site https://sites.google.com/view/gtanswactgreatsouthernreef/virtual-fieldwork # SEE tab for Virtual Fieldwork by Lorraine Chaffer **** Environmental Change / *Ecosystems***	Volume 53, No 4, 2021 Volume 53, No 4, 2021 PPT
Related Bulletin content	
Virtual excursions by Melissa Ellis **** Landforms & Landscapes***	Volume 50, No 2, 2018

FIELDWORK / IN-SCHOOL EXPERIENCES – EXPERIENTIAL LEARNING

Oxfam Hunger Banquet: Experiential Learning Event by Catherine Donnelly	Volume 53, No 1, 2021
The Refugee Challenge by Holly Burgmann	Volume 51, No 3, 2019

FIELDWORK – GEOGRAPHICAL TOOLS and SKILLS

Unpacking the K–10 Syllabus: Geographical Inquiry skills and tools by Lorraine Chaffer	Volume 48, No 2, 2016
Engaging with geographical tools and skills by Sharon Mclean	Volume 48, No 2, 2016
GEO-inquiry: A National Geographic Resource – National Geographic	Volume 49, No 3, 2017

Also in this Edition

Geography 2021 HSC Achievements. Page 8

GTA support for teachers and students in 2022. Page 10

President's Report

Dr Susan Caldis

Welcome everyone to a new year of teaching Geography. Hopefully our in-person return to the classroom is going smoothly and we are drawing confidence in knowing that we can be adaptive and responsive in our pedagogical practice for geography.

As I commence my third year as President, I would like to use this report to set the scene for the year ahead. In looking ahead, whilst it is important to ensure the Association caters specifically for the needs of Geography teachers in NSW and ACT, it is also important to continue to ensure we do so in alignment with the bigger picture of and for the discipline of Geography.

During my time on Council and as President, I have spoken many times about the Decadal Plan for Geography, *Geography: Shaping Australia's Future* (National Committee of Geographical Sciences, 2018). This document offers a framework for engaging research, teaching and industry that aligns strategically with contemporary social, economic and environmental challenges of our region. Chapter 13 is targeted at Geography in Australian Schools and there are key recommendations to ensure the future of Geography flourishes within the school education and initial teacher education context. The recommendations of Chapter 13 continue to frame the focus for Association activities, advocacy and messaging over the next 12 months, particularly around:

- Geography and STEM;
- increasing awareness about the urgency of out-of-field teaching in geography;
- developing collaborative opportunities between school and university geographers.

If you have not yet had the opportunity to do so, I encourage you to download and read *Geography: Shaping Australia's Future* https://www.science.org.au/files/userfiles/support/reports-and-plans/2018/geography-decadal-plan.pdf as part of your professional reading and if time is tight, please ensure you have a read through Chapters 1, 2 and 13.

The *Professional Standards for the Accomplished Teaching of School Geography* will also feature in our work ahead as another testing point for identifying where our focus and activities connect with evidence-based practice and recommendations from research. The GEOGStandards can be accessed via https://www.agta.asn.au/files/Professional%20Standards/geogstandards.pdf

Throughout 2021, Council continued to respond to the need for change in professional learning during uncertain times. It was challenging to make decisions about how to best respond to the demands of teaching and delivery of professional learning in an ongoing pandemic-era. The 2021 Annual General Meeting (AGM) occurred online on 22 November 2021, hosted on Eora Nation, the unceded lands of the Cammeraygal People. I verbally presented the Annual Report of the Association to those in attendance. The written report will be available in an upcoming edition of the *Geography Bulletin*. The AGM confirmed there will be a small increase to the fee structure for 2022. The AGM also brought some changes to our Council for the year ahead, and we both farewell and welcome Councillors.

For 2021–2022 the governance of Council is shown in Table 1 and this information will also be available on the Association website.

Table 1: Governance of GTA NSW & ACT Council for 2021–2022

Name	Position
Dr Susan Caldis	President
Lorraine Chaffer	Vice President (Immediate Past); Journal Editor
Dr Grant Kleeman	Honorary Treasurer; Public Officer
Dr Paul Batten	Vice President
Katerina Stojanovski	Vice President; Minutes Secretary
Alexandria Warnock	Vice President
Stephanie Boden	Councillor

Kieran Bonin	Councillor
Michael Da Roza	ACT representative; Councillor
James Harte	Councillor
Christopher Jenkins	Councillor
Grace Larobina	Councillor
John Lewis	Councillor
Alexandra Pentz	Councillor
Martin Pluss	Councillor
Rebecca Sutcliffe	Councillor
Karen Bowden	Co-opted
Drew Collins	Co-opted
Amy Freshwater	Co-opted
Keith Hopkins	Co-opted
David Latimer	Co-opted
Sharon McLean	Co-opted
Katherine Simpson	Co-opted

The GTA NSW & ACT Council for 2021–2022 remains strong with reach across the ACT and regional NSW, including the Central West, Hunter, Illawarra and Shoalhaven regions.

I would like to take the opportunity to farewell and thank Paul Alger, Cath Donnelly, Adrian Harrison, and John Petts for their time and contribution to the Association and work of Council. We know our paths will continue to cross and we wish you the very best in your endeavours beyond GTA NSW & ACT.

I would also like to acknowledge the sustained contribution of David Latimer, Keith Hopkins, and Sharon McLean to the work of Council; each remain with us for 2022 but this time as co-opted members. I would like to extend my thanks and appreciation to David Latimer who stepped into a Relieving President role for six months during 2021 whilst I completed my doctoral thesis.

The Executive group changes slightly for 2021–2022 with Katerina Stojanovski being new to the Vice President role.

I would also like to welcome five new members, Stephanie Boden, Kieran Bonin, Amy Freshwater, James Harte and Christopher Jenkins. We have much to learn from your fresh eyes over Council, and from your experiences in regional and metropolitan classrooms. On behalf of Council, let me say that we look forward to you sharing your insights during the year.

The Awards of *Life Membership to GTA NSW & ACT*, and of *Outstanding Service to the Profession* are immense accolades and recognition of significant contribution and active service to the Association and to geography education. I am delighted to share with you that in 2021, Lorraine Chaffer and Sharon McLean were announced as receiving *Life Membership to GTA NSW & ACT* at the AGM. Catherine Donnelly was awarded *Outstanding Service to the Profession*. The citations are available in this edition of the Bulletin and I encourage you to read through the inspiring work enacted by Lorraine, Sharon and Catherine.

There is much to look forward to in our program for 2022. During Terms 1 and 2, our professional learning events will occur online-only. During Terms 3 and 4, our professional learning events will move between blended and in-person form. There will be opportunities to engage with Council in-person through small social events. Planning for all events are underway. A couple of examples for Terms 1 and 2 are identified below, and further information will be distributed shortly:

- an online HSC geography 'Meet the Marker' focused event (March 2022)
- an online symposium focused on showcasing STEM in geography (May–June 2022)
- an in-person social night with GTA NSW & ACT Council to celebrate GeoNight – an initiative of the International Geographical Union Commission for Geographical Education (April 2022)
- the webinar program to run in Terms 2, 3 and 4; the suite of e-learning courses available across Terms 1–4.
- an in-person networking event with the Geographical Society of NSW (May 2022)

Wishing you all an enjoyable Term 1 and I look forward to our paths crossing.

Dr Susan Caldis
President, GTA NSW & ACT

The Geography Teachers' Association of NSW & ACT

Life Membership awarded to Lorraine Chaffer

Citation

Lorraine provided transformative leadership of Geography Teachers Association NSW & ACT. She has greatly enhanced the professional standing of the Association and the quality and scope of its support for geographical education in NSW and the ACT.

Lorraine joined the Geography Teachers Association of NSW and ACT as a councillor in 2006. As a member of Council and, especially during her term as President, Lorraine's focus has been directed towards the provision of Teacher Professional Learning events that reach across career-stage requirements. She has also demonstrated a passion for the creation of quality teaching resources.

Lorraine immersed herself into the activities of the Association and has taken on several roles including Vice President (2010–2016); and Co-Editor and Editor of the Journal (from 2014 until the present time). She is a prolific contributor of articles to the journal in addition to her editor roles. Most recently, Lorraine held the role of President (for 2017, 2018 and 2019). Even though Lorraine was constitutionally required to step down from her Presidency after a three-year term, she retained the responsibilities of Journal Editor and until recently Convenor of the Annual Conference.

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. In recognition of her contribution Lorraine been awarded a Fellowship to the Association (2009); Rotary Pride of Workmanship Award (2013); the Brock Rowe Award for excellence in the teaching of Geography (2013); Geoff Connolly Award for an outstanding contribution to the journal (2016); and the PTC NSW Outstanding Service Award (2017). Lorraine was the recipient of 2020 PTC NSW Exceptional Service to the Profession Award

Lorraine's tenure as President of the Association was characterised by her tremendous vision for what geography education could become in NSW. The vision became reality as she worked tirelessly and collaboratively to develop buy-in from Councillors and advance the profile and reputation of the Association. The inspiring way in which Lorraine encouraged Councillors to develop their leadership skills by taking responsibility for various programs provided by the Association is also a distinctive feature of Lorraine's governance. Two significant projects undertaken by Lorraine as President include:

- Leading the development of a new website and the introduction of a banner as the public face of the Association which underpins the framing of professional learning – Collaborate, Inspire and Learn
- Leading constitutional change to formally and legally incorporate the ACT into GTA NSW so that the Association became GTA NSW & ACT.

Lorraine's vision for quality geography education in schools has been realised in various ways. She has tremendous passion for enriching and including primary teachers in professional learning for and engagement with geography; and she helped successfully steer many geography teachers through their navigation of a new syllabus. Perhaps the most notable of these is the introduction of a two-day Annual Conference program of technology-enhanced geographical learning experiences, which span keynote sessions to interactive workshops to fieldwork participation to structured networking.

Pre-COVID-19, Lorraine was instrumental in working with the Executive at the time to spiral out the Annual Conference program into a Regional Conference or Roadshow. Lorraine joined a core group of presenters who take the key messages and activities from the Annual Conference to areas of NSW where Geography teachers are often working in isolation and are not always able to access professional learning in metropolitan areas.

Lorraine's contribution to the Geography Teachers' Association of NSW and ACT, and to geography education is immense and exemplary. The extensive array of peer-nominated awards and appointments within geography education which have been achieved by Lorraine, demonstrate the high esteem in which she is held. Her reach spans from curriculum directorates to the classroom, from the broader community to the Council of the Geography Teachers Association of NSW and ACT.

Lorraine's work ethic, productivity and ideation for geography education is held in high esteem by all on Council. She is responsive to needs of teachers across all career stages, and also responsive to needs of the time. Lorraine's passionate, evidence-informed, professional and service-oriented approach towards developing understanding about the importance of geography education is inspirational.

In recognition of Lorraine's significant and continuous contribution to the Geography Teachers Association of NSW & ACT it is deemed appropriate for her to be awarded the honour of Lifetime Membership to the Association.

Susan Caldis
President GTA NSW & ACT

GEOGRAPHY 2021 HSC ACHIEVEMENTS

The Geography Teachers Association of NSW & ACT recognises the hard work and achievements of all Geography students and their teachers in 2021. We hope that the knowledge, understanding, skills and capabilities developed studying Geography to the end of stage 6 will assist students in their future careers.

The GTA Council congratulates the top ten students and their teachers for outstanding results achieved in the 2021 HSC Examination. The dedication needed to achieve at the highest level is a credit to each student and those who provided guidance and support in what was a year of unprecedented challenges and interruptions. Well done.

1. Sarah Wilson, The Hills Grammar School
   Teacher: Helen Laidler
2. Kepei Tan, Merewether High School
   Teacher: Rachael Tonks
3. Phillip Ma, Sydney Grammar School
   Teacher: Brett Marturia
4. Heidi Elizabeth Shaw, Abbotsleigh
   Teacher: Sean Kelleher.
5. Vivien Kuru, Newcastle Grammar School
   Teacher: Kirsten Williams
6. Callum Berry, Sydney Grammar School
   Teacher: Chloe Robson
7. Harrison Hardge , Sydney Grammar School
   Teacher: Shona Newall
8. Oscar Tilden, Edmund Rice College
   Teacher: Steven Sunderland
9. Tom Bell Bird, Sydney Grammar School
   Teacher: Annabel Furley
10. Max Hawkins, Sydney Grammar School
    Teacher: Chloe Robson

Source: https://educationstandards.nsw.edu.au/wps/portal/nesa/about/events/merit-lists/top-achievers-in-course

The Geography Teachers' Association of NSW & ACT

Life Membership awarded to Sharon McLean

Citation

Sharon McLean has been a member of the Geography Teachers Association of NSW & ACT (GTA NSW&ACT) Council since 2000. Sharon's insightful observations about research and practice in geography education, and her caring ways extended to all, have enabled Sharon to have immense impact in developing the work of Council and the practice of those around her. During these 21 years of service to the Association, Sharon held the roles of Councillor and Vice President; she generously gave her time and shared her experiences and expertise to support the work of Council and develop the profile of geography education in NSW schools. To do so Sharon devised new initiatives for Council to consider, was involved in the revisioning of existing initiatives, and was willing to travel around Sydney and NSW as required. Now, in the era of zoom, Sharon still prioritises her attendance at GTA NSW&ACT meetings, events, and planning sessions.

Sharon is known for offering and enacting generous, extensive support to multiple Association events including:

- active involvement in the planning and development of the Annual Conference, including the set-up, preparation, and MC'ing duties of multiple conferences especially those at Parliament House, and the conduct of presentations at each Annual Conference over the years;
- convening and leadership of the regional conference program;
- introduction of a webinar program;
- hosting HSC Review afternoons for markers and teachers and the provision of lectures for HSC Exam Preparation events;
- co-ordination of geography skills focused workshops
- marking of entries for Fieldwork Awards during school-holidays;
- regular contributions to the *Geography Bulletin*
- contributing to Association responses around curriculum reviews.

Sharon continues to shape the important work of Council. Four areas in which Sharon's ideation and action over time has enabled the teacher professional learning program to remain responsive and adaptive to needs of membership and time are:

- introduction and convening of our first and early blended form meetings to enable regional Councillors to attend and participate in Council meetings prior to the pandemic
- organisation of videographer for selected Annual Conference sessions and HSC Student Lectures
- the coordination of accreditation paperwork and active seeking of a research informed evidence base so that teacher participation in professional learning is duly recognised
- the introduction of Café Conversations as a free of charge, dialogic space of care during the 2020 lockdown, additional to the scheduled webinar program

Sharon's reputation as a transformative and influential Councillor has been recognised within and beyond the Association:

- Sharon was awarded the Brock Rowe Award for exceptional geography teaching in 2006;
- Sharon was one of the first recipients from GTA NSW & ACT of the PTC NSW Outstanding Service to the Profession Award;
- Sharon was appointed on multiple occasions by the New South Wales Education Standards Authority as the GTA NSW & ACT representative on the syllabus development and review committee
- Sharon was awarded the prestigious Geoff Connolly Memorial Award in 2019 for her article *Is Sydney's 'Central District City' a liveable and sustainable city?*, published in Volume 51, No 2. 2019. Peer reviewers noted the paper as one of most relevant articles to teachers of geography due to its quality of writing and use of an evidence-base, its ease of implementation 'as-is', and the overall transferability of ideas to different city or suburb contexts which will greatly assist teachers in targeting fieldwork activities to their local context.

Sharon is held in high esteem by all on Council. Her work ethic, considered and calm responses, care for others, and capacity to reimagine existing items on the professional learning program which responsive to needs of the time are regularly acknowledged by all who know and are fortunate to work with Sharon. Sharon's outstanding active and sustained contribution to meetings, conferences, workshops, and the *Geography Bulletin* for almost two decades demonstrates Sharon's passionate, evidence-informed, professional and service-oriented approach towards developing the importance of geography education in the hearts and minds of both teachers and students.

In recognition of Sharon's significant and continuous contribution to the Geography Teachers Association of NSW & ACT it is deemed appropriate for her to be awarded the honour of Lifetime Membership to the Association.

Susan Caldis
President GTA NSW & ACT

GTA NSW & ACT Support for Teachers and Students in 2022

Professional Learning events

- **Semester 1** – HSC Meet the Marker
  - Symposium
  - GeoNight social events
- **Webinar Program** – Terms 2 to 4
- **Online learning courses** – Anytime PL
- **Semester 2** – Potential Stage 6 Conference

Keep up to date with upcoming events. Visit the GTA website **HERE**

Online Social Media Support

- **Facebook page**
- **HSC Teachers Group**
- **Primary Teachers Group**
- **Twitter @gtanswact**

Resources

- **Geography Bulletin**
- **Geography Bulletin Guide** (Find any article)
- **Classroom Posters**
- **Scoop.it** media curation site. Topics K–12

For Students

- **HSC Exam preparation support**
- **Young Geographer Awards**

PTC NSW Outstanding Professional Service Award – Catherine Donnelly

Catherine has been an active member of the Geography Teachers Association of NSW and ACT (GTA NSW & ACT) since 2015. In this time Cath has contributed to:

- the effective functioning of the association
- the professional learning of teachers of Geography in NSW / ACT and other states
- the association's advocacy for geography in critical state and national forums through her active involvement in state and national level meetings and consultations.

Cath has given generously of her time, expertise, and resources to help grow the association and maintain the high-quality professional learning of teachers for which the association is known. Cath was promoting the value of GTA NSW & ACT membership and services such as the HSC Examination Review in the Newcastle and broader Hunter region long before seeking election to the GTA Council.

Cath has taken on significant roles as a GTA councillor that have included co-ordinating the HSC Exam Preparation lecture series; creating and managing the associations social media profile through the GTA Facebook Page and associated groups and presenting at GTA NSW & ACT Annual Conferences, The Australian Geography Teachers Association Biannual Conference, GTA NSW & ACT Senior Geography Conference, and regional events, particularly those held in Newcastle. Cath's presentations have been extremely popular thanks to her down to earth, practical and relevant advice on topics as wide ranging as organising environmental days, whole year fieldwork, fieldwork on school premises, summative and formative assessment and the Senior Geography Project.

Cath's expertise in the teaching of Geography, her deep knowledge about NESA assessment requirements and ability to evaluate assessment schedules and advise teachers on best practice plus her capacity to lead teachers in the use of effective literacy and numeracy strategies have made Cath's contribution to GTA NSW & ACT invaluable.

In addition to her work with GTA NSW & ACT Cath has been an association representative on the Professional Teachers Council NSW (PTC NSW) Board of Directors since 2017. She has used this position to promote the work of professional associations and to keep GTA NSW & ACT Council connected to the work of the PTC NSW and broader professional associations. Cath's work in this space culminated in the position of Honorary Secretary in 2021. This role is further testament to Cath's belief in the power and importance of all Professional Teacher Associations as well as GTA NSW & ACT.

Overall, Cath has made a sustained and outstanding contribution to the association's support of teachers and education in NSW over an extended period of time through her coordination of association Awards, administration of our social media channels, regular contribution to the *Geography Bulletin*, coordination of events and also through her contribution to the PTC NSW Board.

Cath's commitment to, and work for, GTA NSW & ACT makes her a very worthy recipient of the 2021 Professional Teachers Council NSW Outstanding Professional Service Award.

POSTERS POSTERS POSTERS POSTERS POSTERS POSTERS

GEOGRAPHY POSTERS FOR SALE

GTA NSW & ACT has printed a number of infographic posters for classroom use.

Posters are linked to topics studied in Geography K–12 for the Australian Curriculum and NSW Syllabuses.

- A **bank of questions** for individual and groupwork will be accessible via Google Drive to all schools /teachers purchasing posters.
- Posters can be purchased in **pre-packaged sets** or as **individual posters**.
- **New posters** will be added to the website throughout the year.

SOURCES AND PRICING

Posters have been sourced from organisations including the Geological Society (UK), Visual Capitalist and Graphic News. GTA NSW & ACT has also commissioned some posters.
Posters are being sold in sets of 4 or 5 to make postage viable. Affordability was a key consideration when determining pricing.
Administration, printing and distribution, licensing and design costs where relevant are incorporated into the cost of each pack.
Postage includes the cost of cylinders. A maximum of 5 posters will be packaged in any postage cylinder.

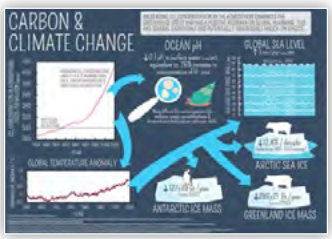
PACK 1: THE CARBON CYCLE – $70 includes p/h

Contents:

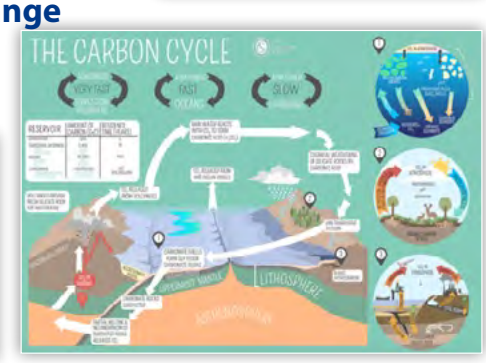
Click here to order Pack 1

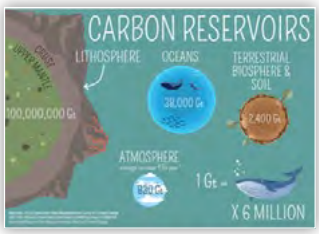
1 x A1 poster: **The Carbon Cycle**

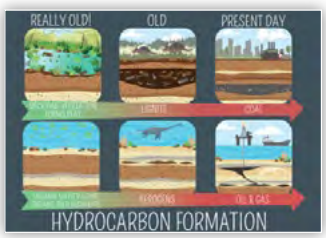
4 x A2 posters: **Carbon Set**



– **Carbon & the Greenhouse Effect**
– **Carbon Reservoirs**
– **Hydrocarbon Formation**
– **Carbon & Climate Change**







POSTERS POSTERS POSTERS POSTERS POSTERS POSTERS POSTERS POSTERS

GEOGRAPHY POSTERS FOR SALE

PACK 2: GEOGRAPHY CONTENT – $81 includes p/h

Click here to order Pack 2

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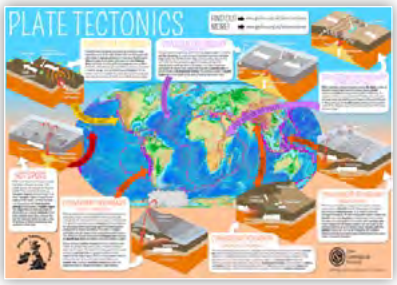
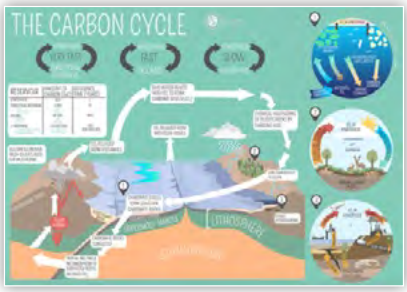


- **Plate tectonics**
- **Minerals in a smartphone**
- **The Carbon Cycle**
- **On the Brink: The biggest threats to Earth's biodiversity**



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A1 = 594mm X 841mm
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Up to 5 posters $15 postage (1 cylinder)
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- **Biomes and Ecosystems** (A1 size)
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- **UN sustainable development goals**

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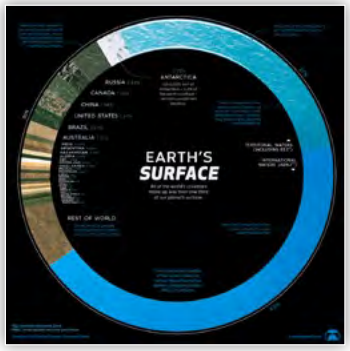

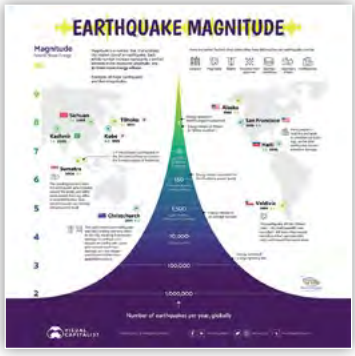

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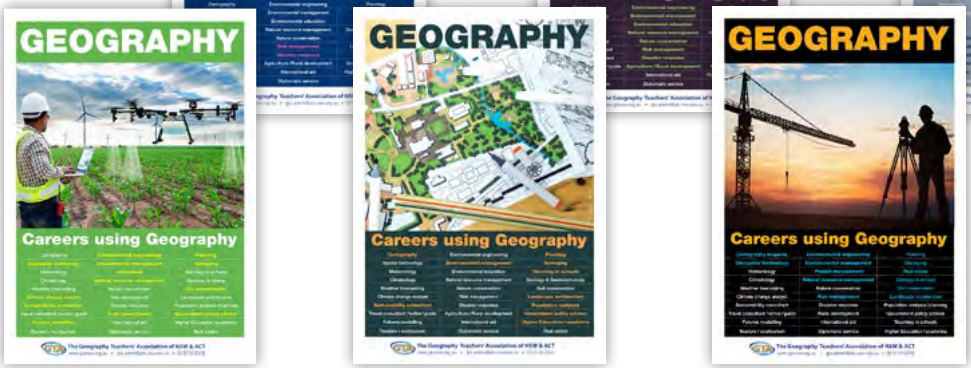

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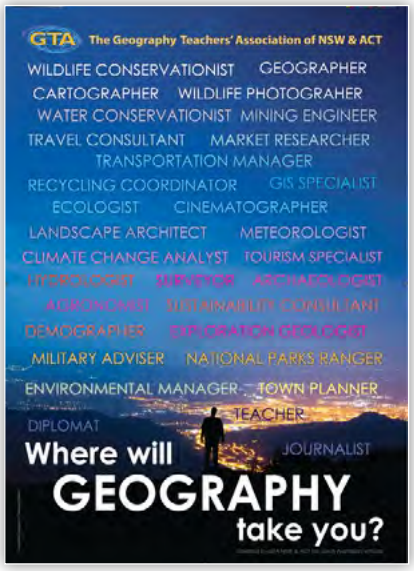
GEOGRAPHY AND CAREERS: Making the links

Lorraine Chaffer, Vice President GTA NSW & ACT



Raising awareness every day

As Geography teachers we have an important role to play in showcasing where Geography fits into different careers as well as highlighting the **workplace skills and capabilities** developed through geographical studies and inquiries.

GTA have developed a series of small A3 sized posters showcasing different careers with a link to Geography and are currently developing a **NEW SERIES** of three larger posters.

The first of these is Where will Geography take you? **Now available for sale.**

The other two posters in the series will include

- a redesign of the Pathways with Geography (course offerings in tertiary institutions).
- A mind map design showcasing workplace skills developed through a study of Geography.

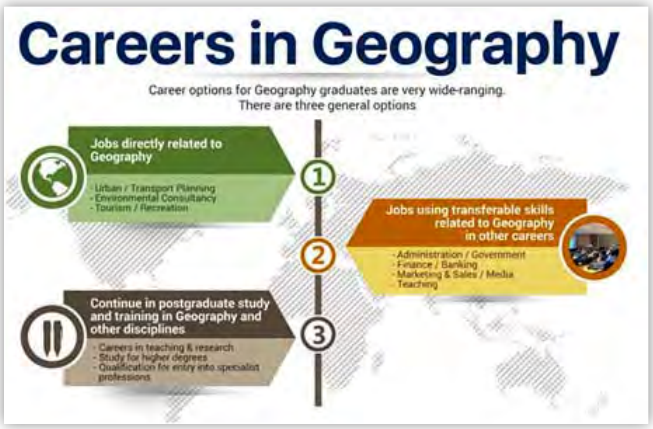
GTA has financially supported TWO *I am a Geographer* career videos produced by the Geography Teachers Association of Victoria (GTAV).

Watch **Catherine Kerr** (Information Delivery Officer), **Sam Amirebrahimi** (Developer and Community Relations Lead, Oceania) and other videos in the series **HERE**

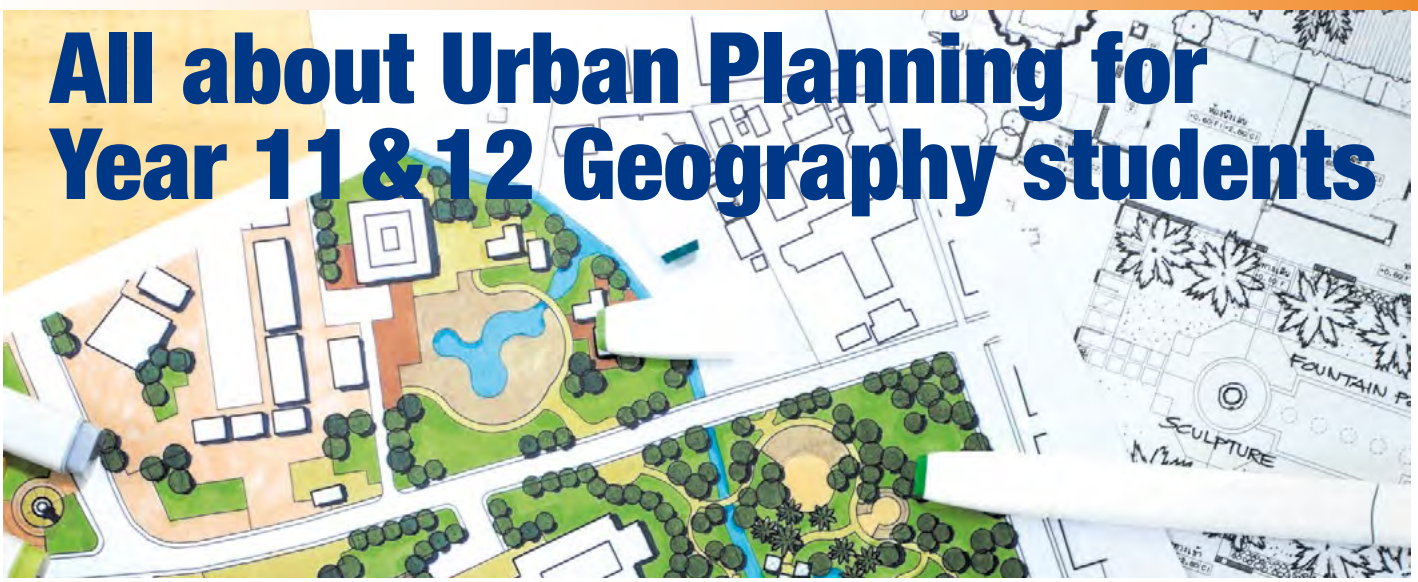
Other profiles include:

- Dr Adele Bear-Crozier, Volcanologist
- Sarah Harris, Manager, Research and Development, Country Fire Authority
- Simon Kuestenmacher, Demographer The University of Melbourne

Through our affiliation with the Australian Geography Teachers Association (AGTA) GTA NSW & ACT has provided input for a CAREERS WEBSITE to be launched early in 2022. Watch the GTA website for an announcement.



All about Urban Planning for Year 11&12 Geography students



Edmund McGrath
Planning Officer, Department of Planning and Environment

Geography and Urban Planning are so closely related and the transition between the two is refreshingly smooth and painless. This is how I felt it anyway. I always loved Geography, I studied it all the way through school and University and after being a High School Geography Teacher for a few years I took a sidestep into the wonderful world of Urban Planning. I continue to tutor Geography and one thing I love is that I can use case studies I see and hear in my day job to help students. Nevertheless, anecdotally at least, Urban Planning is still not getting the love it deserves as a really interesting career choice and study tool for students of Geography.

FOR STUDENTS

Urban what?

Urban Planning used to be more commonly known as Town Planning and is sometimes called Regional Planning or City Planning depending on the context. This can be very confusing for students who are likely to come across a range of degree programs, all using different names. These names include: Urban and Regional Planning (USYD), City Planning (UNSW), Urban Management and Planning (WSU), or Regional and Urban Planning (Southern Cross). Furthermore, it is also commonly part of a broader university degree, such as a Bachelor or Environment and Sustainability (ANU).

Rest assured, these degrees all teach the same fundamental skills needed to be an Urban Planner. The range of titles reflects the fact that it is very hard to define what does and what does not fit within the bubble of Urban Planning. Geography students often remark; 'hey this isn't Geography, it's Economics!' (or biology, or sociology). As an Urban Planner, day in day out, I too find myself in a similar situation, wondering if I am, in fact, an Ecologist, Lawyer, Architect, Engineer or Demographer.

So, what do Urban Planners do?

This is the great part of being an Urban Planner, you get to dabble in a range of fields. For example, if there is a new apartment block that a developer plans to build, they will check the government rules and regulations for that location to see if it is permissible to build. Did you know that most locations have limits on how high a new building can be? The developer may discover that the height of the building they are planning is not allowed. Of course, we live in a democracy and the developer has every right to lodge an application to the government to review these limits. This is called a 'planning proposal'.

For Urban Planners working in the State government like myself, one of our many jobs is to assess such an application. We will consider social, environmental, and economic ramifications of increasing the allowed height of a building on the site. This is not a simple process, and to make the best decision possible we need to ask for expert reports such as architectural designs, assessments by ecologists, studies of how transport will be affected, and the list goes on. Generally, Urban Planners will not write any of these reports, but we will have to read and understand what they say.

In the end, an application is approved if it is judged to have 'strategic' (broad scale) and 'site specific' (local) benefits which outweigh the costs, the Urban Planner will need to write a report to justify the decision and help rewrite the planning 'rule book' – which we call a Local Environmental Plan – to make the change.

Is that all they do?

This is definitely not all that Urban Planners do, there are hundreds of different roles an Urban Planner can have, but the one common feature is ***how*** we do our job. We make decisions on the best possible land use for an area now and into the future, thinking equal parts socially, environmentally, and economically. We also have to be able to understand a little bit of a large number of different fields of expertise. In this sense, if you have ever done a personality test and being categorised a 'peace maker' or if your friends describe you as a 'jack of all trades', you will probably enjoy being an Urban Planner.

What is a new and exciting area of Urban Planning?

Have you ever wondered how a National Park starts? A long time ago, the government may very well have just put a fence around some unwanted bushlands, but these days with the fast pace of biodiversity decline, we have to be really careful to protect the most important and rare ecosystem types from development. An Urban Planner may be involved in managing a team of Global Information System (GIS) experts and Ecologists to map areas based on biodiversity to inform decisions of where the reserves of the future will be. In Sydney for example, some key species Urban Planners are helping to protect with this process include the green and golden bell frog, Cumberland land snail and of course, koalas! Urban Planners will be the ones in charge of creating a long-term plan for land use in areas of sensitive biodiversity to protect it into the future.

Urban Planning is a field that wants to lead the curve of social change rather than follow it. If you want to be involved in a career that takes the global challenges of climate change, health inequality and biodiversity loss seriously, Urban Planning is for you.

Skills of an urban planner:

* vision
* data collection and analysis
* project management
* communication and collaboration
* project management

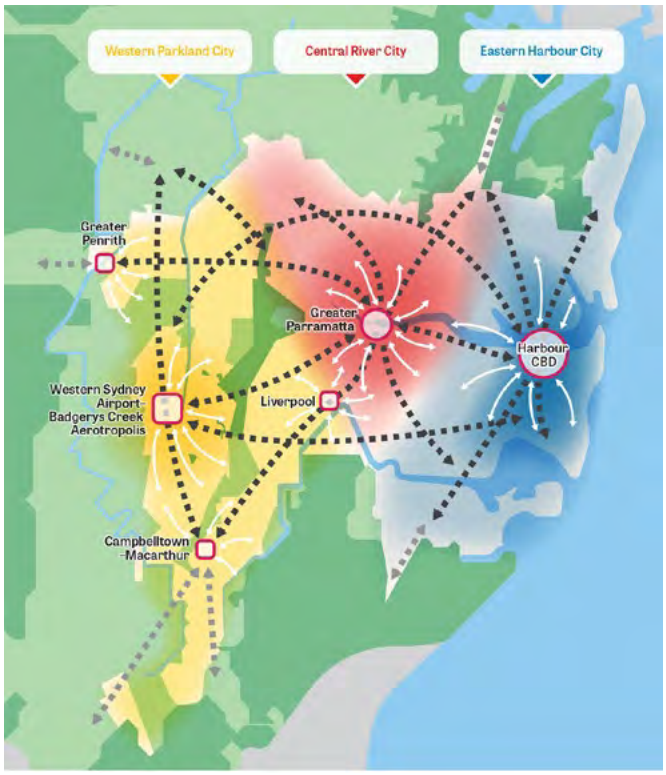
Urban Planners talk in maps

It is no secret that a big part of Geography is maps, this is also true of Urban Planning. Maps can describe what a whole essay can on just a single page, and they are also great for showing a vision for a place. So Urban Planners love maps and are often skilled at expressing things visually.

In school Geography mapping skills often emphasise accuracy, when you are an Urban Planner, many maps are more about simplicity, impact, clarity and vision. Below for example is the strategic vision for Sydney to 2056.

As an Urban Planner, you get to think creatively and leave a long-term legacy.

The Metropolis of Three Cities, a vision for Sydney to 2056 (ref 1)



Source: Greater Sydney Commission. (2018) Greater Sydney Region Plan: A Metropolis of Three Cities, available: https://www.greater.sydney/metropolis-of-three-cities/vision-of-metropolis-of-three-cities

Urban planning, Montreal. Image source: https://unsplash.com/@sergiosala

FOR TEACHERS

How can Urban Planning help students to succeed in Geography?

If you can think like an Urban Planner, you can think like a Geographer.

There are hundreds of links which could be made between the NSW Geography syllabus and Urban Planning, but one thing that overwhelmingly becomes the focus of many of my lessons is stretching students to challenge blanketed and oversimplified understandings of urban consolidation.

Excuse the Sydney centric example, but urban consolidation happens in all areas of Sydney and students might benefit from knowing that urban consolidation does not have one driving force, rather there are three key drivers: government (regulation on the one hand and strategic investment in key 'precincts' on the other), developers (necessity for return on investment, waiting for the market to be right) and the public (demand for high density living, changing demographics etc).

Have a look at the NSW ePlanning Spatial Viewer **(ref 2).**
Find your local strategic centre (Parramatta, Penrith, Bankstown, Randwick etc.), turn on the 'Land Zoning Map' layer under the 'Principal Planning Layers' section of the menu on the left, then compare what is allowed to be developed in that centre versus what you actual see. Student may benefit from discussing possible reasons behind how consolidation is playing out and comparing that to another centre.

Also note these existing planning regulations may change based on the strategic vision of the government, keep an eye out for strategic documents for your area. One which cannot be dismissed for many students is the 2020 'Pyrmont Peninsula Place Strategy' **(ref 2).**

It is important to cover the different way consolidation has played out and will play out in different centres for students to engage with objective H3 of the Stage 6 syllabus *'analyses contemporary urban dynamics and applies them in specific contexts'*

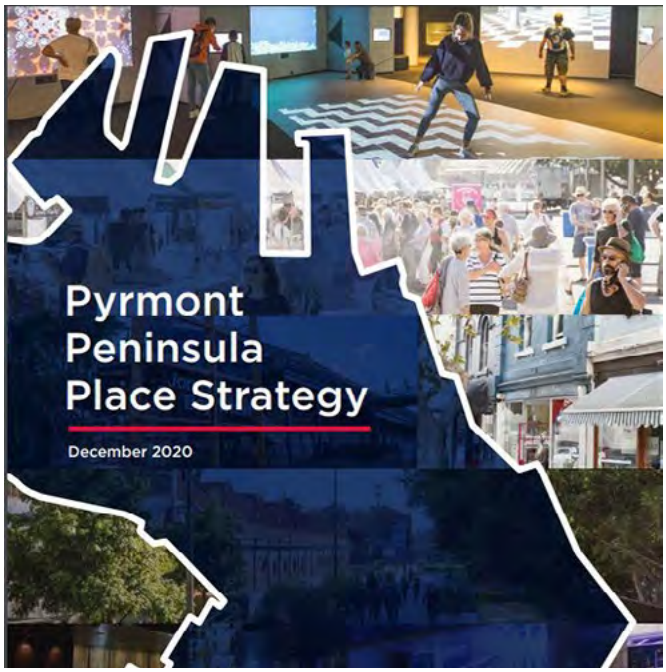
Please reach out if you have any questions or comments on how Urban Planning can become more of a focus for Geography students now and into the future. I would be happy to chat.

References

Greater Sydney Commission. (2018) **Greater Sydney Region Plan: A Metropolis of Three Cities**, https://www.greater.sydney/metropolis-of-three-cities/vision-of-metropolis-of-three-cities

NSW Government. (2021) **eSpatial Viewer,** https://www.planningportal.nsw.gov.au/spatialviewer/#/find-a-property/address

NSW Government. (2020) **Pyrmont Peninsula Place Strategy,** https://www.planning.nsw.gov.au/-/media/Files/DPE/Strategy-documents/Plans-for-your-area/Planning-for-local-communities/Pyrmont-Peninsula/Pyrmont-Peninsula-Place-Strategy-2020-12-11.pdf?la=en



About the author

Edmund McGrath has a background in Urban Planning and Education in organisations across the globe and lately in NSW Government. He has a Master of Urban and Regional Planning, Sydney University and a Master of Teaching, Deakin University.

"My purpose in my career is to deliver innovative and effective improvements to the economic, social and environmental outcomes of urban places and communities. The ideal city for me would be like a giant garden – a lot quieter and greener".

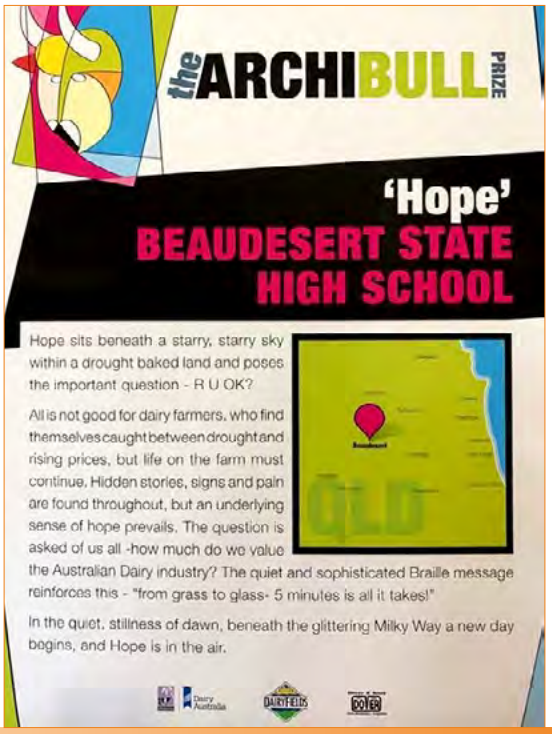
GEOGRAPHY, AGRICULTURE and CAREERS

Lorraine Chaffer, Geography Education Consultant &
Lynne Strong, National Program Director, Action4Agriculture

In 2019 I had the pleasure to attend the award ceremony for the 2019 Archibull Prize, an innovative hands-on program in which students researched an agricultural industry and related sustainability issues. Students expressed their findings through artwork on a life-sized fibreglass cow. Examples of the wonderful student artworks can be seen in the photographs taken at the awards ceremony and this video clip .

The program is now in its 14th year, reached over 300,000 students and has continued to evolve with a focus on investigating global sustainability through the UN SDG's, promoting student agency, and providing an ecosystem of support (Young Farming Champions). Connecting students to real world issues, real world people and things young people value have remained core principles of Action4Agriculture. The program design challenges students to be part of the solution to tackle the challenges facing agriculture and food security they identify. Some of these challenges are shown in the cows on display in 2019.

The Archibull Prize Grand Champion 2019. Photos by L.Chaffer



CAREERS: ACTION4AGRICULTURE

The theme for 2022 is Connect, Collaborate and Communicate to reflect the research by Corteva Agriscience "The Future of Food and Farming" that shows young producers and young consumers share many common concerns and hopes for the food system they are inheriting, and a strong desire to be involved in securing its future.

Equally important to Action4Agriculture programs is the opportunity to open the eyes of students to employment opportunities in agriculture. This is achieved through the engagement of young people who work in agriculture in each school. These Young Farming Champions (YFC) supports students and open their eyes to the diversity of careers available in agriculture. They are a component of the ecosystem of support provided by A4A to schools.

The Archibull Prize program engages school students in agricultural and sustainability awareness, understanding and action through art, design, creativity, teamwork, and project development.

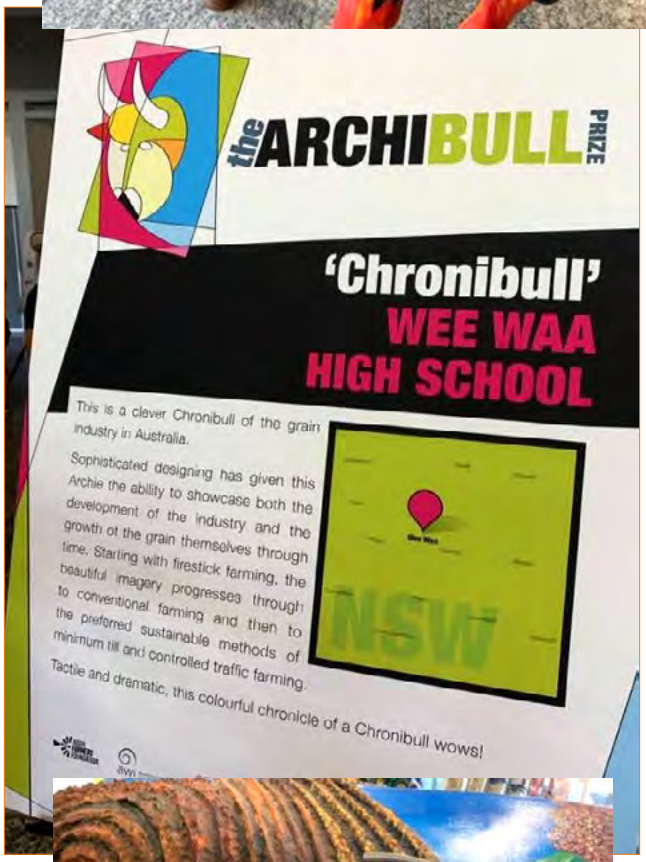
The program is aligned to the learning areas, general capabilities, all three cross curriculum priorities and the United Nations Sustainable Development Goals (SDGs).

Using critical and creative thinking students investigate and reflect on global sustainability issues through the lens of agriculture and act at a local level. The program provides students with opportunities to meet young farmers and to gain knowledge and skills about the production of the food they eat, fibres they use and the environment they live in.

Teachers, students, and their communities are inspired to have courageous conversations and become changemakers.

The artwork the students design and create becomes a legacy, reminding the community about the importance of looking after our planet and each other.

Watch founder Lynne Strong and students from St Catherine's College share The Archibull Prize journey on Channel 7 HERE or on YouTube



RIGHT: Finalist in the 2019 Archibull Prize Photos by L. Chaffer

BELOW: Survey feedback

Pre and post program surveys of students and teachers reveals large increases in knowledge about agriculture are careers in agriculture.

Learn more about Action for Agriculture, the Archibull Prize and Kreative Koalas HERE

Teachers will also find the EOI brochures and links to the application form on those pages.

ARCHIBULL PRIZE CASE STUDIES

EMBEDDING AGRICULTURE IN THE GEOGRAPHY CURRICULUM

The Action4Agriculture school programs, The Archibull Prize and Creative Koalas, are cross curricular / STEM based programs linked to all key learning areas in the Australian curriculum, the general capabilities (employability skills) and cross-curriculum priorities.

In several schools, Geography has been an integral component of the Archibull Prize Program. The following Archibull Prize Case Study summaries from the Action 4Agriculture website arose from interviews highlighting the link between Geography, agriculture, and careers in agriculture and how the Archibull Prize has been delivered.

Meet Lorraine Chaffer, Vice President of the Geography Teachers Association (NSW & ACT) who shares her passion for promoting geography as a subject that integrates issues related to agriculture and the underlying science that sustainable agriculture and food security depend on.

- Lorraine's realisation that there is a lack of understanding about agriculture, its opportunities and challenges inspired her to increase her knowledge by attending conventions, which prompted connections to Young Farming Champion, Dr Anika Molesworth and then Lynne Strong of Action4Agriculture.
- Fuelled by these connections, Lorraine is now a champion of The Archibull Prize program and its integration for Geography, "It's all about STEM [or STEAM] now, and our argument is that Geography is the perfect STEM subject because we tie it all together. With geography, you can link science to what's going on at a place. Geography marries science and agriculture – it makes the learning authentic and linked to the real world through 'place'." Read the full case study HERE

Meet Amy Gill, a teacher with youth off the streets and a passionate advocate for the role agriculture plays in teaching disadvantaged kids.

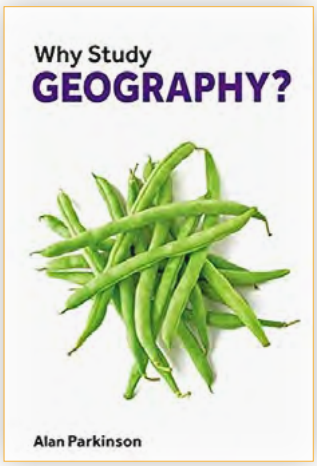
- Action4Agriculture first met Amy Gill in 2018 through the newly opened Youth Off the Streets (YOTS) school, The Lakes College (TLC), whose disadvantaged students participated in The Archibull Prize and were positively impacted by the Ecosystem of Expertise that Amy tapped into during their program participation.
- With Young Farming Champion Tim Eyes at his 'The Food Farm', the students learned about the Australian Beef Industry, had honest conversations about red meat, and discussed the importance of feeding people in poverty.
- Amy also formed the beginnings of an "amazing partnership" with the School and Grace Springs Farm in NSW, where the students initially went to discuss ecosystems and the environment and ended up inspiring a whole learning unit called Bee the Cure; centred around the remediation of the declining bee populations.
- All the project-based learning experiences supported by Archibull program connections through an Ecosystem of Expertise have inspired the students from the school to see the link between geography and science and even consider careers in agriculture. Read the full case study HERE

Meet Ray Howells, geography teacher at Pymble Ladies' College, who has integrated 'ecosystem of expertise' into the stage 5 geography program.

- Pymble Ladies' College Geography teacher Ray Howells began his own local Ecosystem of Expertise by sending an email call-out to the wider Pymble community to foster student interest in agriculture through local support with The Archibull Prize, which has prompted a flourishing relationship with Blantyre Farms in Young, southwest NSW, and family business Montrose Dairy in southern VIC.
- Blantyre Farms is a mixed farming operation including sheep, cattle, cropping and pigs run by Edwina Beveridge, a Pymble Alumna, who is eager to show students examples of cutting-edge technology in the name of "challenging the student's perceptions of sustainability and agriculture".
- Montrose Dairy's Gillian Hayman (also an ex-PLC Alumna) responded to Ray's email to help students see through project-based learning that, "There are so many exciting career opportunities across all aspects of agriculture. [..] Even if people do not choose a career in ag, it's so important to understand food production and land management as a consumer." Read the full case study HERE

Source: Lynne Strong, National Program Director, Action4Agriculture https://www.action4agriculture.com.au/about-us/our-impact/#casestudies

The Archibull Prize in a nutshell. Source: Action4Agriculture 2022 brochure



Why Study Geography? by Alan Parkinson

Reviewed by Kieran Bonin, Orange High School

If I had a dollar for every time a student has smartly asked throughout my short career 'Why do we have to study Geography?', I'd be able to afford that trip to South America I've been dreaming of.

While that year 9 class, period 6 on a Friday can sometimes be difficult to inspire, the book 'Why study Geography' by Alan Parkinson has reconfirmed my own love for the subject that is Geography. The book itself is targeted at a UK market for students and their parents considering a career in Geography, answering questions such as 'Why you should study Geography beyond school?' and 'What careers you can do with a Geography degree?'. Despite some chapters being very UK focused the book itself is still a useful tool for teachers and students to have in their repertoire.

The holy grail for any Geography teacher is getting a Senior Geography class up and running. Whilst a trip to the Great Barrier Reef may be a draw card for some, often students dismiss the subject because they don't understand what a Geographer does. With a student once telling me they didn't pick senior Geography because they wouldn't like making maps for a living, any Geography teacher wanting more students picking their subject need to be across all options beyond school. This is where this book holds its strength. Alan Parkinson has gone into great levels of detail using quotes and examples across a range of high-profile Geographers, academics, and politicians. One example I now use to start my year 11 course with a quote by Steve Brace from the Royal Geographical Society stating that a Geography degree 'experiences above average rates of graduate employment and earning', with female Geographers earning 10% more than average. I then continue to show my class some examples from the book about people using Geography in real life. I like this as it shows that Geography is more than just a school subject. I am stealing some of the books quotes and examples when it comes to subject selection night.

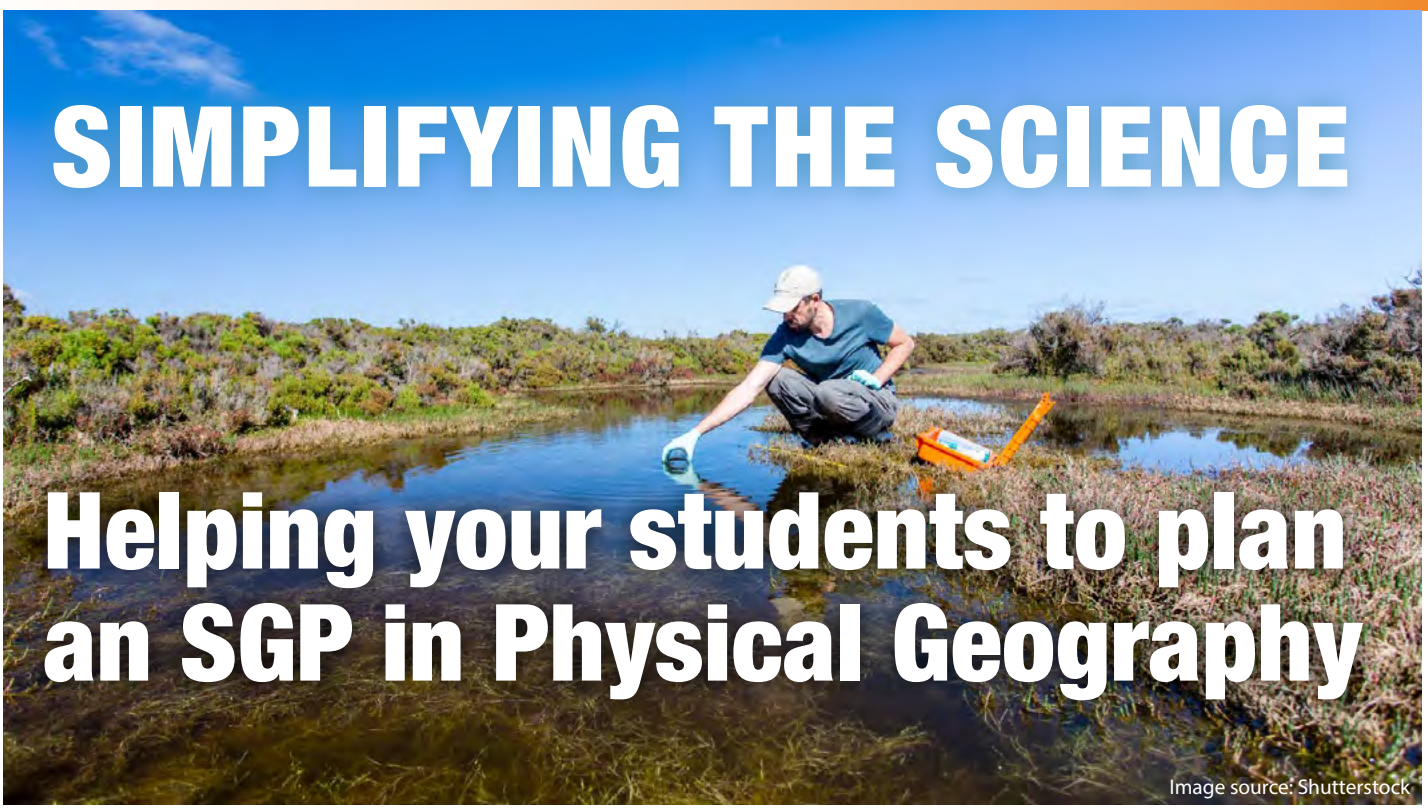
Besides helping students consider Geography as a career option, the book itself has been useful in providing resources that I can use in my own classroom. Chapter 2 provides a vast range of geo-spatial websites, tools, and idea such as earth.nullschool.net and Windy for weather, Worldmapper for cool cartograms and maps, Climate Stripes for climate change data and other free spatial software ideas you could include in your lessons. The final chapter provides a range of books, documentaries, and podcasts to enhance your geographical knowledge. Two that I did not know before reading this book that I now use was 'Time for Geography', a website with short well-made videos about key geographical concepts and the podcast series 'Ask the Geographer' which is currently tickling my geographical itch in my spare time.

As highlighted previously not every chapter is completely relevant, as someone who doesn't know the difference between a GCSE or A Level subject (used in the UK), some chapters lost me. However, keeping in mind this book was not made directly for an Australian market this shortfall was easily overlooked.

The age old joke that Geography teachers just get students to colour in does make me think, do people really know what Geography is? For any new teacher to Geography or an older one wanting to freshen up their perspective on 'Why study Geography' this book is an easy read that like it did for myself will confirm your passion for Geography.

ABOVE: The book's author Alan Parkinson. Source: https://www.kingsely.org/mr-parkinson-releases-new-book-entitled-why-study-geography/

SIMPLIFYING THE SCIENCE



Helping your students to plan an SGP in Physical Geography

Image source: Shutterstock

Kathy Jones, Fieldwork Connections

Have you ever noticed that that trees grow taller in a gully? Have you ever wondered why weeds are found along a creek? Have you ever thought why does so much run-off come from a playing field or why do we never see tadpoles in the school creek anymore?

Designing fieldwork investigations based in physical geography can sometimes seem a little daunting, especially if you do not have a background in science. However, I'm going to try and break it down so that you can encourage your students to find answers to their questions by designing their own investigations, leading to deeper understanding of their local natural environments and their impacts upon them.

The Scientific method

When designing fieldwork to collect data on processes and interactions in the natural world the best place to start is the scientific method. This is a series of steps which help to structure investigations, as follows:

1. Make an observation
2. Form a hypothesis
3. Experimental methods
4. Collect data
5. Analysis
6. Conclusion

1. Observation

An observation is the first place to begin. This involves identifying or describing a problem or asking a question about something that you observe in the world. For example, 'Many invasive species of plants grow near the creek, however, less invasive species grow further up the hill.' This is closely linked to an Inquiry Question in Geography. The observation could be turned into the Inquiry Question, for example, 'Why do more invasive species of plant grow closer to the creek?' Spend some time with your students in a local natural area and ask them to write a list of observations from what they see around them.

2. Hypothesis

The next step is turning those observations into a hypothesis. A hypothesis is simply a statement of what we are trying to prove and in science it is a statement which can be tested using the scientific method. Ask you students to get creative and brainstorm ideas to explain the observations they have made. There may be many ideas which come out of one observation, however, you will also need to ask the question, do I have the right tools to answer the question or verify the hypothesis?

Another way to look at a hypothesis is a 'cause and effect' statement of what we think we will find and the 'cause and effect' are made up of variables. Variables

are the things that are changing in an experiment. Too many variables in an experiment can make it hard to draw conclusions.

A hypothesis states the possible relationship between two variables in a way that can be tested by collecting data. The cause is called the independent variable, and the effect is called the dependent variable. For example, when designing a study based on where an organism exists (distribution) and how many are there (abundance), the locations selected for distribution (usually along a line transect) become the independent variable. We select each sampling location along the line and this can affect the species abundance at each location (the dependent variable). If we apply this to our hypothesis, 'As you move in the direction away from the creek (independent variable) less invasive species are present (dependent variable).'

3. Experiment method

The experiment part of the investigation involves designing a set of procedures to test the hypothesis. You should have already identified the variables and the data you want to collect. Before you design the procedure you will also need to:

- Visit the study area to select locations to carry out the data collection;
- determine equipment you will need and make sure it is working and you know how to use it;
- Create a data table for clear and efficient data collection on the day.

Example of data table

Distance from creek (m)	0	2	4	6	8	10	12	14	16	18	20
Weeds identified											
Common weeds	1 = Crofton weed, 2 = lantana, 3 = small leaf privet , 4 = asparagus fern										

Next, list the procedures step by step, for example:

1. Starting at the creek, lay out a 20m transect line in an uphill direction.
2. Using an invasive plant species identification sheet, identify all the invasive plants in the area.
3. Start at the 0m mark and identify all invasive plants present at this point and record them on your data sheet. Repeat this process at 2m intervals along the transect line.

Remember, don't let the student overcomplicate the investigation, keep it simple, make it achievable, use available equipment.

Some simple equipment and ideas include: transect lines (20m tape or rope) for distribution; quadrats for distribution and abundance; pH soil and water testing kits to investigate chemical characteristics of creeks and surrounding landuses; soil moisture probe and soil depth spike to compare different biophysical factors in different environments.

4. Collect data

Once the experiment procedures have been decided it is time to collect the data. As well as collecting numerical data on the data table observations about other environmental conditions on the day and a field sketch can be made. A few other considerations should also be taken into consideration when collecting data, these are validity, accuracy and reliability.

Accuracy is how close a measurement is to the true value. Accuracy can be improved by using and reading equipment properly and making sure it is calibrated before you collect your data.

Reliability is the consistency of a measure, whether the results can be reproduced under the same conditions. If you were to repeat the experiment at the same time of day, under the same weather conditions would results be similar? Reliability of data can also be improved by increasing the data set. The reliability of the experiment would be improved if data was collected from 10 transect lines rather than one or two.

Validity is how well a scientific test actually measures what it set out to. Will the experiments method actually address the aim of the experiment? For example, if you want to determine the number of weeds present moving away from a creek you need to be able to identify the plants which are weeds. (https://www.bmcc.nsw.gov.au/documents/priority-weeds-information-booklet)

5. Analysis

There is no point in collecting data unless you can analyse it to find meaning. A good way to visually represent your data is to graph it and this helps you to see relationships between the variables, or trends. A trend is an upwards or downwards shift in a data set over time and it allows you to predict what might happen in the future. A trend line is used to show the shape of scatter plot data and can be created by drawing a 'line of best fit' through the data points on the graph.

In practice, when you have an independent variable and a dependent variable you are able to graph you data in your analysis to see if a relationship exist between the two. The independent variable goes along the x-axis and the dependent variable on the y-axis. For example for our hypothesis 'As you move in the direction away from the creek less invasive species are present', the distance from the creek is the independent variable and is plotted on the x-axis, the number of invasive species is the dependent variable and is plotted on the y-axis.

6. Conclusion

Like any good conclusion you need to bring it all together interpreting your findings, stating if the hypothesis has been proved, what has been learnt, what could be done better next time and recommendations for future studies.

I hope this gives you and your students a small place to start when designing fieldwork investigations in physical Geography. I encourage you to give a simple investigation a go in a local area, get outside the classroom, learn while doing and gain a deeper appreciation of the natural world.

Please contact me for further help and information on designing simple fieldwork in physical Geography
kathy@fieldworkconnections.com.au

Local Geography: Fieldwork at School

Martin Pluss

In a survey of membership in 2021 a common request was for fieldwork resources. At Northholm Grammar we have developed an approach to build field stations on the school grounds. The approach is shared here – to be adapted, used or modified as appropriate.

The field stations are set up with QR Codes linked to Word documents of key content, skills and activities. After a review of the different NSW Geography syllabuses eight stations were established. The content changes depending on the year group completing the fieldwork. Additional QR codes are also set up to review specific data in the field such as data on flora and fauna, original Darug inhabitants, or videos demonstrating catchment management.

At each station students are guided to explore secondary sources of information and to undertake primary data collection. The balance of these activities will vary for each year cohort and topic under investigation.

The framework involves building an understanding of the local area, in this case Hornsby Shire, and then an in depth examination of the school biophysical and built environment. The eight themes can be used across all Stages of Geography.

Field Station 1 – Location of Northholm Grammar

Field Station 2 – Lithosphere: Geology and Topography

Field Station 3 – Biosphere: Flora and Fauna

Field Station 4 – Hydrosphere: Catchment Management

Field Station 5 – Atmosphere: Weather and Climate

Field Station 6 – Land use of the Built Environment

Field Station 7 – Management of the Natural Environment

Field Station 8 – The Northholm Community

There is a two-fold approach to data collection involving the collection of primary and secondary data and information at a regional and local scale within the school grounds. The field station approach at Northholm is a project under construction and continually evolving. The locations do change depending on the year group and the weather. The students are taken into the field where as a first step, the secondary resource information is shown and explained.

The data collection methods vary between the stations and this is evident when you look at the resources in the QR Code. The specific activities are still being developed but will be updated over time. For example, Year 11 undertakes an activity based on the principle of tabula rasa, where I take them to the location of the dam and ask them to record and explain what they see. Initially students are not forthcoming but with patience you can coax out observations. Then I ask them to take photos and back in class they are asked to pick six photos and annotate them in detail in a Powerpoint. To aid the process I show them a video of me explaining what I see when I explain the dam location and then they are more confident to make their own observations.

Year 11 also has the Senior Geography Project to complete and I explain to them that they can adopt the same approach for the data collection for their suburb. As I move through the stations with them they can now keep thinking back to their

suburb and potential SGP topic. Everything we do in the field is a model to approach their own research in their suburb.

Let's unpack the different stations

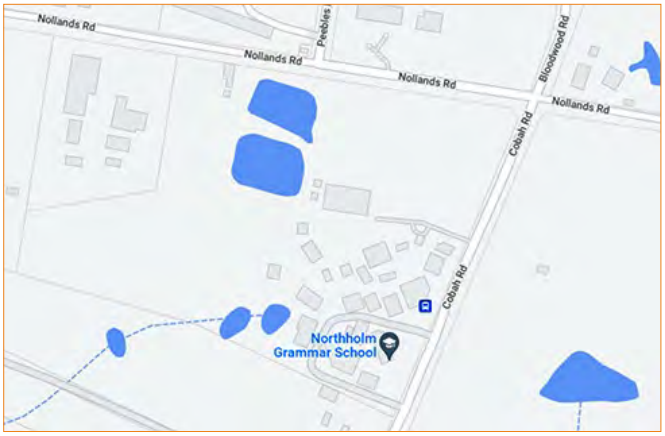
In relation to Station 1, a Google map search locates Northholm on a map between Arcadia and Fiddletown. A breakdown of the surrounding suburbs and rural communities is outlined with the use of Figure 1. I was able to obtain the exact latitude and longitude of the school using the Red Cross Emergency App on my phone. The review of location information starts with an introduction of the original inhabitants, the Darug, an outline of colonial settlement and an introduction to the geomorphology of the Sydney Basin. Basic demographics of the Shire is established through ABS Quick Stats. The use of an online terrain map enables the development of a series of skills such as direction, distance, time/speed, aspect etal. Satellite imagery is used to identify key features of the built and the natural environment.

Figure 1: Location of Northolm Grammar

Station 2 examines the lithosphere with focus on the geology and topography of the school and regional area. The geology provides the bedrock of the basin's three catchments: Central Coast , Hawkesbury Nepean and the Sydney Metropolitan Catchments. This provides an opportunity to investigate the details of the Sydney Basin in which Northholm is a small component on the Hawkesbury Plateau. One avenue of investigation is to outline the formation of the plateau and establish its relevance to the location of Northholm near the highest point on the ridgeline between the valleys. Finally, an in depth investigation of the topography in the field of the school grounds examines the types of rocks, sites of weathering and erosion and soil formation. Observations of the surrounding rural properties through online terrain and topographic maps expand student understanding.

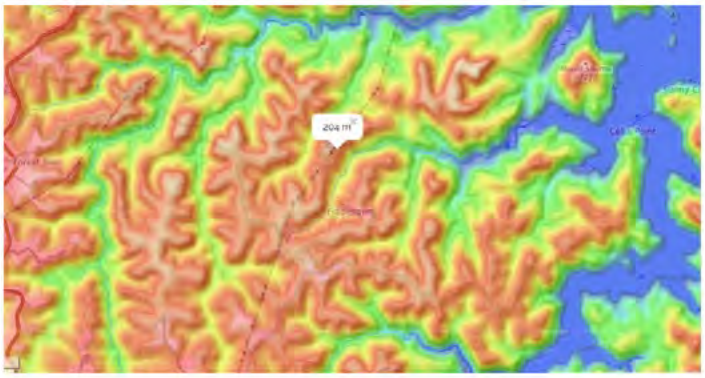
The flora and fauna of the biosphere is the focus of Field Station 3. This station provides an opportunity for interdepartmental collaboration with the Science and English faculties. The science staff were able to identify details of the local flora and fauna. From this information more specific geographical focused exercises were developed about adaptations, impact on the natural and built environment on flora and fauna. Plants and animals in their environment provide a tranquil place for reflection and to this end provides an opportunity to work with English teachers. The school already has an established sensory garden for the primary school and we now have an opportunity to have a creative writing space.

Figure 2: Catchment management at Northolm Grammar



Northholm's grounds make possible detailed hydrosphere/catchment management fieldwork at Station 4 (Figure 2). The school is accessed by ascending Cobah Road on to a ridge between the upper catchment Calabash Creek to the east and Colah Creek to the west both of which flow into the Berowra Creek Catchment. The use of an online terrain map in a tracing activity locates key creeks and tributaries, into which water from Northholm flows. An examination of gully/ gorge creek creation, linked to the geology and topography, provides knowledge of creek formation through a plateau. Specifically, in relation to Northholm, there are four dams and a series of drains, sediment traps and overflow grates. Catchment management provides

Location of Northholm Grammar QR Code Poster



From Sydney:
44kms · 46 mins by car ·

Quick Stats:
1,385 population (2016 Census)

Northholm is located in Arcadia/Fiddletown.

Arcadia is located approximately 40 kilometres northwest of Sydney in the Shire of Hornsby.

multiple opportunities to examine water management. The hands-on and visual nature of the fieldwork leads to greater engagement by students.

Weather and climate, as features of the atmosphere, are examined through Station 5. Weather and climate can be observed in a quantitative and qualitative manner. The characteristics of the climate of the region are easily identifiable with online weather data which breakdowns the elements of weather. There is a plan in place for the collection of live field weather data. Opportunities to construct and analyse climate graphs is supplemented with a breakdown of relevant factors which contribute to the climate such as topography, distance for the sea valley and plateau breezes and the southerlies.

The land use of the built environment of the Arcadia Northholm regional area is reflective of a rural community. An aerial, verbal and written walk through the region is the focus of Field Station 6. This involves a review of key facts and activities to complete on the communities of Galston, Glenorie and Berowra Waters. (There is a detailed examination of the communities in Field Station 8.) Firstly, in relation to the immediate land use a satellite map is used to identify land use. Secondly, a similar process of comparing Google Maps and satellite imagery, is applied to an analyse and activities from Glenorie to Berowra Waters. Thirdly, a systematic review of the land use on school grounds includes at least land use related to the dams, agricultural plots, parking, ovals, natural bushland, school facilities, gardens, bus bays and pathways for the movement of people (Figure 3).

Northholm is located in a rural setting with environmental management the focus of Field Station 7. Using the framework provided by Hornsby Council publications and discussions with Council Officers,

students are appraised of the bushland management strategies and the principles of Bushcare. In addition, students report on how to manage and prepare for bushfires through a three step program – discuss, prepare and know. In my case the breakthrough, in relation to locating school maps and data, came in discussions with the Campus Director. Once I started asking the right questions I got more detailed plans and maps of the topography which were used for the different building projects over the years. This enabled current analysis of the terrain and environmental management. Furthermore, access to past documents enables students to examine change over time.

Figure 3: Satellite image of Northolm Grammar

There are a number of communities which have direct and indirect interactions with Northholm. Field Station 8 enables an understanding of the communities within and beyond the Northholm Community. The starting point is the original inhabitants of the land, the Darug people. There are community newspapers like the Dooral Round Up, Galston, Glenorie, Hills Community Rural News, local community progress associations and community groups who are regular in their attendance of Hornsby Council Meetings. In 2021 the latter was an example of active citizenship where the community of teachers and parents wrote letters and spoke at a council meeting to improve the quality of narrow rural roads up the climb and on the ridge of Cobah Road.

These field stations provide content and activities for the classroom and where relevant in locations around the school grounds. Their use is a perfect opportunity to develop hybrid online and actual fieldwork activities. There are locations in the school which are suited to fieldwork in collecting data about flora and fauna , weather and climate, the movement and management of water, modification to topography due to building work, evolving land use patterns, and quiet places for reflection and yarning circles

The use of QR Codes enables a flexible approach to worksheets and instructions. They are presented on Posters with additional material (Figure 4). Depending on the year group and topic we customise the content and the activities. The QR Codes are linked to fixed documents. The QR Codes provided in this article are linked to current documents. Please note the content may vary throughout the year as updates require. The nature of the updates include links to key syllabus content and skills as well as a mixture of primary and secondary data collection modes such as videos, podcasts, photos, sketches, surveys questionnaires, statistics, reports and interviews. The QR Codes linked to these documents are provided for you to use and adapt as you wish for your school should you wish to adopt a similar approach for your geography students.

Increasingly with pressure from within schools to localise fieldwork, reduce costs, recent issues with organisation and time factors for suitable external fieldwork, the number of out of field subject teachers of geography with little or no training in fieldwork, the development of school based field stations are a worthy exercise. It will fall to the experienced geography teacher to set up but also provides a valuable opportunity for geography in your school. Firstly, it provides help transitioning students from good geography students to geographers. Secondly, it is a project in which all the faculty can work together, as well as providing an opportunity for inter-faculty cooperation. Thirdly, with the promotion of the field station approach across in the school and the wider school community, it builds the profile of geography in the school which will assist in building geography student numbers.

If you would like to discuss any of these ideas or work together please let me know.

Martin Pluss teaches Geography at Northholm Grammar. Email: martinpluss@gmail.com and Twitter: @plu

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NESA-accredited, flexible, anywhere, anytime courses available through Open Learning. All courses $90

Unpacking the HSC Geo Exam

This course unpacks the HSC Geography exam using the 2021 exam as an exemplar and explores strong approaches for teachers to prepare their students for the HSC.

The course addresses the following outcomes:

- apply knowledge of the content and teaching strategies of Geography to develop engaging teaching activities (NESA Standard 2.1.2)
- develop, select and use informal, formal, diagnostic, formative and summative assessment strategies to assess student learning (NESA Standard 5.1.2)

To access the course, go to **https://www.openlearning.com/ptc-nsw/courses/geo-hsc/**

Completing *Unpacking the HSC Geo Exam* will contribute 3 hours of NSW Education Standards Authority (NESA) Accredited PD in the priority area of *Delivery and Assessment of NSW Curriculum/EYLF* addressing standard descriptors 2.1.2, 5.1.2 from the Australian Professional Standards for Teachers towards maintaining Proficient Teacher Accreditation in NSW.

Geography 242: Teaching Landscapes and Landforms: Extension

This course further develops and extends teachers' understanding of these key ideas. By completing the learning activities participants will demonstrate their capacity to create engaging Geography lessons. Participants will be required to explain how they would implement engaging lesson ideas and strategies in relation to Landscapes and Landforms and share their ideas with fellow participants.

Skills developed in this course include:

- applying knowledge of the content and teaching strategies of Geography to develop engaging teaching activities (NESA Standard 2.1.2),
- selecting and/or creating and using a range of resources, including ICT, to engage students in their learning. (NESA Standard 3.4.2)

To access the course, go to **https://www.openlearning.com/ptc-nsw/courses/geo242**

Completing *Geography 242: Teaching Landscapes and Landforms Extension* will contribute 3 hours of NSW Education Standards Authority (NESA) Accredited PD in the priority area of *Delivery and assessment of NSW Curriculum/EYLF* addressing standard descriptors 2.1.2, 3.4.2 from the Australian Professional Standards for Teachers towards maintaining Proficient Teacher Accreditation in NSW.

Geography 141: Teaching Place and Liveability

This course examines strong approaches to teaching about *Place and Liveability*. The course explores influences and perceptions, access to services and facilities, environmental quality, community and enhancing liveability.

Skills developed in this course include:

- applying knowledge of the content and teaching strategies of Geography to develop engaging teaching activities (NESA Standard 2.1.2),
- selecting and/or creating and using a range of resources, including ICT, to engage students in their learning. (NESA Standard 3.4.2)
- The course is designed for flexible delivery, where participants can start, progress and finish at times convenient to them. The collaboration is in a 'pay it forward' style, where participants engage with previous contributions and contribute themselves – learning in the process, but also adding to the galleries of exemplars and case studies for future participants to review.

To access the course, go to: **https://www.openlearning.com/ptc-nsw/courses/geo141**

Completing *Geography 141: Teaching Place and Liveability - Beginner* will contribute 3 hours of NSW Education Standards Authority (NESA) Accredited PD in the priority area of *Delivery and Assessment of NSW Curriculum/EYLF* addressing standard descriptors 2.1.2, 3.4.2 from the Australian Professional Standards for Teachers towards maintaining Proficient Teacher Accreditation in NSW.

For other GTA NSW & ACT E Learning courses visit the website for detailed flyers and registration links.

If you have any questions email gta.elearning@gmail.com

REFLECTIONS ON THE 2021 GTA CONFERENCE

Cameron Menzies, Red Bend Catholic College Forbes

During last year's Geography Teachers Conference, I was able to attend a session run by Adrian Shipp (Head of Geography, Trinity Grammar School) entitled "Liveability: A topic to connect us all". Adrian presented a means of thinking about Liveability as a topic that can be engaging and meet students where they are at through a variety of hands-on, student directed activities.

One activity presented was a formative assessment called "Where would you live?". Students were given a scenario as a young house buying family with a budget of $700,000. They had to identify a house within the budget in one of the following locations: Sydney, Tamworth, Canberra, or Hobart. In making their decision students had to consider aspects of liveability such as education, climate, crime, transportation and natural geography.

For my school context, a co-educational Catholic School located in Forbes, I wanted to be able to help students consider the challenges and opportunities available within both their local rural context and the larger cities that they would be less familiar with. The scenario was basically kept the same with the inclusion of Forbes as an option on the list. Also included was a checklist of the geographical information that had to be included in their research report. A list of resources was provided with a series of links to help guide students in their decision making process.

Where I expanded on this activity was on the inclusion of an extension component that required students to use Google My Maps to construct their own visual representation of their chosen homes' liveability factors. Students used their prior research and the search functionality of Google My Maps to find and add locations that would contribute to liveability such as recreational activities, schools, and local restaurants. Students dropped pins on each location to which they added pictures, wrote a short description and customised the pin. This activity helped students to consider the spatial aspect of liveability and to gain a little perspective about the kind of decisions that people have to make when thinking when choosing a place to live.

Many thanks go to Adrian Shipp, all the workshop presenters and to the GTA Conference team for a fantastic conference.

Research Task: Where would you live?

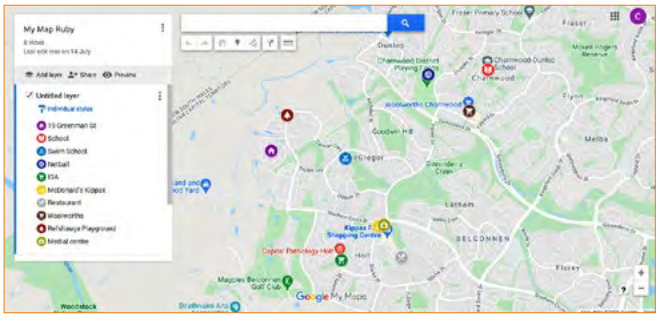
You have three lessons to complete this task. When you have completed this task upload it to Google Classroom.

Scenario:

- You have a budget of $700,000 to buy a property
- You are a young family of four with a 2 year old and a 6 year old child
- You have a choice of the following places to live:
  - A suburb in Sydney
  - Hobart
  - Canberra

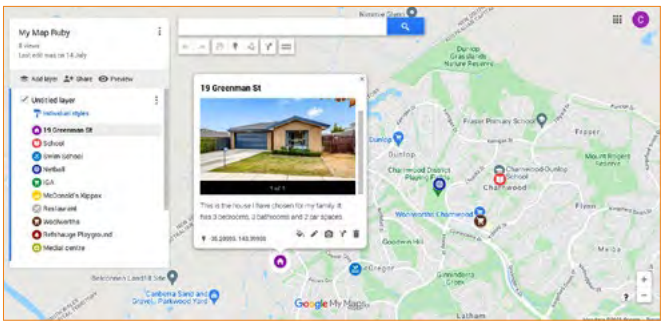
Task:

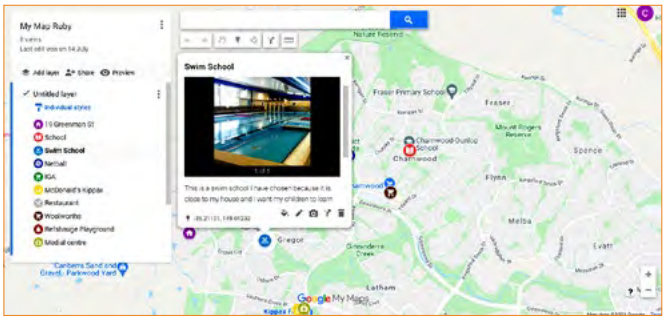
You are to prepare a report outlining a plan for this family taking into account what we have learned about liveability this term. It should be two pages and composed of words, images and geographical diagrams (e.g. satellite maps, climate graphs etc.)



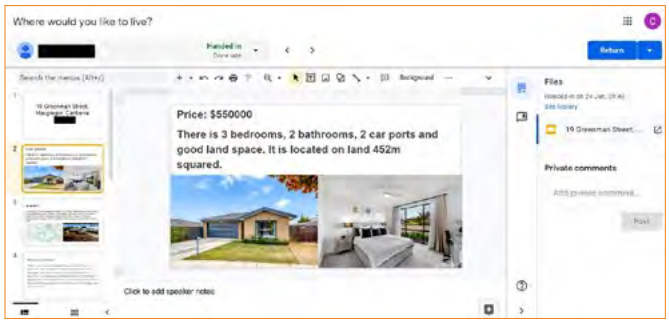
In your report you will need to include the following information:

- Information about the house that you have decided to purchase:
  - Cost of the house
  - Details about the house (bedrooms, bathrooms etc.)
  - Images of the house
  - A screenshot from Google Maps/ Google Earth of the location of the house

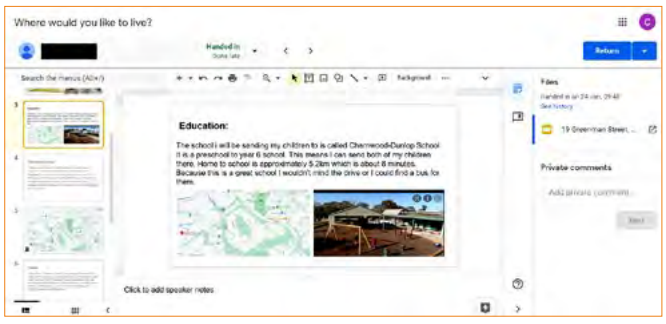




- Reasons for living in this location such as:
  - Natural geographical location
  - Climate (you could include a climate graph)
  - Recreational activities (e.g. sports clubs, community groups)
  - Entertainment options
  - Level of crime and safety
  - Location to public transport
  - Location to schools



- What family matters did you need to consider in your decision?
  - Where will the adults work? Will they have to commute?
  - Where do your relatives live?
  - What other factors might be important?

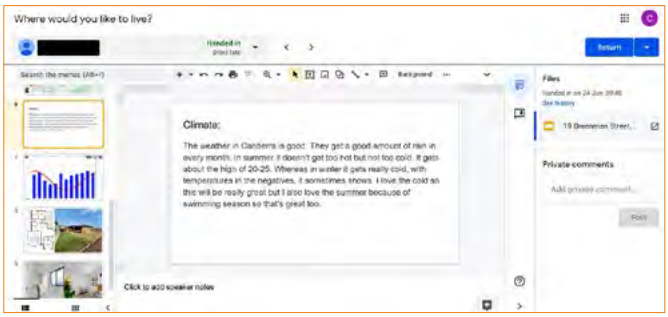


Research Task:Where would you live?

Extension Task:

- Create a Google My Map to present your findings. On your map include the location of the house, as well as other key locations important to this family's liveability.

Click here for a video tutorial on Google My Maps



Below are some website that will help get you started:

Housing:

- www.realestate.com.au/buy
- www.domain.com.au/

Climate:

- Climate-Data.org – https://en.climate-data.org/oceania/australia-140/

Recreation and Entertainment:

- Google Maps – www.google.com/maps

Crime:

- NSW Bureau of Crime Statistics – www.bocsar.nsw.gov.au/Pages/bocsar_crime_stats/bocsar_crime_stats.aspx

Public Transport:

- Transport NSW – https://transportnsw.info/

Schools:

- Good Schools – www.goodschools.com.au/

Find other material on Place and Liveability in the Guide to Geography Bulletin Resources on the GTANSW&ACT website **HERE**

Place and Liveability	
Assessment Task: Place and liveability *Newcastle Grammar School*	Volume 52, No 1, 2020
Urban Places and liveability: Design an apartment block. (Also Stage 5 Urban Places) *Jessica Skinner Crowe*	Volume 51, No 2, 2019
Place and Liveability Part 1: Some teaching ideas *Lorraine Chaffer*	Volume 49, No 2, 2017
Place and Liveability: Part 2 *Lorraine Chaffer*	Volume 49, No 3, 2017
New Zealand: Perceptions of liveability *Nick Hutchinson*	Volume 46, No 2, 2014
Liveability Assessment Unit *Dr Susan Bliss*	Volume 45, No 2, 2013

Photo by D. Nevozhai Source: https://unsplash.com/@dnevozhai

THE SUPPLY CHAIN

Christina Kalinic and Katerina Stojanovski
Stella Maris College

Syllabus Focus: Stage 4 - Interconnections

Key Inquiry Questions

- What role does technology play in connecting people to people, goods, services and information in other places?
- What are the consequences of a globally connected world for people and places?

Outcomes

- GE4-2 - describes processes and influences that form and transform places and environments
- GE4-3 - explains how interactions and connections between people, places and environments result in change

When teaching the supply chain in the Interconnections unit, one way to start is to investigate each of the stages briefly to give the students a sample of what to expect using different examples. Students can define and explain each of the stages and within each stage they can start their glossary terms. It is important they are familiar with words like extraction, processing, consumption, distribution and waste. As they move through each stage they explore:

- laptops, denim jeans and chocolate in the extraction stage
- apples in the manufacturing stage
- tomatoes, salmon and paprika in the distribution stage
- they watch extracts of 'Confessions of a Shopaholic' (2009) in consumption
- they learn about dumpster diving in waste

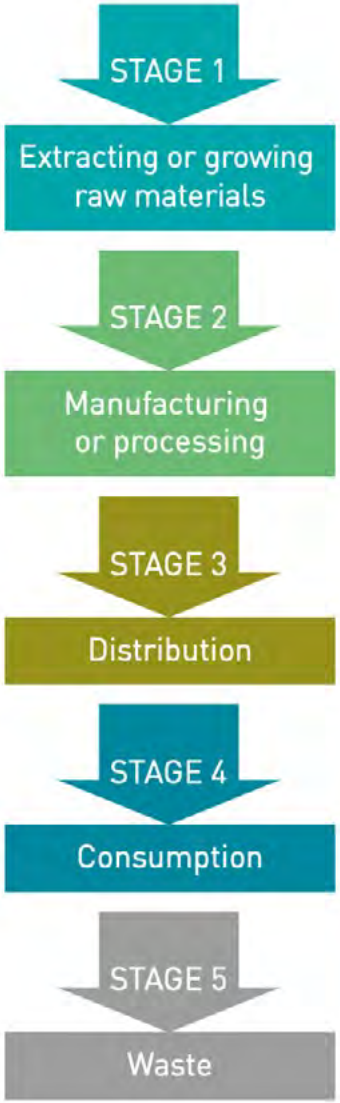
It doesn't stop at waste. The need for the supply chain to be circular as opposed to linear means we should emphasise sustainability and look at how we can reduce waste by reducing consumption, recycling and upcycling. The case study 'Sustainable fashion hiding in my fruit bowl' looks at unique ways to combat food waste.

There are four activities to support teaching the supply chain.

1. The Supply Chain
2. Introducing Gucci's sustainable packaging
3. Sustainable fashion – hiding in your fruit bowl
4. Upcycling
   The upcycling activity has student sample work included to demonstrate quick and easy ways to repurpose fashion items.

The Supply Chain

The supply chain is the journey of a product from its source to the consumer and then its disposal once used.



Sourced from: Oxford Insight AC for NSW Stage 4 – Collins et al (2017)

STAGE 1: Extracting or growing raw materials

Explanation

INVESTIGATE – What raw materials are used to make the following products?

LAPTOP

DENIM JEANS

CHOCOLATE

Extractive industries are responsible for half of the world's carbon emissions and more than 80% of biodiversity loss!

Resources are being extracted from the planet three times faster than in 1970, even though the population has only doubled in that time.

Each year, the world consumes more than 92b tonnes of materials – biomass (mostly food), metals, fossil fuels and minerals – and this figure is growing at the rate of 3.2% per year.

STAGE 2: Manufacturing or processing

Explanation

APPLES – SORTING, GRADING AND PACKING LINE

Watch *Novatec's Sorting, Grading and Packing line for Apples* at:
https://www.youtube.com/watch?v=S6v27nUONvE

Draw a labelled flowchart to demonstrate the process of sorting, grading and packing apples.

REMEMBER: use a lead pencil!

INVESTIGATE – In what countries are the different parts of denim jeans made?

Cotton for jeans: _____

Cotton for pockets: _____

Synthetic indigo: _____

Denim cloth: _____

Thread: _____

Polyester fibre: _____

Thread dye: _____

Thread wound on spools: _____

Brass wire for zip teeth: _____

Brass in buttons and rivets: _____

Polyester tape for zips: _____

STOP AND CHECK – What does BOLTSS stand for?

Add the missing BOLTSS to the map below.

B = _____

O = _____

L = _____

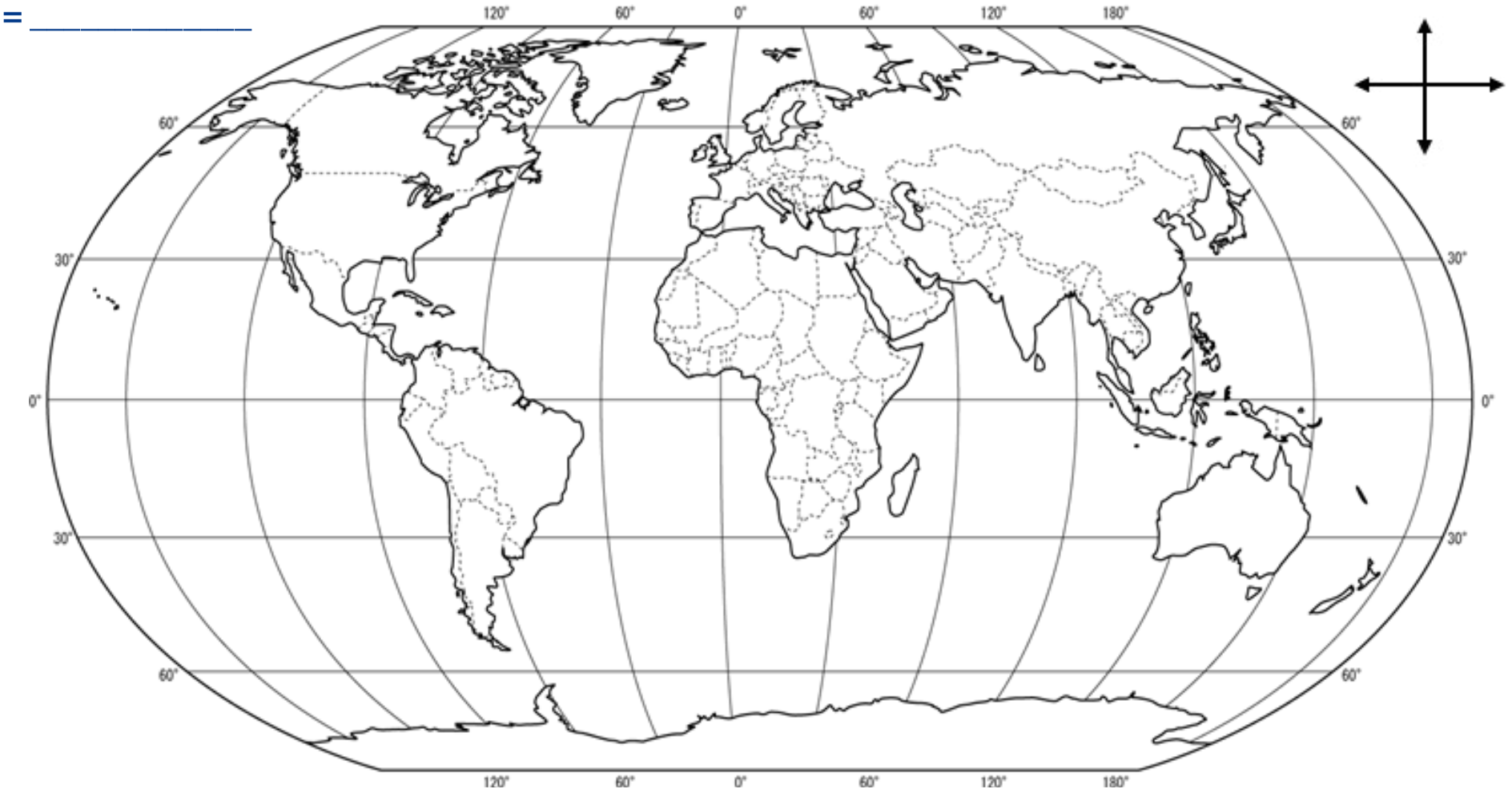
T = _____

S = _____

S = _____

1 centimetre represents: _____

I got this information from: _____



STAGE 3: Distribution

Explanation

FOOD MILES

"Food miles" are the distance food travels from where it is grown to where it is ultimately purchased or consumed by the end user.

The more food miles attached to a given food, the less sustainable and less environmentally desirable that good is.

For example: For every calorie of carrot flown in from South Africa to Europe, 66 calories of fuel is spent – this contributes significantly to CO_2 emissions.

HOW WELL TRAVELLED IS YOUR FOOD?

TASK: Help Barry determine how well travelled each item on his shopping list is!

Access the "Food Miles" calculator at: http://www.foodmiles.com/ to determine the distance each of Barry's groceries travelled.

GROCERY ITEM	DISTANCE (KM)
Tomatoes	
Chocolate	
Maple syrup	
Salmon	
Paprika	
Rice	

STAGE 4: Consumption

Explanation

POPULATION TRENDS

WATCH: The Economist's *Mapping global population and the future of the world* at: https://www.youtube.com/watch?v=Ur77lDetI9Q to help you answer the following questions.

1. **The world's population has doubled in four decades. How many people were there in: a) 1970? _____ b) 2017? _____**
2. **How many people will there be in 2030? _____**
3. **Describe the expected population changes for Africa and Asia by 2050.**

   _____

   _____

   _____

4. **On average, how many children do women in Africa have? How does this compare to the global average?**

   _____

   _____

5. **"*Populations are rising because people are ageing*". Support this statement with quantitative data._____**

   _____

   _____

   _____

6. **The top 10 countries with the fastest shrinking populations are all in eastern Europe. Identify three reasons for this.**

   i. _____ ii. _____
   iii. _____

7. **In 2100 it is projected that one-third of the world's total population will live in what continent? _____**
8. **A bigger population is a burden for three primary reasons. What are these reasons?**

   i. _____ ii. _____
   iii. _____

9. **Outline how a bigger population can also be an opportunity. _____**

   _____

   _____

MOVING OUT OF POVERTY – AN EMERGING MIDDLE CLASS

Read, highlight and annotate the KEY POINTS from the passage of text below.

In 1851, Britain hosted the Great Exhibition of the Works of Industry of All Nations showcasing the art, industry, and science resulting from the fastest expansion of wealth and the largest increase in economic opportunity that the world had ever seen. This was the Industrial Revolution, a time when new technologies increased productivity in ways previously unknown.

Just as revolutionary was another change in the functioning of British society. The old world of aristocrats, craftsmen, and laborers was not suited to 19th-century business. Contracts and invoices were needed, bank loans had to be written, and lawsuits adjudicated. Government services, such as railways and post offices to serve industry, were expanded. A new occupation arose – the clerks who could pen the needed papers, their numbers skyrocketing in England from 44,000 in 1851 to over 119,000 20 years later. And since the new breed of worker needed to read, write, and understand arithmetic, as well as stay healthy enough to work regularly, teachers and nurses were needed – thereby fuelling further professional growth.

These new occupations changed economic and social structures. Neither elite nor working class, clerks and others were referred to as "the middling sort." They saved and invested for the future, educated their children, and took responsibility for improving their lives and those of their families. As their numbers grew, they used their discretionary income to indulge in entertainment, vacations, and travel, and consumed goods of higher quality and greater variety. The Harrods store opened in 1849 selling tea and groceries to this new middle class.

And so the middle class became a consumer class, driving the economies of countries that embraced the Industrial Revolution. It ushered in an age of mass development that swept the Western world in the 20th century and is now spreading to emerging economies, especially in Asia and Latin America.

Today, this spread of the middle class across the world is one of the primary forces sustaining the global economy. In 2015, the global middle class numbered about 3 billion people who spent $33 trillion, amounting to two-thirds of the world's consumer spending.

Sourced from: https://www.pewtrusts.org/en/trend/archive/summer-2016/how-a-growing-global-middle-class-could-save-the-worlds-economy

What is the Industrial Revolution?

_____

_____

Describe the changing hierarchical structure of British society. _____

_____

_____

_____

_____

How did the "middling sort" use their discretionary income? _____

_____

_____

_____

_____

How much does the world's middle class contribute to the economy every year?

_____

_____

WATCH: *Harrods History* at: https://www.youtube.com/watch?v=Qvo5CNaRozA

_____

_____

_____

WATCH an extract of *Confessions of a Shopaholic (2009)* via ClickView at: https://online.clickview.com.au/exchange/videos/34360893/confessions-of-a-shopaholic to help you complete the table

Outline the economic consequences of over-consumption for individuals	Outline the social consequences of over-consumption	Predict the environmental consequences of over-consumption

BLACK FRIDAY SALES VS. BUY NOTHING DAY

WATCH: The Salt Lake Tribune's *Shoppers go crazy on Black Friday* at: https://www.youtube.com/watch?v=2zBWjlkKDpA

Australian's spend $10.5 billion on goods and services that are never or hardly ever used each year!

What is Black Friday?

Visit Days of the Year at: https://www.daysoftheyear.com/days/buy-nothing-day/ to answer the following questions.

a) What is it? _____

b) When is it? _____

c) How did it come about? _____

INVESTIGATE –

1. How much water is used to make:
   a) 1 cotton T-shirt? _____
   b) 1 pair of denim jeans? _____
   c) 1 hamburger? _____
   d) 1 loaf of bread? _____
2. Why has the Aral sea declined in size?

STAGE 5: Waste

Explanation

DID YOU KNOW?

Australians produce 540kg of household waste per person, each year. That's more than 10kg for every single person, every single week. Of the estimated 67 million tonnes of waste Australians generated in 2017, just 37 was recycled, leaving 21.7 disposed of in landfill. It's estimated about 130,000 tonnes of Australian plastic ends up in our waterways and oceans each year.

THROWAWAY CULTURE

INVESTIGATE – What is meant by the term "throwaway culture"?

_____

_____

_____

BRAINSTORM – Sustainable alternatives for the following goods.

a) Plastic food wrap: _____
b) Throwaway straws: _____
c) Disposable water bottles: _____
d) Take-away coffee cups: _____
e) Plastic bags: _____
f) Paper towels: _____

DUMPSTER DIVING

WATCH: TLC Australia's *Extreme Cheapskate's Dumpster-diving and fine dining buffets* at: https://www.youtube.com/watch?v=eXa1Lc6Xnv8

Would you dumpster dive? Why/why not?

_____

_____

_____

_____

_____

_____

_____

PEE POWER – Recharge your mobile phone with urine. WATCH: https://www.youtube.com/watch?v=buJhuJIACx0

What is in our urine that makes it worthwhile to recycle? _____

What is urine converted into? How is it used? _____

About REDcycle

RED Group is a Melbourne-based consulting and recycling organisation who has developed and implemented the REDcycle Program; a recovery initiative for post-consumer soft plastic.

We have teamed up with Coles, Woolworths and some of Australia's most-loved brands to make it easy for you to keep your plastic bags and soft plastic packaging out of landfill.

The REDcycle Program is true product stewardship model where manufacturers, retailers and consumers are sharing responsibility in creating a sustainable future. See our partners page to see which of Australia's most-loved brands are on board to reduce the amount of plastic packaging going to landfill.

What to REDcycle – visit https://www.redcycle.net.au/what-to-redcycle/

YES PLEASE!	NO THANKS!

WATCH: War on Waste – *Replas Recycled Plastic* at: https://www.youtube.com/watch?v=ZSFpOfSXmas

REPLAS is Australia's leading mixed recycling plastic manufacturer who aims to provide a solution for plastic waste by delivering quality cost effective sustainable products.

VISIT: https://www.replas.com.au/products/ AND identify some of the 200 different recycled plastic products Replas makes.

PROPOSAL: Main campus, Stella Maris College, Manly

Write an email to Mrs Carnegie proposing the use of at least three different Replas products for an upcoming refurbishment.

Smarties becomes the first global confectionery brand to switch to recyclable paper packaging

On 26th January, 2021 Nestle announced that its popular Smarties brand is now using recyclable paper packaging for its confectionery products worldwide.

This represents a transition of 90% of the Smarties range, as 10% was previously already packed in recyclable paper packaging.

Smarties is the first global confectionery brand to switch to recyclable paper packaging, removing approximately 250 million plastic packs sold globally every year.

The new Smarties paper packaging is sourced sustainably and is made of a coated paper, paper labels or carton board.

Sourced from: https://www.nestle.com/media/news/smarties-first-global-confectionery-brand-recyclable-paper-packaging

WATCH: Nestle's *Smarties in Recyclable Paper Packaging* at: https://www.youtube.com/watch?v=9_KqwnftHBM

BLUEPRINTS FOR A MORE SUSTAINABLE FUTURE

Kinder Surprise is a special treat that creates little moments of surprise and delight for kids with three happy experiences in one little egg: the delicious milky taste of quality Kinder chocolate, a little toy and a big moment of surprise!

TASK: Kinder turns 50!

To celebrate, design a blueprint to make Kinder Surprise chocolate toy's more sustainable.

Blueprint:

IMAGINE A WORLD WITHOUT PLASTICS

ADVANTAGES	DISADVANTAGES

INTRODUCING GUCCI'S SUSTAINABLE PACKAGING…

WATCH: *Gucci new packaging* at: https://www.youtube.com/watch?v=6O2Xr2IBGAs&t=2s

READ: *Introducing Gucci's sustainable packaging* at: https://equilibrium.gucci.com/introducing-guccis-new-sustainable-packaging/

What material are the shopping bag handles made out of?

_____

Glue is not used. How is this avoided?

_____

Describe the packaging pattern and materials used.

_____
_____
_____
_____

Why is this sustainable?

_____
_____
_____
_____

What are the ribbons made from? _____

SUSTAINABLE FASHION – HIDING IN YOUR FRUIT BOWL!

WATCH: *Turning orange peels into clothes- a unique way to confront food waste* at: https://www.youtube.com/watch?v=6yFQ2ahN8mk

ORANGES

When all of the juice has been squeezed out of an orange, cellulose fibres are extracted from the peel and pulp.

The cellulose is then spun into a biodegradable yarn – it has a soft silk-like feel.

Orange Fiber in Italy, prevents 700,000 tonnes of citrus juice by-products ending up as waste!

H&M PRESENTS: *The Small Things with Ava Claire* (Episode 11) accessible at: https://www.youtube.com/watch?v=XAWLxC-DRv4

TRADITIONAL LEATHER →

Make brief notes in the boxes below to explain how these fruits can be made into clothing.

GRAPES

PINEAPPLES

BANANAS

UPCYCLING

1. **What is upcycling?**
2. **Do you know about the three R's (reduce, reuse, and recycle)? Explain the difference.**
3. **What do you recycle and upcycle at home and at school?**
4. **What are the benefits of upcycling? Here are some suggestions:**
   - **reduces the amount of waste and therefore landfill**
   - **reduces the need for production using new or raw materials (therefore reduces air pollution, water pollution, greenhouse gas emissions)**
   - **unique, one of a kind products**
   - **Save money – for example, you could upcycle your clothes into new designs**

Image Source: Tees to Totes – upcycling your old favourites

ACTIVITY

Choose one of the following upcycling ideas to make during this lesson. Post your upcycled product in the class chat in Teams.

a. **Make a tote from a t-shirt – https://youtu.be/ob0jHgnJL0g**
b. **Make a t-shirt rug for the classroom – https://www.instructables.com/Make-a-braided-t-shirt-rug/**
c. **30 denim upcycling ideas – https://scratchandstitch.com/30-denim-upcycling-ideas-using-old-jeans/**
d. **Pinterest upcycle and repurposing ideas – https://www.pinterest.com.au/savvyb/upcycle-and-repurpose-ideas/**

LEFT: Gown was made out of an old beach dress which was reconstructed by cutting off the bottom to make new straps and added darts so it was tight fitting, then added some old fabric that was going to be thrown out) creating a new look. Made by Eva Loyez , Year 8 Geography 2021

RIGHT: Shorts from Trackies made by C J Ward , Year 8 Geography 2021

ABOVE: T-shirt Tote made by Catherine Barton , Year 8 Geography 2021

Shane Cronin, Professor of Earth Sciences, University of Auckland

Why the volcanic eruption in Tonga was so violent, and what to expect next

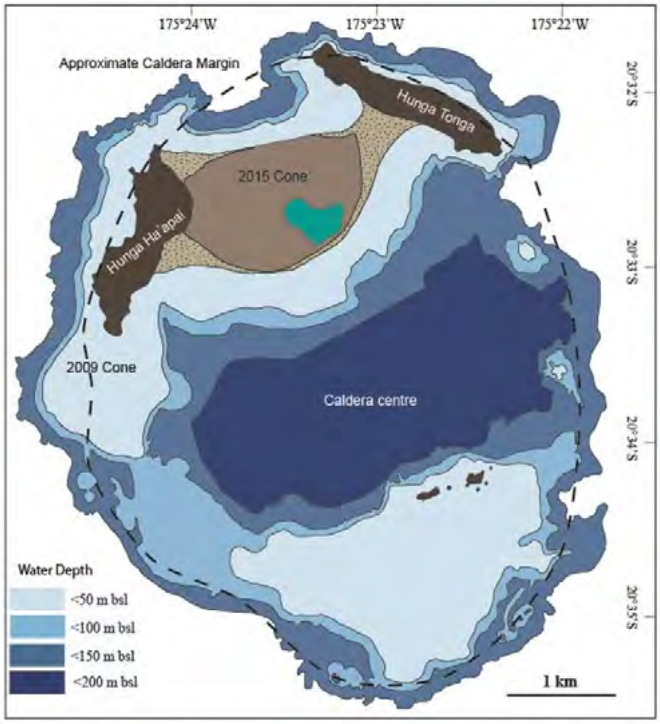
Republished from *The Conversation*, January 16, 2022
https://theconversation.com/why-the-volcanic-eruption-in-tonga-was-so-violent-and-what-to-expect-next-175035

The Kingdom of Tonga doesn't often attract global attention, but a violent eruption of an underwater volcano on January 15 has spread shock waves, quite literally, around half the world.

Screenshot 1 from article: View video footage here – https://theconversation.com/why-the-volcanic-eruption-in-tonga-was-so-violent-and-what-to-expect-next-175035

The volcano is usually not much to look at. It consists of two small uninhabited islands, Hunga-Ha'apai and Hunga-Tonga, poking about 100m above sea level 65km north of Tonga's capital Nuku'alofa. But hiding below the waves is a massive volcano, around 1800m high and 20km wide.

The Hunga-Tonga-Hunga-Ha'apai volcano has erupted regularly over the past few decades. During events in 2009 and 2014/15 hot jets of magma and steam exploded through the waves. But these eruptions were small, dwarfed in scale by the January 2022 events.



A massive underwater volcano lies next to the Hunga-Ha'apai and Hunga-Tonga islands. Author provided

Our research into these earlier eruptions suggests this is one of the massive explosions the volcano is capable of producing roughly every thousand years.

Why are the volcano's eruptions so highly explosive, given that sea water should cool the magma down?

If magma rises into sea water slowly, even at temperatures of about 1200°C, a thin film of steam forms between the magma and water. This provides a layer of insulation to allow the outer surface of the magma to cool.

But this process doesn't work when magma is blasted

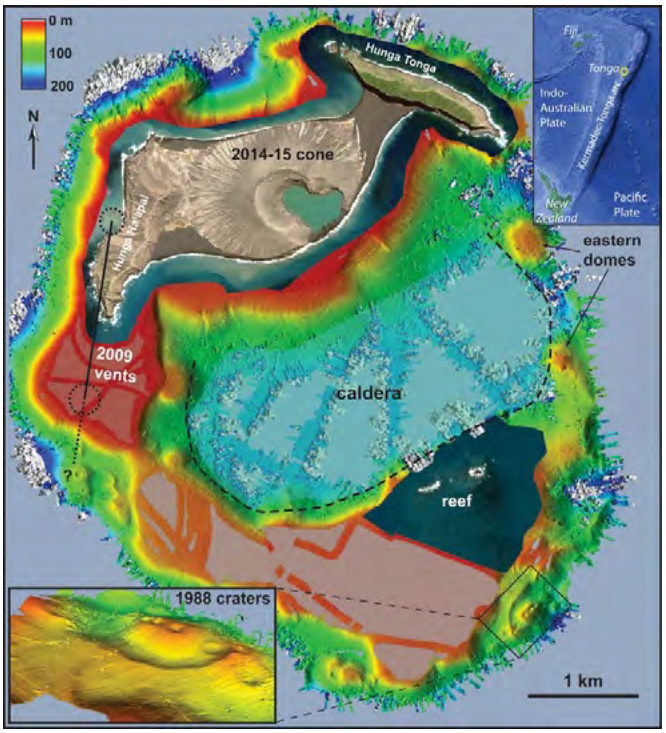
out of the ground full of volcanic gas. When magma enters the water rapidly, any steam layers are quickly disrupted, bringing hot magma in direct contact with cold water.

Volcano researchers call this "fuel-coolant interaction" and it is akin to weapons-grade chemical explosions. Extremely violent blasts tear the magma apart. A chain reaction begins, with new magma fragments exposing fresh hot interior surfaces to water, and the explosions repeat, ultimately jetting out volcanic particles and causing blasts with supersonic speeds.

Two scales of Hunga eruptions

The 2014/15 eruption created a volcanic cone, joining the two old Hunga islands to create a combined island about 5km long. We visited in 2016, and discovered these historical eruptions were merely curtain raisers to the main event.

Mapping the sea floor, we discovered a hidden "caldera" 150m below the waves.



A map of the seafloor shows the volcanic cones and massive caldera. Author provided

The caldera is a crater-like depression around 5km across. Small eruptions (such as in 2009 and 2014/15) occur mainly at the edge of the caldera, but very big ones come from the caldera itself. These big eruptions are so large the top of the erupting magma collapses inward, deepening the caldera.

Looking at the chemistry of past eruptions, we now think the small eruptions represent the magma system slowly recharging itself to prepare for a big event.

We found evidence of two huge past eruptions from the Hunga caldera in deposits on the old islands. We matched these chemically to volcanic ash deposits on the largest inhabited island of Tongatapu, 65km away, and then used radiocarbon dates to show that big caldera eruptions occur about ever 1000 years, with the last one at AD1100.

With this knowledge, the eruption on January 15 seems to be right on schedule for a "big one".

What we can expect to happen now

We're still in the middle of this major eruptive sequence and many aspects remain unclear, partly because the island is currently obscured by ash clouds.

The two earlier eruptions on December 20 2021 and January 13 2022 were of moderate size. They produced clouds of up to 17km elevation and added new land to the 2014/15 combined island.

The latest eruption has stepped up the scale in terms of violence. The ash plume is already about 20km high. Most remarkably, it spread out almost concentrically over a distance of about 130km from the volcano, creating a plume with a 260km diameter, before it was distorted by the wind.

This demonstrates a huge explosive power – one that cannot be explained by magma-water interaction alone. It shows instead that large amounts of fresh, gas-charged magma have erupted from the caldera.

The eruption also produced a tsunami throughout Tonga and neighbouring Fiji and Samoa. Shock waves traversed many thousands of kilometres, were seen from space, and recorded in New Zealand some 2000km away. Soon after the eruption started, the sky was blocked out on Tongatapu, with ash beginning to fall.

All these signs suggest the large Hunga caldera has awoken. Tsunami are generated by coupled atmospheric and ocean shock waves during an explosions, but they are also readily caused by submarine landslides and caldera collapses.

It remains unclear if this is the climax of the eruption. It represents a major magma pressure release, which may settle the system.

A warning, however, lies in geological deposits from the volcano's previous eruptions. These complex sequences show each of the 1000-year major caldera eruption episodes involved many separate explosion events.

Hence we could be in for several weeks or even years of major volcanic unrest from the Hunga-Tonga-Hunga-Ha'apai volcano. For the sake of the people of Tonga I hope not.

TONGA: INTERCONNECTIONS

Dale Dominey-Howes, Professor of Hazards and Disaster Risk Sciences, University of Sydney

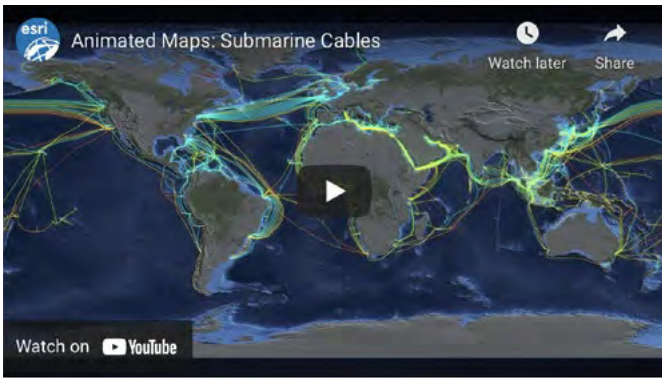
The Tonga volcanic eruption has revealed the vulnerabilities in our global telecommunication system

Republished from The Converstion, January 17, 2022 – https://theconversation.com/the-tonga-volcanic-eruption-has-revealed-the-vulnerabilities-in-our-global-telecommunication-system-175048

In the wake of a violent volcanic eruption in Tonga, much of the communication with residents on the islands remains at a standstill. In our modern, highly-connected world, more than 95% of global data transfer occurs along fibre-optic cables that criss-cross through the world's oceans.

Breakage or interruption to this critical infrastructure can have catastrophic local, regional and even global consequences. This is exactly what has happened in Tonga following Saturday's volcano-tsunami disaster. But this isn't the first time a natural disaster has cut off critical submarine cables, and it won't be the last.

The video below shows the incredible spread of submarine cables around the planet – with more than 885,000 kilometres of cable laid down since 1989. These cables cluster in narrow corridors and pass between so-called critical "choke points" which leave them vulnerable to a number of natural hazards including volcanic eruptions, underwater landslides, earthquakes and tsunamis.



Animation of spread of global submarine cable network between 1989 and 2023. Hyperlink to https://www.youtube.com/watch?v=6dkiqJ_IZGw

What exactly has happened in Tonga?

Tonga was only connected to the global submarine telecommunication network in the last decade. Its islands have been heavily reliant on this system as it is more stable than other technologies such as satellite and fixed infrastructure.

The situation in Tonga right now is still fluid, and certain details have yet to be confirmed – but it seems one or more volcanic processes (such as the tsunami, submarine landslide or other underwater currents) have snapped the 872km long fibre-optic cable connecting Tonga to the rest of the world. The cable system was not switched off or disconnected by the authorities.

This has had a massive impact. Tongans living in Australia and New Zealand can't contact their loved ones to check on them. It has also made it difficult for Tongan government officials and emergency services to communicate with each other, and for local communities to determine aid and recovery needs.

TONGA: INTERCONNECTIONS

Telecommunications are down, as are regular internet functions – and outages keep disrupting online services, making things worse. Tonga is particularly vulnerable to this type of disruption as there is only one cable connecting the capital Nuku›alofa to Fiji, which is more than 800km away. No inter-island cables exist.

Risks to submarine cables elsewhere

The events in Tonga once again highlight how fragile the global undersea cable network is and how quickly it can go offline. In 2009, I coauthored a study detailing the vulnerabilities of the submarine telecommunications network to a variety of natural hazard processes. And nothing has changed since then.

Cables are laid in the shortest (that means cheapest) distance between two points on the Earth's surface. They also have to be laid along particular geographic locations that allow easy placement, which is why many cables are clustered in choke points.

Some good examples of choke points include the Hawaiian islands, the Suez Canal, Guam and the Sunda Strait in Indonesia. Inconveniently, these are also locations where major natural hazards tend to occur.

Once damaged it can takes days to weeks (or even longer) to repair broken cables, depending on the cable's depth and how easily accessible it is. At times of crisis, such outages make it much harder for governments, emergency services and charities to engage in recovery efforts.

Many of these undersea cables pass close to or directly over active volcanoes, regions impacted by tropical cyclones and/or active earthquake zones.

In many ways, Australia is also very vulnerable (as is New Zealand and the rest of the world) since we are connected to the global cable network by a very small number of connection points, from just Sydney and Perth.

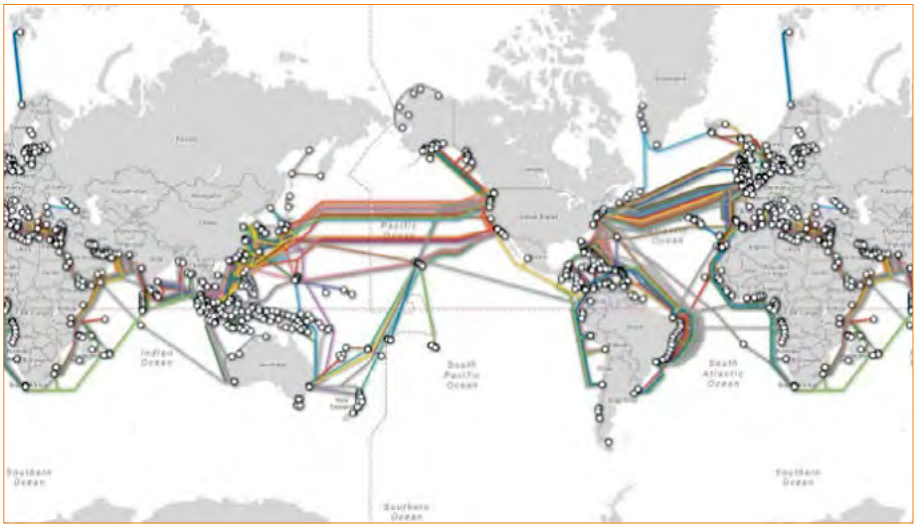
In regards to Sydney and the eastern seaboard of Australia, we know large underwater landslides have occurred off the coast of Sydney in the past. Future events could damage the critical portion of the network which links to us.

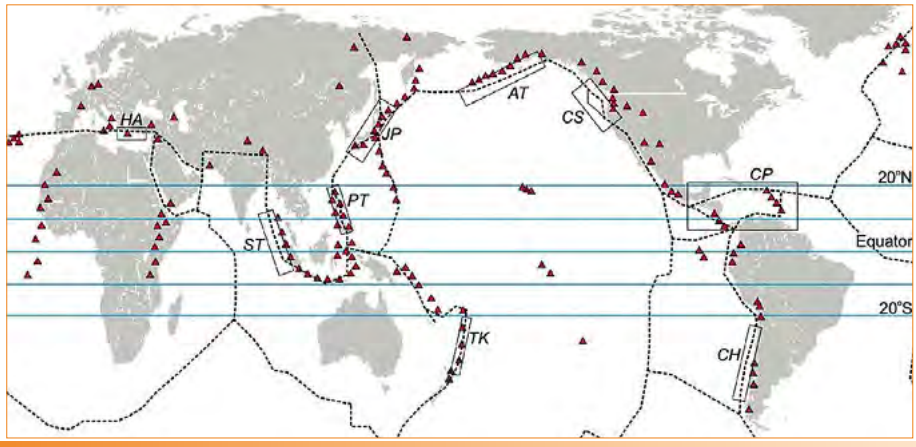
How do we manage risk going forward?

Given the vulnerability of the network, the first step to mitigating risk is to undertake research to quantify and evaluate the actual risk to submarine cables in particular places on the ocean floors and to different types of natural hazards. For example, tropical cyclones (hurricanes/typhoons) occur regularly, but other disaster such as earthquakes and volcanic eruptions happen less often.

Currently, there is little publicly available data on the risk to the global submarine cable network. Once we know which cables are vulnerable, and to what sorts of hazards, we can then develop plans to reduce risk.

At the same time, governments and the telecommunication companies should find ways to diversify the way we communicate, such as by using more satellite-based systems and other technologies.





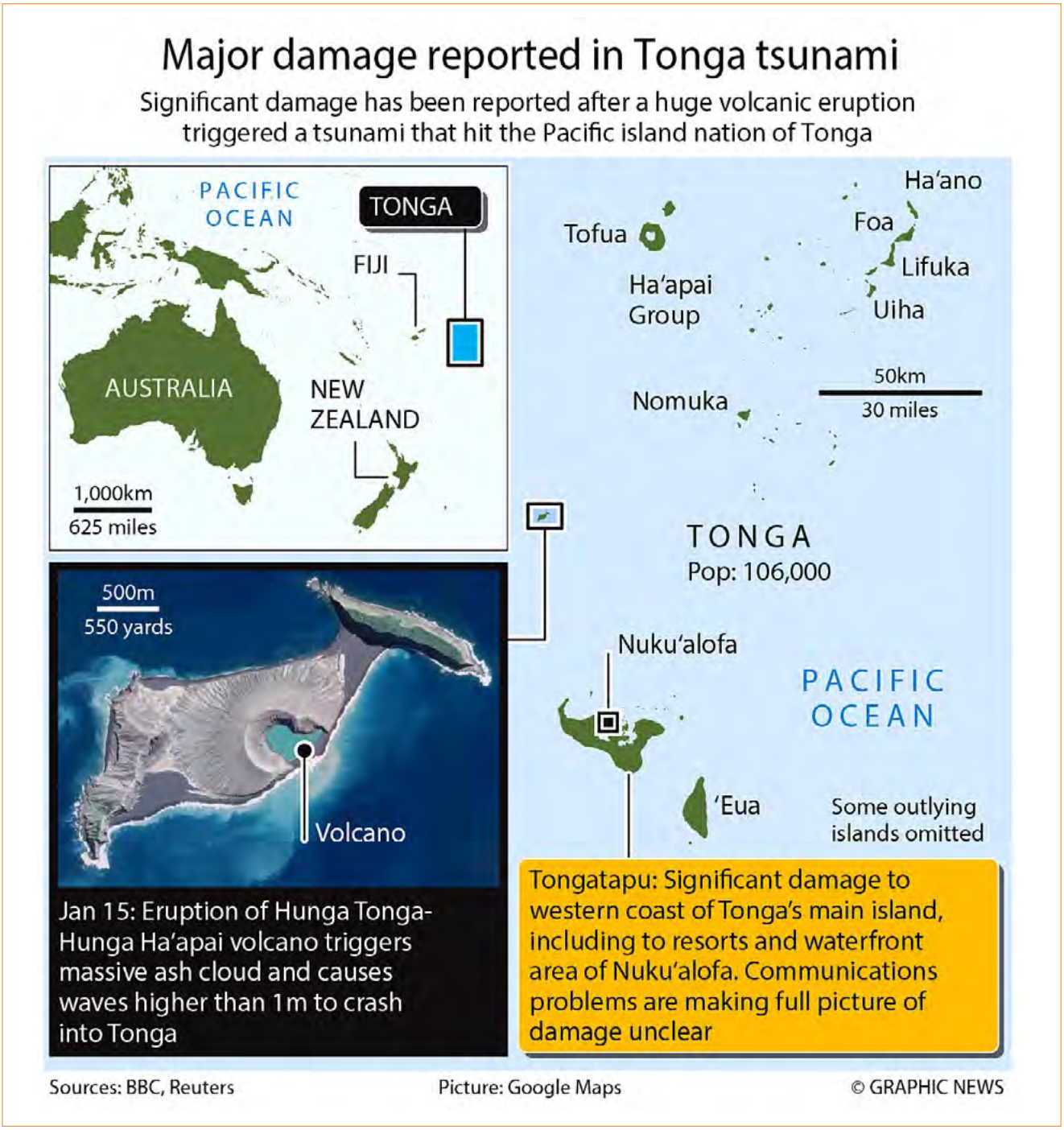
Screen captures from original article showing the global undersea cable network and Earth's tectonic plates.

TOP: Tonga is connected to the rest of the world via a global network of submarine cables. Author provided

LEFT: In this map you can see the global plate tectonic boundaries (dashed lines) where most volcanic eruptions and earthquakes occur, approximate cyclone/hurricane zone (blue lines) and locationsof volcanic regions (red triangles). Significant zones where earthquakes and tsunami occur are marked. Author provided

TONGA: SKILLS DEVELOPMENT

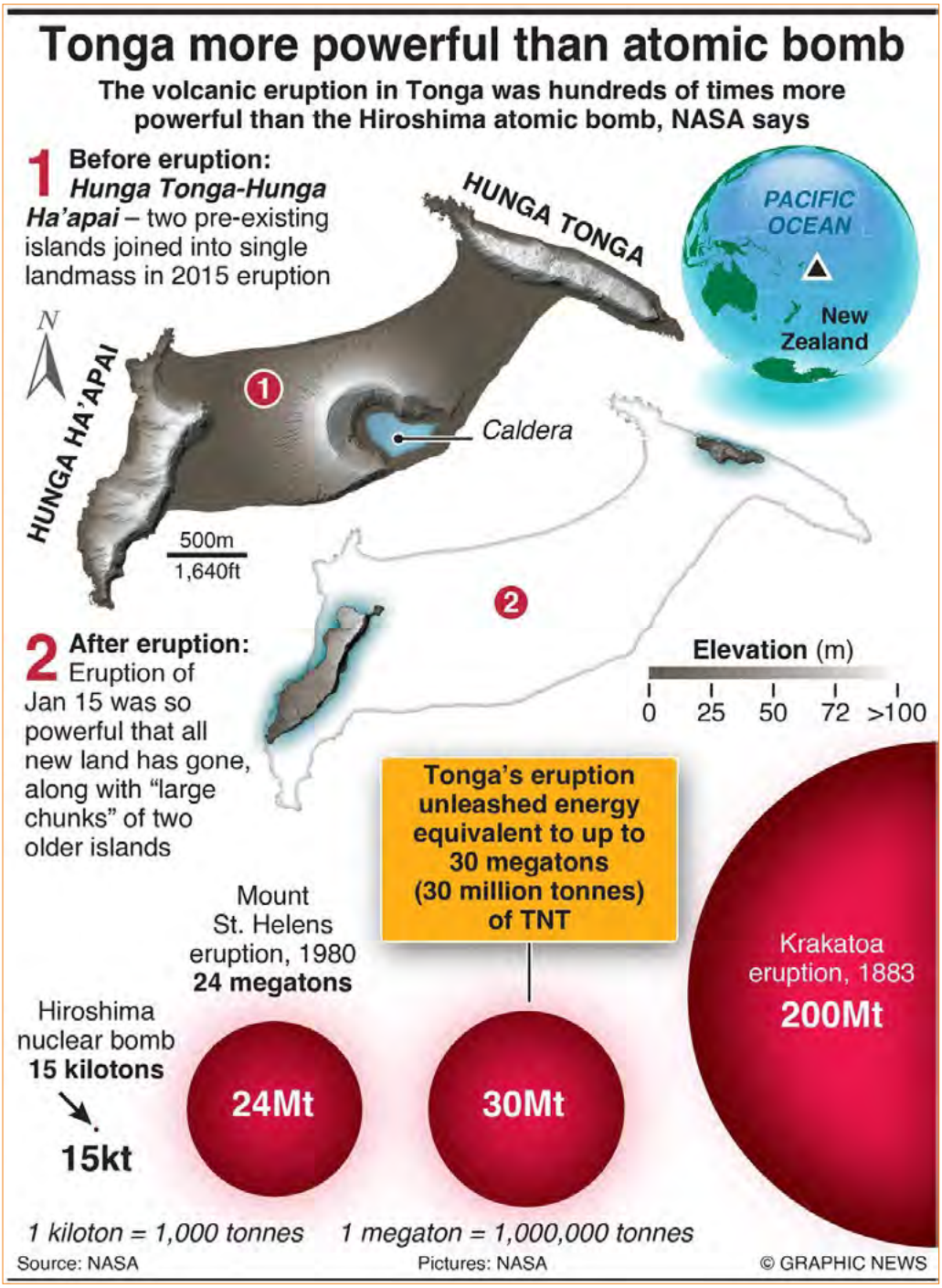
SOURCE A



1. Use SOURCE A to measure the following
   a. The distance between Tonga and the closest point on the Australian coastline?
   b. The distance between the main island of Tonga (Tongatapu) and Hunga Tonga – Hunga-Ha'apai
   c. The dimensions of Hunga Tonga-Hunga–Ha'apai (length and breadth)

2. Refer to the article *'Why the volcanic eruption in Tonga was so violent, and what to expect next'.*
   a. Identify the two hazard events that occurred in Tonga during January 2022.
   b. Complete a timeline of volcanic events using the following dates.
      - 2009
      - 2014/15
      - December 20, 2021
      - January 13, 2022
      - January 15, 2022

SOURCE B



Refer to SOURCE B and the following weblinks:

- The Guardian: Tonga volcano: a visual guide to the eruption and its aftermath https://www.theguardian.com/world/2022/jan/17/tonga-volcano-a-visual-guide-to-the-eruption-and-its-aftermath
- Washington Post: What you need to know about the Tonga volcano and the Pacific's 'Ring of Fire' https://www.washingtonpost.com/world/2022/01/17/tonga-volcano-eruption-tsunami-damage/

Describe the cause and impact of the volcanic eruption on 15 January 2022.

In your answer you should refer to:

- Earth's tectonic plates
- Volcanic eruptions and tsunami
- Impacts on Tonga
- Impacts on other places

Include at least one diagram in your answer.

SOURCE C

Source: Contains modified Copernicus Sentinel data, 2016 [CC BY-SA 3.0-igo]WikimediaCommons.org.)

Use SOURCE C to complete the following activities

1. Create a sketch map of the main island of Tonga in the satellite image
2. Create a KEY to show the following on your map:
   - urban areas (towns)
   - main roads and the airport
   - agricultural land
3. Use a mapping tool such as Google Earth or Google Maps to complete the following:
   - *Orientation:* Put an arrow showing North. (Look for the North direction on your digital map.
   - *Scale:* Create a line scale for your map (Measure the width of the island in kilometres using the measuring tool on your digital map.

     Then measure between the same points in cm on your sketch map. This many cm represents the km you measured using the mapping tool. Reduce to 1cm represents a number of km)
4. Refer to:

- 'The Tonga volcanic eruption has revealed the vulnerabilities in our global telecommunication system' in this issue

and / OR the following weblink:

- Broken Cable Shuts Down Tonga's Internet (News for Kids) https://newsforkids.net/articles/2019/01/27/broken-cable-shuts-down-tongas-internet/

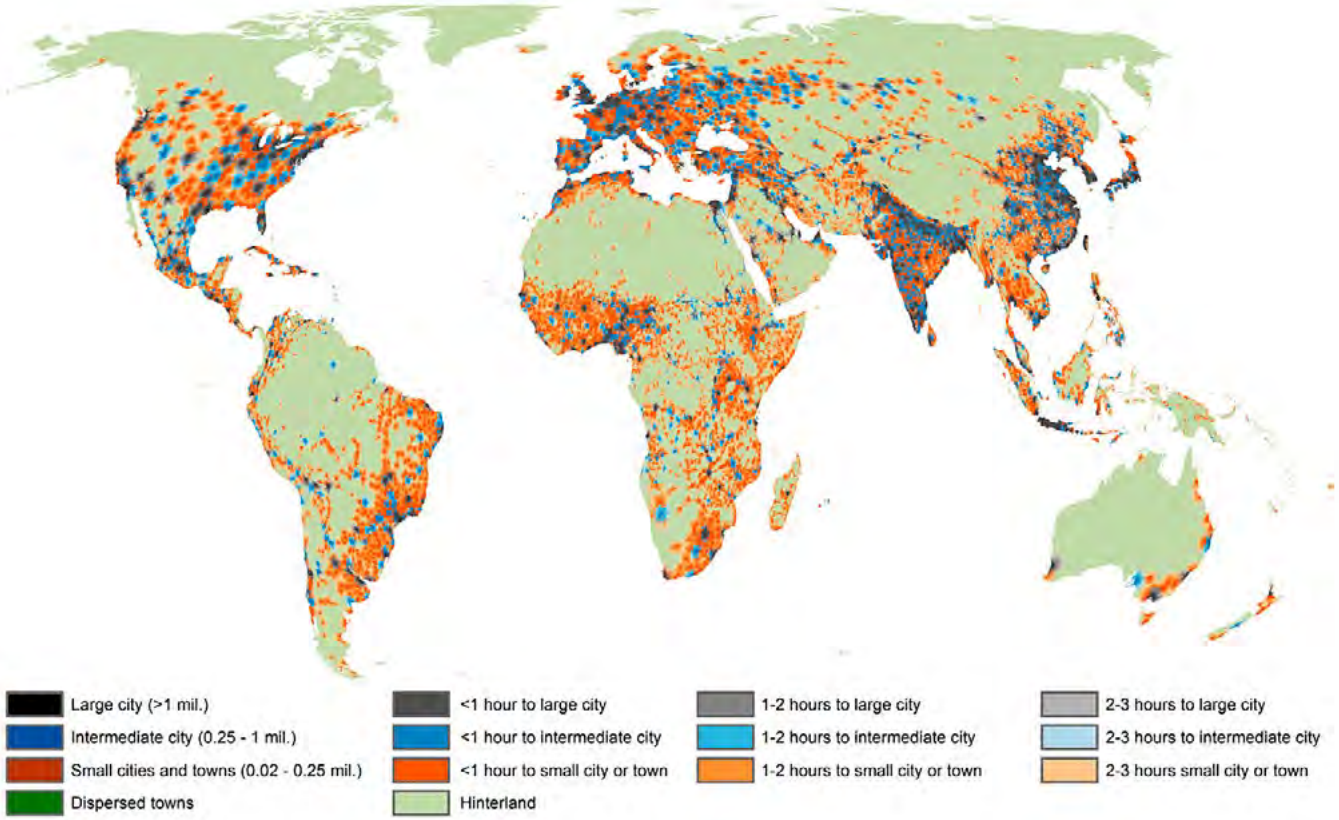
Explain why communications between Tonga and the outside world were disrupted after the 15th January 2022 eruption and tsunami.

URBAN SETTLEMENT PATTERNS

Rebecca Sutcliffe, Waverley College

Aerial view of buildings by Jet dela Cruz. Source: Unsplash

Global map of URCA's in 2015 at a spatial resolution of 1km², showing catchment areas of cities of different population sizes



Map Source: https://www.pnas.org/content/118/2/e2011990118/tab-figures-data

The NSW Geography Stage 5 Syllabus

Students: investigate differences in urban settlement patterns between Australia and another country, for example:

- examination of urban settlements to determine patterns of concentration
- explanation of factors influencing urban concentration e.g. climate and topography, transportation networks, land use or perceptions of liveability
- assessment of the consequences of urban concentrations on the characteristics, liveability and sustainability of places

CHANGING PLACES: CASE STUDY

The following resources worksheets 1–3 look specifically at:

1. The differences between settlements in the USA in comparison to Europe (Worksheet 1)
2. By observing past and present settlement patterns, we can observe the impacts of change on different Australian communities (Worksheet 2)
3. Considering the population densities and urban concentrations of Sydney suburbs to their liveability and sustainability (Worksheet 3).

Three EXIT slips are also provided for students to complete after every lesson.

Image source: https://3.bp.blogspot.com/-xYJvLoEmFqA/Uexps1Cm8dI/AAAAAAAAAKE/sJF5QrZC27o/s1600/exit+slip.jpg

EXIT SLIP: Urban Settlement Patterns – Worksheet 1 (USA v Europe)

3	Things I learned today….
2	Things I found interesting….
1	Question I still have….

EXIT SLIP: Urban Settlement Patterns – Worksheet 2

3	Things I learned today….
2	Things I found interesting….
1	Question I still have….

EXIT SLIP: Urban Settlement Patterns – Worksheet 3

3	Things I learned today….
2	Things I found interesting….
1	Question I still have….

Worksheet 1: Urban Settlement Patterns

Urban Concentrations: USA and European comparisons

Paris (France) – Urban Geographers, Why we live where we do? Image source: https://www.youtube.com/watch?v=aQSxPzafO_k

TASK

Whilst watching the video *Urban Concentrations: USA and European* answer the questions below on this worksheet.

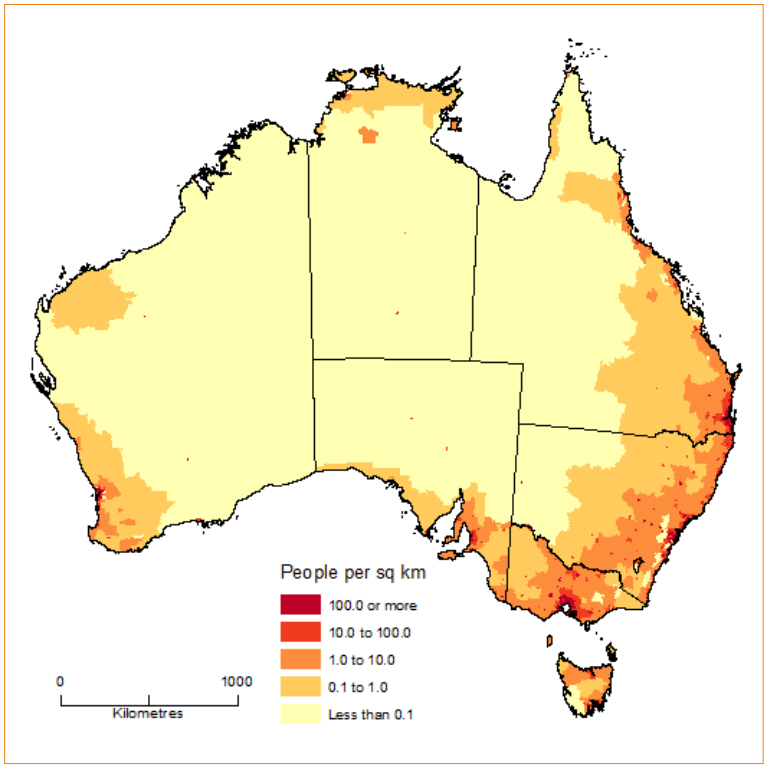
1. What is the population density of New York and Paris (in people per square km):
2. Looking at the factors that affect population density (urban concentration):
   a. Describe the pattern of settlement in and around New York:
   b. Describe the pattern of settlement in and around Paris:
3. Name TWO differences between where the 'rich people' live between Paris and New York:
4. What is the most commonly factored reason for these patterns?
5. How does the age of a city reflect its urban concentration?
6. In the middle ages, what was the population of Paris?
7. How long did it take to walk across Paris?
8. Explain why this had an impact on where people chose to live.
9. Why were small villages in Europe always the same size?
10. How large would they become and why?
11. Explain how "Decentralising Technologies = transport" affected the rise of rapid growth in America?
12. What was established in the mid 19th century?
13. Railroad suburbs – what are they?
14. What became an instrumental part of the American commute?
15. What type of communities were created by Street Cars?
16. What was influenced by Geography?
17. Explain how walking distance created the patterns seen around railroad stations?
18. What happened after WWII to increase distance travelled by Americans?
19. How did this differ from European cities like Germany?
20. What is the difference between the average metropolitan population density in Germany compared to the US?
21. Crime rates in New York in 1990 were **higher** or **lower** than in the whole of the 90s in London?
22. Crime rates in the US are statistically higher in what regions: cities or suburbs?
23. Why does land have an impact on the different settlement patterns between America and Europe?
24. Describe how the price of energy (Petrol/Gas) differ between the US and Europe and how does this create patterns of concentration?
25. Commuting from home to work – what are the consequences of living in the urban sprawl? Identify both positive and negative.

Worksheet 2: Urban Settlement Patterns

(Settlement Patterns text source unknown)

TASK

1. Read the text 'Settlement Patterns text' document attached'
2. Answer the following questions on this worksheet:
   - 2.1. Briefly outline the impacts of European settlement as outlined in the text:
   - 2.2. Name the series of migration waves since the colonisation of Australia. (Hint, you should be able to determine 5 broad waves found under the heading 'Settlement Patterns')
   - 2.3 The population densities of Sydney and Mumbai (India) are mentioned in the text. Using your own research skills, research and state the current population densities of these two cities. Provide at least TWO reasons for the differences in densities. Think of the geographical factors and migration patterns of these two cities. So you can compare both and easily set this out in a table like below – create your own headings in the first column and add more rows.



Australia Population Density - Image Source: https://www.abs.gov.au/ausstats/abs@.nsf/0/c147e96a334460e0ca2583c9000dfb10/Body/0.7BA!OpenElement&FieldElemFormat=gif

Sydney and Mumbai Population Density

	Sydney	Mumbai

Settlement Patterns text source unknown

Introduction

When we discuss settlement patterns, we look at the historical flows and migration patterns of the population over time. We also observe population growth rates and density rates in particular areas. By observing past and present settlement patterns, we can observe the impacts of change on different Australian communities.

European landing and its impact

Terra nullius was the official settlement claim made by Europeans when they arrived in Australia in 1788. Terra nullius or 'empty land' has now been legally removed from our Constitution, because between 300 000 to 1 000 000 Indigenous peoples were settled here many thousands of years prior. The impact of European settlement on the Indigenous peoples was disastrous; genocide and disease had wiped out Indigenous peoples in Tasmania by 1876. Racism and intolerance was exhibited by settlers, pastoralists and the like for most of the 19th century. Pastoralists had forcefully occupied indigenous-occupied land. Reserves were created on town fringes, leading to further dispossession. Indigenous peoples (Aborigines and Torres Strait Islanders) had enjoyed thousands of years of sustainable and harmonious life on the land. There were 18 broad language regions, based on water catchments and contrasting indigenous groups.

Worksheet 2: Urban Settlement Patterns

Geographical factors affecting early settlement

The impact of the Australian climate and geography on the settlers was generally harsh. The settlers were not accustomed to the harsh and unforgiving Australian climate and conditions. They encountered low levels of rainfall, poor soils and faced topography (land forms such as mountains) and vegetation which were hard to travel through and manage. The settlers found that the Australian continent was too large to travel in, leading to high financial costs for the colony. The early settlers and communities found the Australian environment ideal for agricultural methods. Around 70 per cent of woodland and forests were cleared for crops and housing. Settlement and agricultural practices, together with destruction of the indigenous way of life and culture, were indeed negative impacts on the ecology and geography. Soil was consistently degraded, pollution of the natural environment and destruction of various species of animals and plants were other negative impacts.

Settlement patterns

Colonisation of Australia featured a series of migration waves around the south and south-east regions of Australia. Between 1788 and 1868 about 150 000 convicts arrived in Australia from the United Kingdom. During the 1850s and the gold rushes, the population of NSW doubled and the population of Victoria increased six-fold. By the 1830s there were over 100 000 settlers in the Australian colonies. By the 1850s over half a million migrants were added to the existing population. Railways were built and expanded inland for farming. Eventually the railway network allowed relatively easy internal migration of the population. The 1880s featured more intensive agriculture, which led to the development of prosperous towns, rural communities and regional centres (a large town or city of over 1000 people, with many surrounding villages). After World War II there was a large European wave of migration to Australia. In the 1970s there was an influx of Vietnam War refugees. Through the 1980s and 1990s there was a mix of cultural arrivals (21 per cent were overseas-born in the mid 1980s. In 2006, it is 25 per cent). There were essentially two types of human settlement by the turn of the 20th century: rural settlements (featuring primary industries such as farming, mining and fishing) and urban settlements (secondary industries, such as manufacturing of raw materials and tertiary industry, such as professional services and government). Sydney is an example of an urban settlement. It has become our largest city, with a settlement population of over five million people. Sydney is not a large city by world standards, yet it features a vast urban or suburban sprawl that spreads around 100 kilometres in three directions (north, south and west). This large sprawl of suburbs gives Sydney one of the world's lowest population densities (even though Sydney is far more densely populated than most other Australian cities). To illustrate this point, Mumbai in India has a population of over 14 million, which would fit within the area of Sydney's eastern suburbs.

Changing settlement patterns: urban growth and decline, and the rural-urban drift

While Sydney has grown and renewed to the point of overdevelopment, other urban areas in Australia have both grown and declined. There has been development growth of 75 per cent in cities over 10 000 people. Overall, more than half of Australia's population live in the capital cities of Sydney, Melbourne, Brisbane, Perth and Adelaide; 6.7 million reside in the Greater Metropolitan Region of NSW (Sydney, Newcastle, Wollongong and the Central Coast); 85 per cent of NSW live in urban areas.

We can track growth of areas in relation to natural population increases, internal migration and overseas migration. In 2012, the largest population increases occurred in Melbourne (increase of 52 500) and Sydney (increase of 42 700). In the same year, Brisbane's population increased the fastest at 2.3 per cent, whilst Melbourne and Perth both increased significantly at 1.5 per cent. In 2013, Queensland's Gold Coast recorded a large increase of 3.4 per cent. 'Sun belt' growth has been significant (retirement, tourism, young people), where people pursue lower costs, less crime and cleaner living (big increases were recorded in coastal NSW cities like Shoalhaven, Tweed Heads and Hastings Point).

Source: Unknown

Worksheet 3: Urban Settlement Patterns

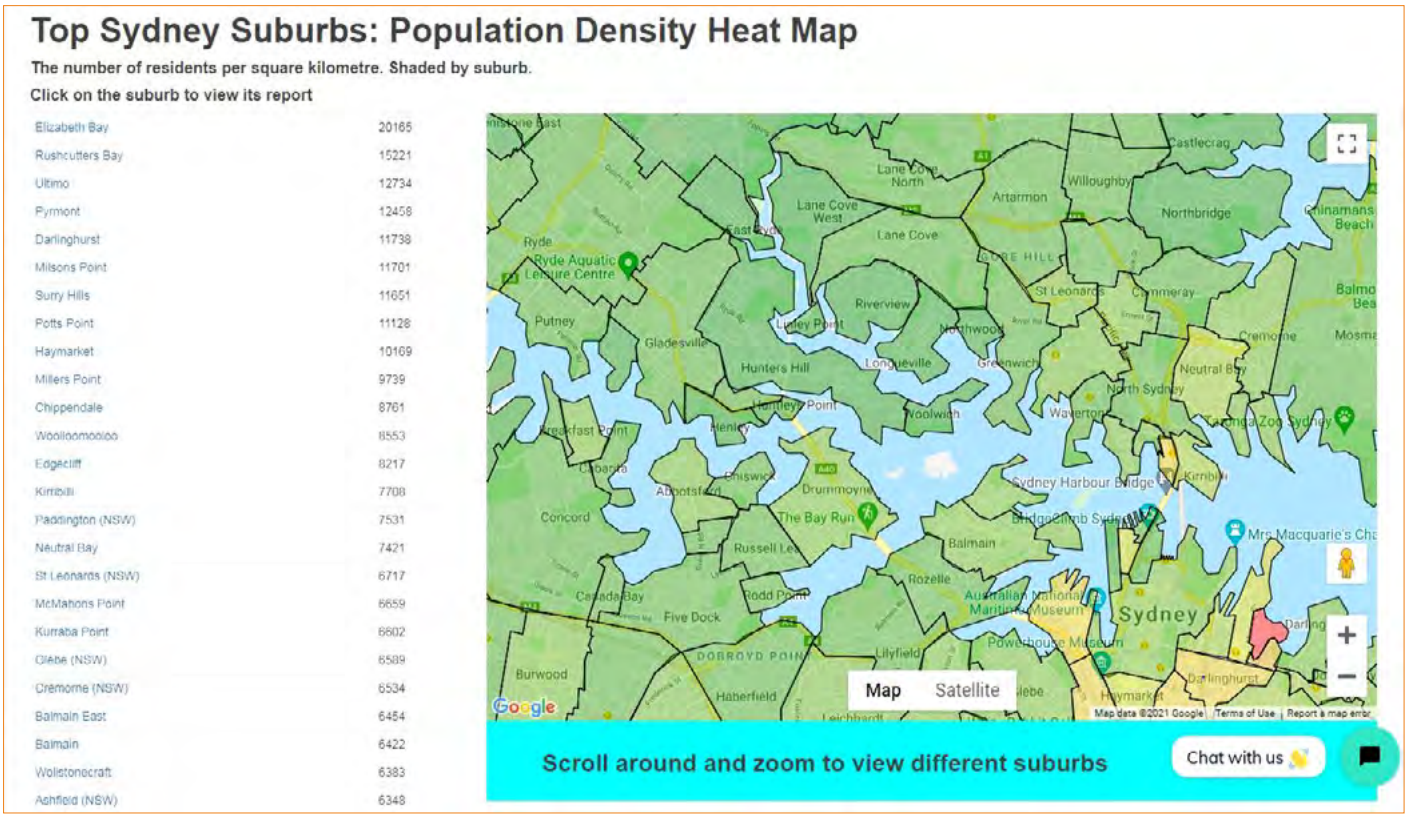


Image source: https://www.microburbs.com.au/heat-map/population-density#151.17067399999996:-33.840703:13

TASK

1. Using this link Microburbs, do your own research on the Sydney suburb that has the highest population density. Make sure you provide the following:
   a. Name the suburb and;
   b. State the population density of the suburb
2. Using the same link as above do your own research on the Sydney suburb that has the lowest population density. Make sure you provide the following:
   a. Name the suburb and;
   b. State the population density of the suburb
3. Using the 'Urban Living Index' link Urban Living Index, Describe the FIVE categories of research sources that provide information on the liveability of a place.
4. What liveability and sustainability issues face the suburb you found in question 1?
5. What liveability and sustainability issues face the suburb you found in question 2?
6. Compare these suburbs to the population density, liveability and sustainability of your home suburb.

Urban Living Index homepage. Source: https://urbanlivingindex.com/

Worksheet 3: Urban Settlement Patterns (Sydney)

7. In your own words write a PEEL paragraph assessing the consequences of urban concentrations on the characteristics, liveability and sustainability of places.

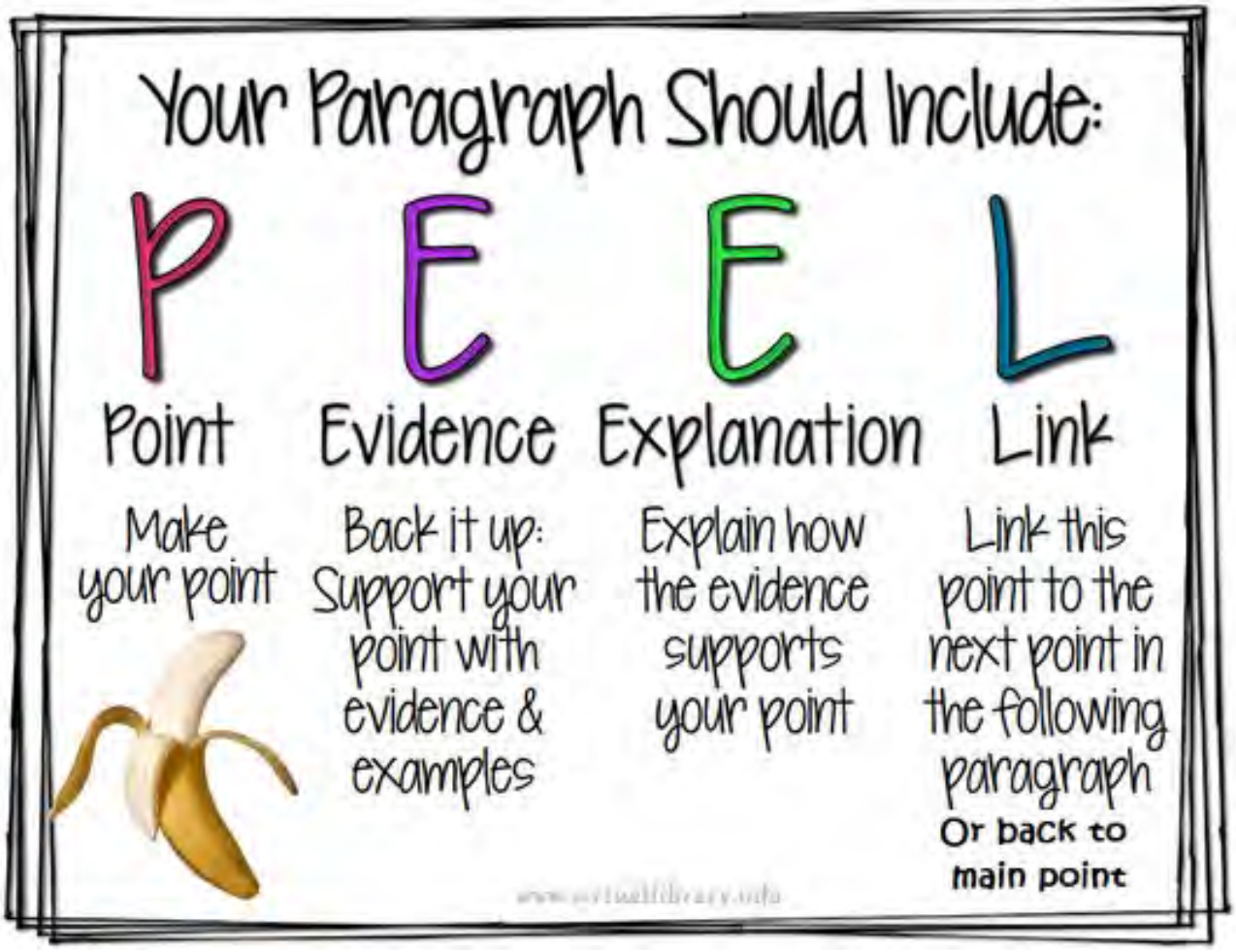


Image Source: https://www.virtuallibrary.info/peel-paragraph-writing.html

Children and Wellbeing: one approach to teaching


Source: Shutterstock

Stephanie Boden, Social Sciences Teacher, Hornsby Girls High School

Human Wellbeing is an exciting and dynamic topic and can be approached in a variety of ways. It has links to the Stage 4 'Place and Liveability' topic as well as 'Global Challenges' in Stage 6. There are also cross curricular links to HSC Economics (The Global Economy) and HSC Legal Studies (Human Rights and Young Offenders). At Hornsby Girls High School several teachers have worked together to build an engaging unit that involves both explicit teaching as well as student led investigations.

For context, Hornsby Girls High School is a selective school in the north of Sydney. Students are drawn from a wide range of Sydney suburbs and some also travel from the Central Coast of NSW. Many of our students have global connections with family and friends in many different countries. Students study Geography for one Semester each year, and study History for the other Semester. We teach the Human Wellbeing topic as the first topic in Year 10. Students have already studied 'Sustainable Biomes' and 'Changing Places' in Year 9. We accelerate our Stage 6 Geography course, so that some students in our core Year 10 classes are also studying the Preliminary Course at the same time.

Given how broad the Human Wellbeing topic can be, and the variety of understanding and knowledge our students bring to lessons, one way to focus the teaching approach is by using case studies about child wellbeing. By considering the global variations of children's wellbeing, students address three syllabus outcomes:

- analyses differences in human wellbeing and ways to improve human wellbeing GE5-6
- acquires and processes geographical information by selecting and using appropriate and relevant geographical tools for inquiry GE5-7
- communicates geographical information to a range of audiences using a variety of strategies GE5- 8

At Hornsby Girls High School, we introduce the topic over two 75 minute lessons by asking students to describe their own bedroom. They need to identify the features of their bedroom, including building materials, connection to electricity, furniture, electronic items, trinkets, heating and cooling options, and whether they share their room. They then share their descriptions with the class and we build a common features list.

The class then view pictures by photographer James Mollison that show 'Where children sleep' in various countries. As we look at each photo, we identify the location on a wall map and have a brief discussion about some features of the city or country each child is

Double page spread from 'Where children sleep' by John Mollison

from. If a student has first-hand knowledge of a place and is willing to share it, it can be a great way for them to be the expert in class. As we think about each child and their location, we build up a list of reasons that account for the differences between children. These reasons can broadly be categorised into economic, social, political, environmental and technological factors.

In pairs or groups of three they then choose one child's country to investigate to find out further information that can explain the level of wellbeing in a place. Great sources of information include the Department of Foreign Affairs and Trade's 'Countries, Economies and Regions' website and the BBC's 'Country Profiles'. Students put together a photo only slideshow and verbally share their findings. Limiting research time to 30 minutes and presentations to one minute keep the learning pace fast and focused. Students write a paragraph on what they think 'Human Wellbeing' means and why there are global spatial variations. By this stage they have usually started using some key human geographic terminology including life expectancy, GDP per capita and inequality.

Once these introductory lessons have been completed, students work in groups to determine what countries they think have good wellbeing and which ones have lower levels. We think about what data they might be able to use to show these differences. Explicit teaching is needed to explain qualitative and quantitative types of data and we look at Gross Domestic Product (GDP), GDP per capita and the Human Development Index (HDI). The United Nations and the World Bank websites have lots of current information about these. For High Potential and Gifted Education (HPGE) students, discussing the advantages and limitations of each type of data builds their analytical skills which is useful for Stage 6 study.

We then move back to thinking about children and wellbeing. We investigate the UN Development Programme's Multidimensional Poverty Index (UNDP MPI) and identify what it means to be 'multidimensionally poor'. Students are usually surprised to learn that half of the world's multidimensionally poor are children. We discuss reasons for this and implications for the children throughout their lifetime. By this stage students have usually started thinking about intergenerational disadvantage, spatial inequality and social mobility/ immobility. Different classes also tend to be interested in different aspects of children's wellbeing, so we adapt the program as we teach to cater for the interests of the current classes. UNICEF is a great starting point for information on different child wellbeing issues.

There are lots of ideas to consider about children and wellbeing. We usually do a case study on child marriage. A great way to introduce this topic is by watching the Netflix short film 'Sitara' (ensure you have tissues handy). We think about the different perspectives of each character and whether the overall message is hopeful or not. World Vision, The UN's Population Fund and 'Girls Not Brides' both have relevant information and short videos to build up a case study on child marriage. For extension work or for HPGE students, consider finding out about child marriage in more developed countries. Is it an issue in Australia? The USA? What laws exist to protect children from forced marriage in different countries? What barriers exist to stopping child marriage? Students can show some of this information on a choropleth map. 'Population Education' has a straightforward guide on how to create a choropleth map using Google Sheets. Groups of students can focus on aspects of child marriage and can compare their spatial outcomes as shown on the choropleth map they compare. This leads to discussions that help pinpoint the effectiveness of organisations that aim to reduce child marriage.

Other issues relating to children include:

- Orphanages: Foreign Correspondent on ABC iView has an excellent episode on 'Paper Orphans' in Nepal. This case study can be further developed into looking at the issue of child/ people trafficking.
- HIV prevalence for children in various regions also shows students the importance of quality education and healthcare systems. Start with UNICEF's information on this area.
- Child soldiers (look at the Human Rights Watch website)
- Stunting (The World Health Organisation has excellent information and videos)
- Child labour (start with UNICEF and look at the International Labour Organisation's comprehensive website)

- Gender inequality (again, UNICEF has great information)
- Refugees (start with UNHCR)
- Indigenous children wellbeing outcomes on either a national or international scale (The Lancet- will need teacher interpretation and there are links to other research articles)
- Child incarceration in Australia and globally (start with Human Rights Watch)
- COVID-19 and the impact on children (start with UNICEF's Data Lab website).

Due to time constraints, these topics can't all be explicitly taught, and it can take a lot of time to develop all these case studies. There are several ways to determine what is best for your class. Students can vote for one or two of these early in the term to allow time for the teacher to develop the case studies. Alternatively, students can work in groups and investigate the child wellbeing issue of their choice. This could also be incorporated into an Assessment Task. Ensuring that students can find ways to improve the outcome for children means that this topic doesn't become too overwhelming for them. There are lots of amazing charities and NGO's that focus on improving children's wellbeing. A class might decide that they want to run a fundraiser for one of them. This can also be incorporated into the school's Social Justice Group and shows students the real-life impact that understanding and acting on human wellbeing inequalities can have.

As mentioned earlier, at Hornsby Girls High School several teachers have developed this unit. Thanks to Vanessa Gilmore, Head Teacher HSIE and Louise Goodwin, Geography Teacher for their excellent contributions to this course. Thanks also to our students who provide lots of honest feedback each year so that we can continue to improve Stage 5 Geography.

Child in a refugee camp. Image source: Shutterstock

Sources of Information

'Where Children Sleep' by James Mollison https://www.lensculture.com/articles/james-mollison-where-children-sleep

Department of Foreign Affairs and Trade's 'Countries, Economies and Regions' website https://www.dfat.gov.au/geo/countries-economies-and-regions

BBC country profiles http://news.bbc.co.uk/2/hi/country_profiles/default.stm

UN HDI https://hdr.undp.org/en/content/human-development-index-hdi

World Bank HDI https://databank.worldbank.org/Human-development-index/id/363d401b

UNDP MPI https://hdr.undp.org/en/2021-MPI

UNDP MPI 2021 update https://hdr.undp.org/sites/default/files/2021_mpi_report_en.pdf

UN Population Fund https://www.unfpa.org/child-marriage

Girls Not Brides https://www.girlsnotbrides.org/

World Vision https://www.worldvision.com.au/global-issues/work-we-do/forced-child-marriage

Foreign Correspondent https://www.abc.net.au/foreign/paper-orphans/12021342

UNICEF Data Lap Covid and Children https://data.unicef.org/covid-19-and-children/

How to make a choropleth map using Google Sheets https://populationeducation.org/a-step-by-step-guide-to-making-a-choropleth-map-in-google-spreadsheets/

Child soldiers https://www.hrw.org/topic/childrens-rights/child-soldiers

Child stunting https://www.who.int/news/item/19-11-2015-stunting-in-a-nutshell#:~:text=Stunting%20is%20the%20impaired%20 growth,WHO%20Child%20Growth%20Standards%20median

Child labour UNICEF https://www.unicef.org/protection/child-labour

Child labour – International Labour Organisation https://www.ilo.org/ipec/facts/lang--en/index.htm

Child gender inequality – UNICEF https://www.unicef.org/gender-equality

Children and HIV https://data.unicef.org/topic/hivaids/global-regional-trends/

Child refugees UNHCR https://www.unhcr.org/children.html

Indigenous children – The Lancet https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(21)02719-7/fulltext

Child incarceration – Human Rights Watch https://www.hrw.org/world-report/2016/country-chapters/africa-americas-asia-europe/central-asia-middle-east/north#

Human Wellbeing as a hands-on topic to engage kinaesthetic learners

David Proctor

DISCLAMER: *Many of the activities mentioned in this article are highly engaging to all students, they can be applied to a range of topics other than Human Wellbeing, and Proctor isn't an expert in this area, just wanted to share successes with some of his past students.*

Image source: Shutterstock

Have you ever had students that you cannot engage in topics which seem very theoretical? It can be a trying task to play catch up with new students and develop personalised learning activities that make theoretical and intangible topics such as Human Wellbeing more practical. The suggestions below are based around past success at engagement through movement, gamification of learning and making a topic more personal for students so it really hits home.

It is important to remember that ***kinaesthetic learners learn from hands on processes and do not simply need a fidget device*** while listening to your (probably boring) lecture or answering a worksheet. It is therefore important to make the hands-on part of the learning meaningful to the content and not simply be additional to the content.

You will also need to consider, if you are targeting specific students, the type of kinaesthetic learner they are as not all activities listed here will provide success to all but are still likely to be engaging for most students (kinaesthetic preferences or not).

Think about the following to tailor activities for your students:

- Do they use whole body movement?
  Indicating you might use out of chair activities, whole room movement, outdoor activities.
- Do they communicate with their hands?
  Indicating you might look at using alternative materials and resources than computers and worksheets.
- Do they prefer fine motor skills?
  Indicating you might use activities where hands on tasks are used to test, obtain, apply or communicate information.
- Do they work well with others? (And what are the current Covid restrictions)
  Indicating you might modify group work or student interaction.

Examples of hands-on learning that might benefit learners

Games – these ideally would be linked to outcomes or learning content. Such an example could include a board game with consequence cards. For example, students can create a game about development where a consequence card might read "Your country has a low life expectancy due to malnutrition. Move back two spaces."

If you want an easy version that students can create and use in one lesson, you might give them a net of a cube and make a consequence dice. An example of this might be to make a poverty cube and play the life expectancy game. This is a pretty basic game, but will act to highlight an idea in a kinaesthetic way and can be easily be adapted for other purposes.

The Life Expectancy Game

This is a game to help you understand all the issues faced by people living in poverty which limit or reduce their life expectancy – how long they are going to live.

To play the game you will need the following items:

- A poverty cube
- A pen and paper
- A calculator

How to play:

- Each player starts off with a life expectancy of 80 years – an average life expectancy for a person living in a developed country.
- Roll the poverty cube.
- For each issue that is face up on the dice the player deducts years from their life expectancy based on the table below.
- A player is out of the game once they reach their real life age (around 16 years old) and the winner is the last player left alive.

Write or draw the following poverty issues on each side of a cube:

Poverty issue	Years to deduct from your life expectancy
Worms	1 year
Poor housing	2 years
Poor access to clean water	3 years
Poor access to food	4 years
Malnutrition	5 years
Disease	6 years

Fieldwork – virtual fieldwork is possible for many topics during the Covid-19 era, however, any physical fieldwork is best for kinaesthetic learners. For a fairly intangible topic such as Human Wellbeing, students could focus on designing and carrying out surveys to administer, environmental monitoring to assess risks to health.

For example, students could build questions to assess the wellbeing of a local suburb in comparison to a neighbouring suburb, or to compare to data of a contrasting suburb in a large city.

Dry erase magnets/mini whiteboards – these can be used to write upon and collaborate ideas which involves discussion and movement.

Mini whiteboards can be used for formative assessment by asking students to write their answers to a question and reveal. This can also be a great way to build student resilience in sharing their understanding and ideas with others by encouraging movement between groups or partners, where answers can be modified. For example, you might complete a Think, Pair, Share activity where students are asked to think of the most/least developed nation, then discuss and rank their guess with a group of students on a mini whiteboard.

This can then be moved to the whiteboard combining all students guesses with the ability to move these around to follow the discussion if you also employ dry erase magnets. Alternatively, students could be given a suburb in Sydney or town in Australia and use profile.id data to do some preliminary research and go through the same process.

Using collaborative technology such as a Google doc or Kahoot (or other online quizzes) will deliver a similar result in terms of an activity, however, loses some of the movement and interaction.

Sticky notes – can offer similar activities as the dry erase magnets but are cheaper and more accessible. Students could place their reasoning on a thinking continuum for a posed question.

For example, students could be asked how effective they believe wellbeing indicators are, rate them on the continuum or even rate the measures taken to improve wellbeing in a country. Students writing on the board or moving between groups to access information or display answers around the room also helps to engage them in movement in the learning process.

Silent source – this activity is a popular History game where students are given a visual image in the middle of a large piece of paper and asked to walk around the room and write comments on the border in silence. Comments might be what the source shows, when it was created, a criticism of the source etc.

This involves movement and where students are unsure or have questions, they are encouraged to write these down so that other students might answer them as they move from source to source. For example, students could be given different choropleth maps or graphs depicting where countries sit on a wellbeing measurement. Discussions can be had at the end of the activity where students might want to justify or add to an idea.

Build population pyramids – normally a graphing task, this can be made into a more hands-on activity by using blocks, playdough, popsicle sticks or Lego. Students can be requested to build on of the common shapes of pyramids (triangle, beehive or barrel, rectangle) and use this for discussion around what each shape means for a nation or population.

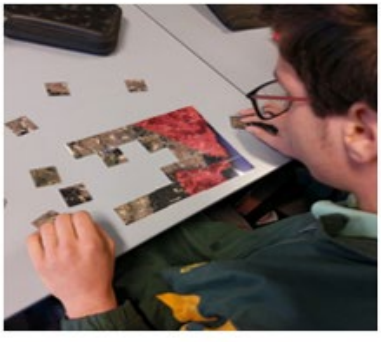
Cath Donnelly has presented at the GTA on Numeracy activities which also suit kinaesthetic learners by using biscuits, blocks and other items to create graphs. She also suggests using a string continuum to plot information along. An example might be to using labels and pegs to guess where countries sit on a HDI or other scale.

Scratch offs – If you really want to impress your students and add some excitement (and cost) to your lessons you can use scratch stickers to hide information. Students might be asked to first guess the information that is hidden and then scratch to reveal the answer. For example, you might provide the definition to a wellbeing indicator and hide its name under a scratch sticker. Once students guess they reveal. Scratch stickers can be bought easily and somewhat cheaply in eBay. A similar effect could be achieved through folding the paper, but not as exciting for students.

Scratch stickers can be bought inline e.g. eBay, or can be made by mixing paint (silver/grey) with a small amount of dishwashing liquid. You can paint this mixture, once you have the right ratio, onto what you are trying to hide directly or onto some clear contact to cut up and use later.

Make something

- *Make a MUAC bracelet* and try it on. Students will often not know what MUAC stands for, so when they colour their bracelet and try it on, they first put it on their wrists. When it is revealed that MUAC stands for Middle Upper Arm Circumference and that on a child sized bracelet the red zone is about a 20c piece, students get a shock.
- *Prepare a meal* that someone in a developing nation might eat. You could assign a meal to prepare from a range of countries for students to compare. This will likely also engage in student discussion about fairness of meals where there is quality foods with diversity versus a plain meal with basic ingredients. This would then make the lesson an empathy task and stick with them for years to come.



Puzzles – making learning discoverable through a puzzle means that tactile learning engages their needs and builds understanding through play. Taking a choropleth map of access to water, education or another indicator of wellbeing and making it into a puzzle would allow for a fun activity where students must piece the map back together. Once complete, students can be quizzed or make their own understanding clear in an assessment form that that is needed.

When using the map of Sydney showing spatial patterns of advantage and disadvantage students were initially told nothing about the map and were asked to guess. This stimulated them to access their prior knowledge and informal comments could be heard where students were overheard saying "Oh, I didn't know that was where Blacktown was." And making their predictions about the map's content. This allowed for some initial formative assessment and where the next parts of the lesson would then move to.

Host a Hunger Banquet – Oxfam has a planed activity to raise awareness and understanding about poverty (and donations) with a worked script, resources, and ideas on how to successfully run the banquet. In summary, the Hunger Banquet splits students into groups representing different levels of development. The groups are then fed based on these groupings, with the most developed fed well, while the least developed group receive a paltry meal in comparison. It really shows the disparities through food and ticks off a lot of students who miss out on a full meal!

https://www.oxfamamerica.org/take-action/events/oxfam-hunger-banquet/

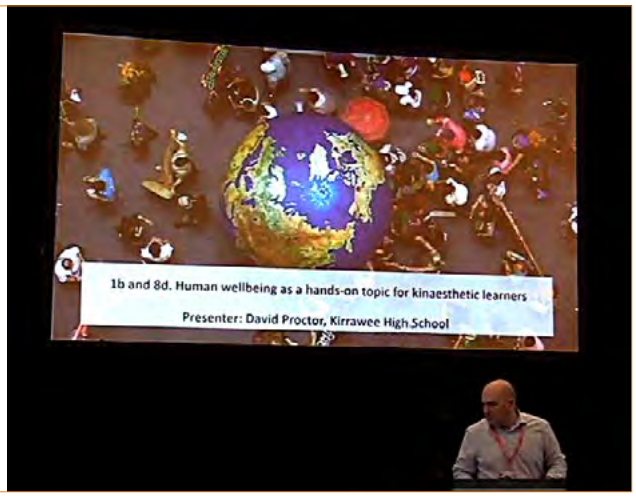
Mystery bags – hiding something that is tangible in a bag and asking students to guess what is inside only by touching helps to inspire their creativity and curiosity. A range of things could ultimately make their way into the bag however, a fun game is to get bags of different colours and in small groups students try to work out what diet is inside each bag. They may be asked to list the individual items and then guess if it is a healthy diet or not.

This could be then extended to photos of people from countries where the diet is from and students matching these together. Examples of foods to hide in the bag can range from fast food or convenience items to rice and pulses, plant-based food or even insects (plastic ones are best). Bags like this can be purchased online, made at school or cheap pillowcases could be utilised.

WATCH David's presentation on this topic from the 2021 GTANSW & Act Annual Conference

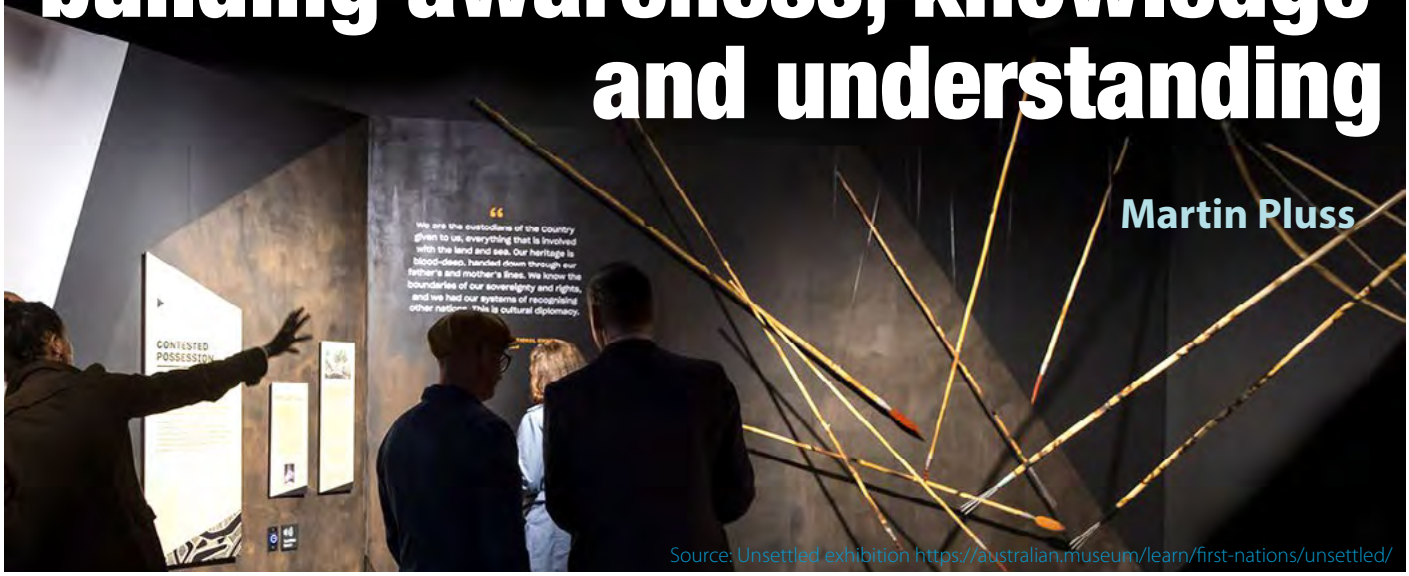
Link **https://vimeo.com/559931755**

Password GTA2022



First Nations Peoples, Australia: building awareness, knowledge and understanding

Martin Pluss



Source: Unsettled exhibition https://australian.museum/learn/first-nations/unsettled/

This is a follow up article to the 2021 publication "*A framework for learning about Aboriginal and Torres Strait Islanders in the Geography classroom*" (Pluss, 2021). The framework step through three stages of awareness, knowledge and understanding of the potential future for Aboriginal and Torres Strait Islanders.

Aboriginal and Torres Strait Islander Peoples are explicitly referred to in the NESA Stage 4 and Stage 5 Syllabus documents and there is the capacity to make further references. **Figure 1** is a summary of specific and integrated references to Aboriginal and Torres Strait Islander Peoples for the geography classroom.

This article draws on new resources including the Unsettled Exhibition at The Australian Museum which was wrapped up the day after Australia Day, 2022, having been established as a response to the 250-year celebration of Cook in 2020 (**Figure 2**). This is followed with an exploration of the ideas and practices drawing on Buraadja (Bragg, 2021) which presents government and community policies as he builds a case for reconciliation.

This article is in three sections.

- an investigation of eight themes drawn from Unsettled.
- the timeline of policies, legislation and strategies is outlined since Federation.
- a brief outline of current issues pertaining to First Nations Peoples.

Figure 2 : Unsettled Exhibition, Australian Museum. Photo by M. Pluss

Stage 4 and Stage 5 Syllabus First Nations Peoples References

SYLLABUS	FIRST NATIONS PEOPLES REFERENCES
Geographical Concepts	
There is no specific reference to First Nations Peoples in Geographical Concepts but connections can be made.	Place is references "culture of its population". Environment refers to "values and worldviews". Interconnections there is relevance to "sets of cause-effect interactions that can operate between and within places". Sustainability includes "there are a variety of contested views on how progress towards sustainability…"
Learning across the curriculum	
Aboriginal and Torres Strait Islanders are specifically mentioned.	Communities are strong , resilient, rich and diverse. Emphasises relationship people have with places and interconnections with environments. Integrate their use of land, governed by a holistic spiritual based connection to country and place, environmental management and regional economies. Learn about different ways about and interacting with the environment and how it can influence sustainable development.
Stage 4	
Landscapes and Landforms	Value of landscapes and landforms: investigate aesthetic, cultural, spiritual and economic value of landscapes and landforms for people , including Aboriginal and Torres Strait Islander Peoples. Landscape management and protection: investigate ways people, including Aboriginal and Torres Strait Islander Peoples. Manage and protect landscapes.
Water in the World	The value of water: investigate the economic, cultural, spiritual and aesthetic values of water for people, including Aboriginal and Torres Strait Islander Peoples…
Stage 5	
Environmental Change and Management	Environmental Management: investigate environmental management, including different world views and the management processes of the Aboriginal and Torres Strait Islander Peoples.
Syllabus Integration	
There are several places where of Aboriginal and Torres Strait Islander Peoples references can be integrated.	Stage 4 Place and Liveability: access to services and facilities, community, enhancing liveability. Stage 4 Interconnections: production and consumption. Stage 5 Sustainable Biomes: challenges to food protection and food security. Stage 5 Changing Places: internal migration. Stage 5 Environmental Change and Management: Investigative Study. Stage 5 Human Wellbeing: human wellbeing and development, spatial variations in human wellbeing, human wellbeing in Australia and improving wellbeing.

Figure 1: Stage 4 & Stage 5 Syllabus References – curated by Martin Pluss https://educationstandards.nsw.edu.au/wps/portal/nesa/k-10/learning-areas/hsie/geography-k-10

Unsettled

Now let's investigate the aboriginal perspective on their issues as portrayed by the Unsettled Exhibition at the Australian Museum (Mc Bride, L & Smith M, 2021). There is also a website of Unsettled with a virtual tour and updated information.

Unsettled presents another view of history which is shaping decisions in the present by focusing on signal fires, recognising invasions, fighting wars, remembering the massacres, surviving genocide, continued resistance and healing nations.

We need awareness of the past to understand the present to make shared decisions for the future.

Unsettled gives voice to First Nations Peoples as stated by the Director in the first exhibit:

"Why should we speak for others when they can speak for themselves?"

1. Cultural differences

Healing is not possible unless there is an understanding of cultural differences and to an extent this continues to today. Captain Cook's story is challenged in the process of recognising and understanding a shared past as the step on the shared journey.

Take for example the cultural significance of signal fires.

There is a difference between smoking ceremonies, campfires, cultural burning and signal fires. When Cook arrived the aboriginal peoples lit signal fires on headlands as warnings. Cook noted the fires but did not have the cultural knowledge to understand it was an emergency response by First Nations Peoples and evidence that the continent was inhabited - contradicting Terra Nullius.

2. Environmental balance

The environment is in balance and the Aboriginal people live respecting air, water and fire in a balanced manner for survival until their lives were disrupted. The disruption in the environment is evident today at a much larger scale. Bruce Pascoe's *Dark Emu* is a very good starting point for a synthesis of this approach to environmental land management.

3. Recognising invasions and Terra Nullius

Aboriginal lands were taken by declaring the land uninhabited, so no treaties or agreements were made. The Kaurareg First Nations people, the Traditional Owners of Tuin (Possession Island), maintain Cook never landed. Firstly because, the painting of the proclamation does align with the landforms and landscapes of the area. Secondly, the smoke signals up the coast indicated the warriors were ready for war should the strangers have disembarked.

4. Fighting wars

A peaceful settling of Australia is an illusion. Unsettled sites colonial documents as evidence.

In the Sydney Gazette on May 23, 1839, an article titled 'The War of Reprisal' discusses the retaliatory war of aborigines in the north west district. There are references to the deaths of the stock of sheep and cattle, colonialist sand stockmen. With a distinctive tone:

> *"…the aborigines must be made to understand, that while they are under the protection of English law, they are also amenable to these laws. They must be taught to seek redress than other means than their spears and tomahawks."*

The location of hostile aborigines was identified, for example, Fort Burke was established as a fortified depot in Warrego country by Thomas Mitchell in 1835 to protect stores for the attack of hostile aboriginal people.

The Sydney wars tended to be geographically specific. There was a concentration in Windsor, Parramatta, along the harbour and rivers, on land between the harbour and Botany Bay and then spread to the edge and beyond the 19 Counties.

5. Massacre sites

An Unsettled exhibit states:

> *"Killing became a defining colonial tactic used by government troops, police officers and even ordinary Australians, to retaliate against the resistance efforts of First Nations Peoples defending their homelands, families and resources."*

In archival records 'dispersal' was code word for widespread systematic attacks on Aboriginals across Australia. Lachlan Macquarie, for example, was explicit in his instructions which lead to the Appin Massacre.

Dr Lyndall Ryan and the team at Newcastle University academics have conducted a detailed methodological survey of massacres their location and numbers. (Ryan, 2019) Colonial written history does not always align with living histories and oral histories of First Nations Peoples. The academics have identified the characteristics of massacres and recorded the details of massacres in text, maps and numbers. **(Figure 3)**

> "To-date, the team has been able to verify that over 8,400 people were killed during more than 300 massacres between 1788 and 1930. Ninety-seven percent of those killed in the massacres were Aboriginal and Torres Strait Islander people."

Figure 3: Colonial Frontier Massacres, Australia, 1780–1930. Source: https://c21ch.newcastle.edu.au/colonialmassacres/map.php

6. Missions, Reserves, Stations and the Stolen Generations

Unsettled outlines a history of government controls over Aboriginal and Torres Strait Islanders lives, which led to the Sorry Statement in 2008 and initiatives since then. Welfare and Protection boards were set up, through race based legislation, forcing people on designated areas of land and the removal of children. There were missions, reserves and camps all over Australia **(Figures 4 and 5)**.

As well there were stolen generation institutions in regional Australia with a concentration in the capital cities of Sydney, Brisbane and Melbourne. Unsettled mapped 28 institutions throughout Sydney mostly located in the west and south of the harbour. There were regional institutions/ homes such as Kinchela Boys Home near Kempsey and the Bomaderry Aboriginal Children's Home.

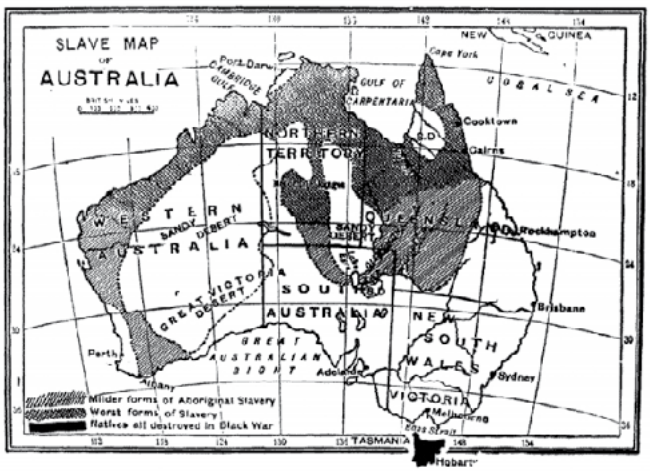


Figure 4: Slave Map of Australia 1890 Source: https://www.creativespirits.info/aboriginalculture/history/australia-has-a-history-of-aboriginal-slavery

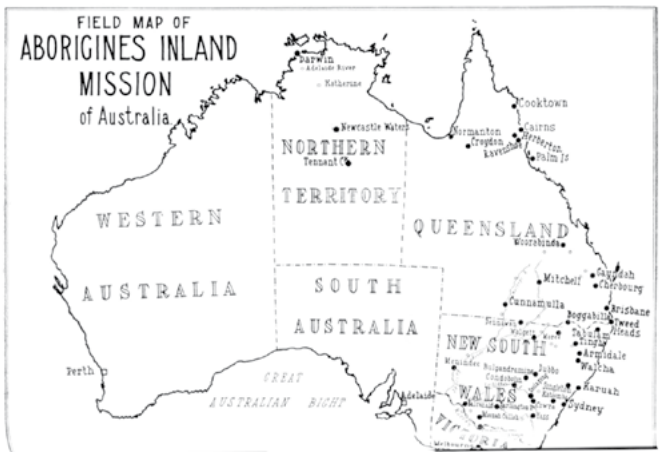


Figure 5: Australian Missions Map 1930 Source: https://aiatsis.gov.au/collection/featured-collections/aborigines-inland-mission

7. Aboriginal deaths in custody.

After the death of John Peter Pat in 1983 the Royal Commission into Aboriginal Deaths in Custody was commissioned and reported in 1991. In 2018 it was reported there were 164 deaths per 100 000 for those 25–34 years old and 368 for those 35–44 years old. In June 2021 there have been 489 indigenous deaths in custody since 1991. Further details can be viewed and used for geographical skills in **Figure 6 and Figure 7**.

	NSW	Vic	Qld	SA	WA	Tas	NT	ACT	Aust
ATSI	1,992	1,565	1,626	2,008	3,383	523	2,504	1,904,	2,039
Non-ATSI	176	133	156	204	206	151	193	108	163
Over-representation ratio	11.3	11.7	10.5	9.8	16.4	3.5	13.0	17.7	12.5

Figure 6: Imprisonment rates, 2016 Source: https://www.alrc.gov.au/publication/pathways-to-justice-inquiry-into-the-incarceration-rate-of-aboriginal-and-torres-strait-islander-peoples-alrc-report-133/3-incidence/over-representation/

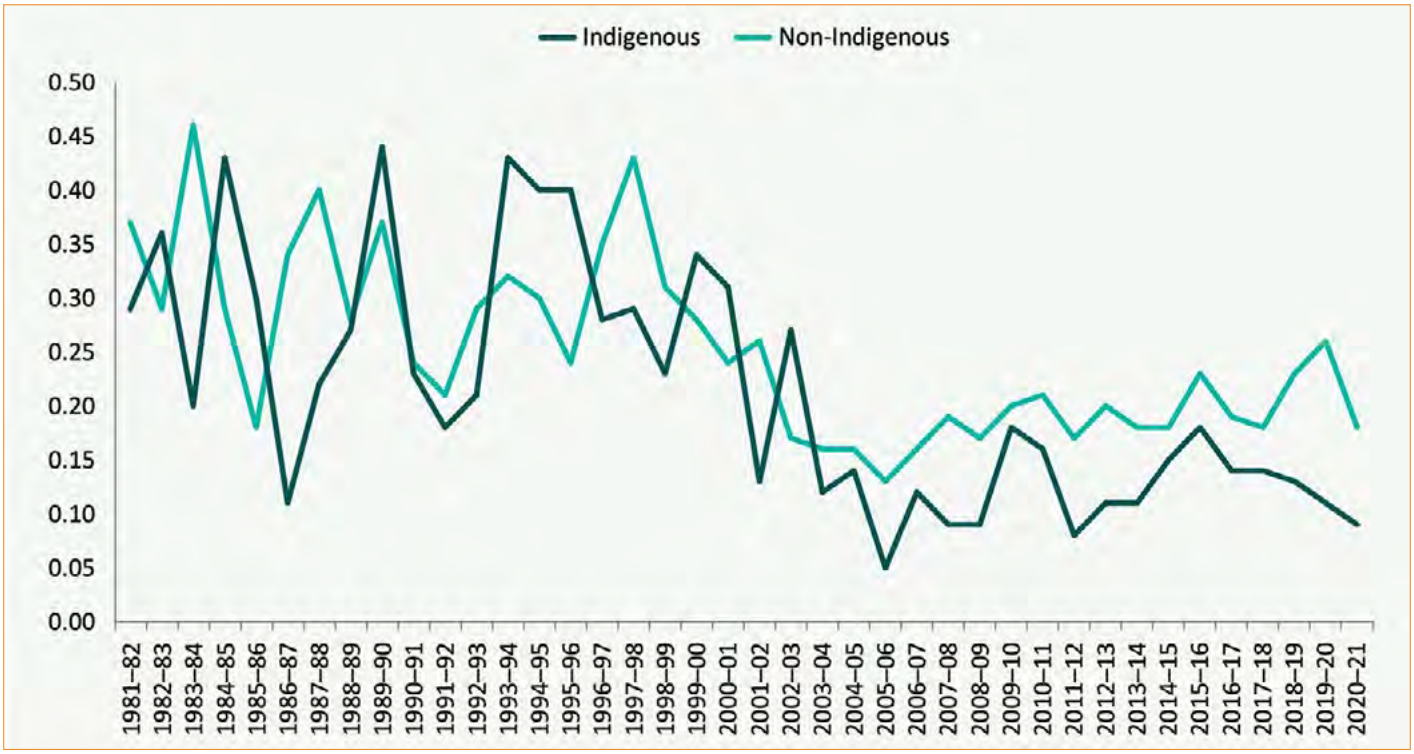


Figure 7: Deaths in prison custody by Indigenous status, 1981-2020. Source: https://www.aic.gov.au/sites/default/files/2021-12/sr37_deaths_in_custody_in_australia_2020-21_v3.pdf

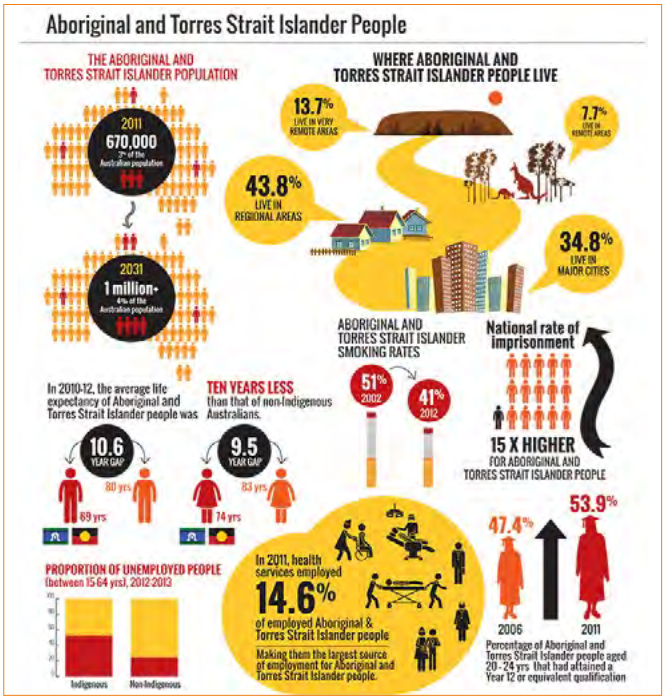


Figure 8 Face the Facts. Source: http://humanrights.gov.au/face-facts

8. Healing

Unsettled established a healing room based on six principles, concepts worthy of deeper investigation. These include galin.gabangbur (the spirit of Children); dhurrirra ngiyanhigingu giyira (Birth Rebirthing Our Future); yawandyilinya.yindamalidya (Taking Care of and Honouring Ourselves and Ancestors) ngarrbang-dhurandu murun-gu (Dilly Bag of Life); winhangagigiladha ngunggiladha (Care for Each Other /Share with Each Other) and walumarra ngiyanhigingu ngurambang (Protecting Our Country).

Healing is required at many levels in the process of moving forward but there is a lot to do to empower Aboriginal and Torres Strait Islander peoples living conditions. (**Figures 8, 9 and 10**)

There have been decades of government and community policies to address this with intended and unintended consequences not all of which have contributed to healing.

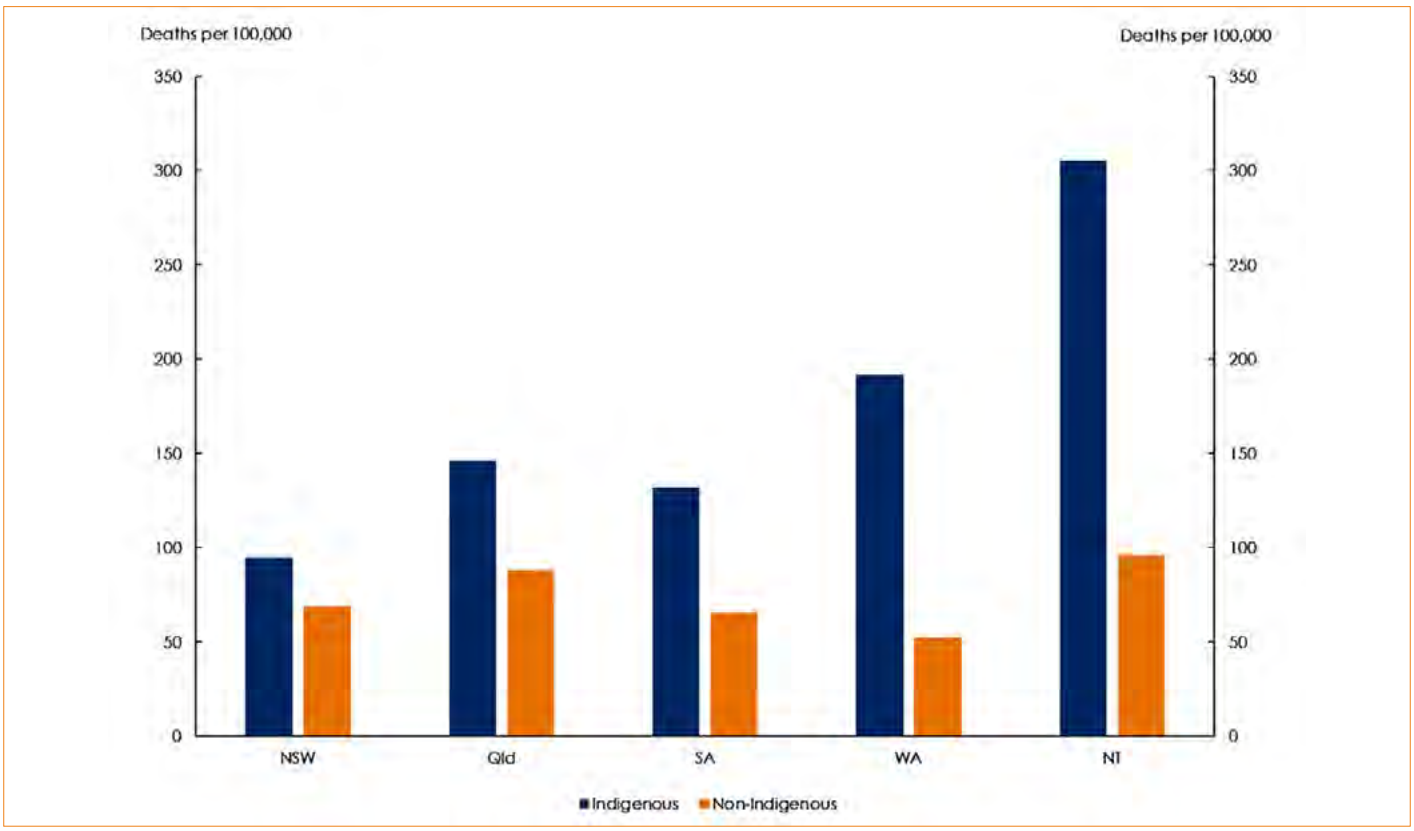


Figure 9 Child Mortality – Closing the Gap 2020. Source: https://ctgreport.niaa.gov.au/child-mortality

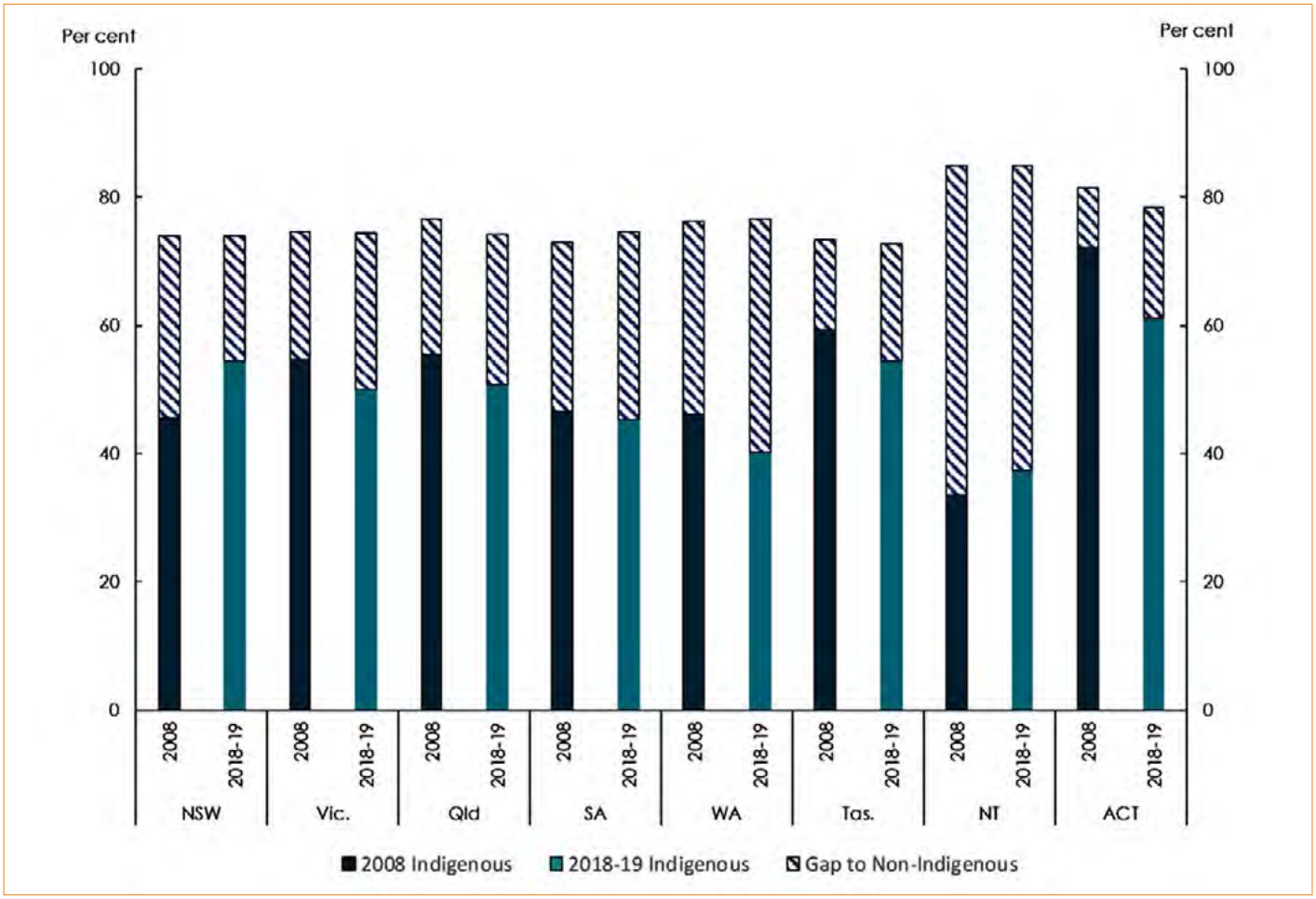


Figure 10: Employment Rate Gap. Source: https://ctgreport.niaa.gov.au/employment

Policies, Legislation and Strategies

Much of this timeline has been derived from Senator Andrew Bragg's *Buraadja*. Prior to Federation there was a mixture of franchise laws for the different colonies. For example,

> *"In the 1850s under the constitutions of Victoria, New South Wales and South Australia, Aboriginal men had the same right to vote as other male British subjects aged over 21."*

Although the 1902 Commonwealth Franchise Act gave the vote to women it denied voting of "aboriginal natives" in Australia. This was also in the context for the Immigration Restriction Act 1901 which prevented nonwhite people from migrating to Australia.

The 1920 Australia Aboriginal Progress Association was the first recognised political organised aboriginal activist group. At its height it had 13 branches and four subbranches and 600 members in NSW. It clashed with the NSW Aborigines Protection Board connecting the removal of children from their families. Under strong pressure, the government and law enforcement agencies, public activity ended in 1927. Though it was privately active.

In 1949 the vote was given to any Aboriginal person in the defence forces. Ben Chifley introduced an amendment to the Commonwealth Electoral Act 1918 which made this possible.

In 1961 the House of Representatives Select Committee on Voting Rights of Aboriginals was set up and the Commonwealth Electoral act 1962 granted all Aboriginal and Torres Strait Islanders the option to enroll and vote in the federal elections. It was not until 1984 that they gained full equality and compulsory voting rights.

The 1967 Referendum, with a turnout of 94% and an overall majority of 91%, made possible for the government to make laws for Aboriginal people. The result removed Section 127 which excluded Aboriginal people from being counted in the census and in doing so removed all reference to Aboriginal people in the Constitution. Holt's position was that the use of these words was discriminatory.

The question was:

> *"Do you approve the proposed law for the alteration of the Constitution entitled 'An Act to alter the Constitution so as to omit certain words relating to the people of the Aboriginal race in any state and so that Aboriginals are to be counted in reckoning the population?'"*

The referendum had a significant symbolic impact and went a long way to raise the expectations of Aboriginal and non-Aboriginal people regarding Aboriginal rights and welfare in the 1970s.

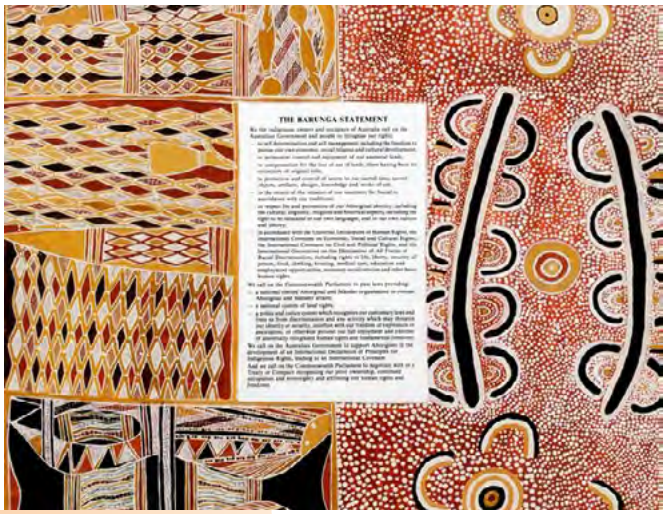
The Woodward Royal Commission into Aboriginal Land Rights was held in 1973–1974. Following this the Whitlam Government drafted the first Commonwealth legislation to grant land rights to Aboriginal peoples. The Aboriginal Land (Northern Territory) Bill was introduced (October 1975), but the Whitlam Government was dismissed before the legislation could pass the Senate. In 1976, the Fraser Government passed The Aboriginal Land Rights Act that allowed Aboriginal people in the Northern Territory to make claims on land to which they could prove traditional ties.

The 1980 Policy of Makarrata "end of the dispute and resumption of normal relations" was started by the Fraser government. The idea of a treaty or a broad agreement between two groups was not in favour.

In relation to Makarrata – the National Aboriginal Committee wanted:

- Land rights over farmer reserves, national parks and traditional rights
- National Aboriginal Bank
- One seat per state in house and senate
- Self-government of aboriginal communities
- Return of artefacts and artworks
- Dedicated schools, medical centres and legal aid.

On behalf of the government of the day Fred Chaney's response was to do the following. Return tribal lands including sacred sites and freehold titles. Provided compensation in cash as a percentage of GNP or a % of the aboriginal proportion of the population. There was no agreement to reserve seats in parliament. There was no compulsory employment in government but would promote aboriginal employment. The Senate Committee Report *Two Hundred Years later: report on the feasibility of a compact or a Makarrata between the commonwealth and aboriginal peoples* was tabled.



In 1988 Prime Minister Bob Hawke promised a Treaty after receiving the Barunga Statement from Aboriginal elders. (**Figure 11**) This seemed to raise concerns and was replaced by a document of reconciliation', Makarrata or compact. The broad impact of the Barunga statement was as follows:

> *"Barunga and other festivals are important venues for the celebration and sharing of Aboriginal and Torres Strait Islander cultural practices and to provide opportunities for communities to engage with current social and political issues."*

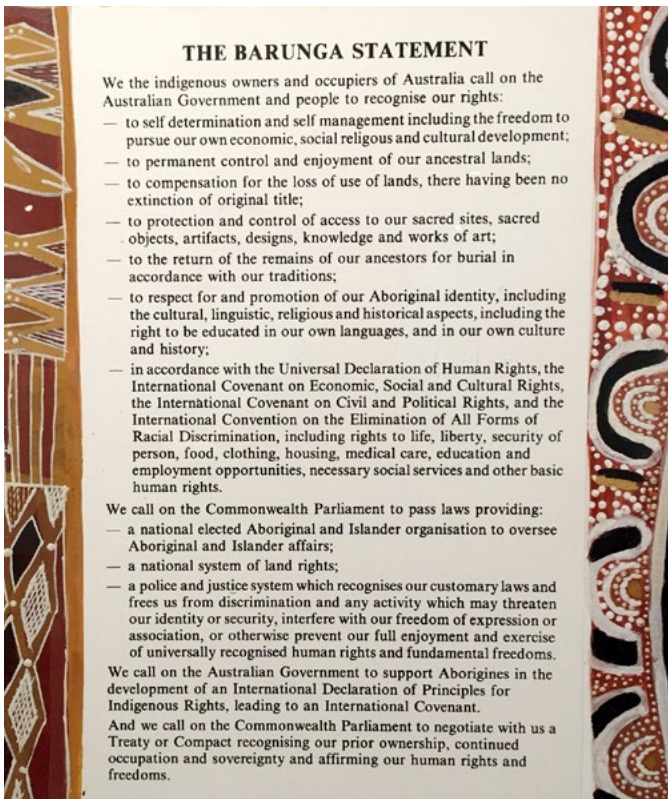
The Aboriginal and Torres Strait Islanders Commission (1990-2005) was set up to allow formal involvement in the processes of government but was dismantled.

Paul Keating Redfern Park Speech 1992 is remembered as one of the most powerful speeches in Australian history, both for its rhetorical eloquence and for its ground-breaking admission of the negative impact of white settlement in Australia on its Indigenous peoples, culture and society. It is the first acknowledgement by the Australian Government of the dispossession of its First Nations Peoples. It has been described as a significant moment in the nation's reconciliation with its Aboriginal and Torres Strait Islander people.

In 1992 the High Court decision in Mabo case recognised native title. The lead up was with the *Torres Strait Islands Coastal Islands Act 1985*, which 'extinguished without compensation' any Torres Strait Islander claims to their traditional land. In February 1986, the Meriam challenged the legislation and in December 1988 the High Court ruled in the Mabo No. 1 case that the Act contravened the *Commonwealth Racial Discrimination Act 1975*. This enabled the High Court to begin hearing Mabo No. 2, the Meriam's Land Rights Case.

The judgements of the High Court of Australia in the Mabo case No. 2 introduced the principle of Native Title into the Australian legal system. In acknowledging the traditional rights of the Meriam people to their land, the court also held that native title existed for all indigenous people. This decision altered the foundation of land law in Australia and rendered terra nullius a legal fiction. The implications were wide reaching, as would become more apparent in recent years.

The 1996 Wik High Court decision examined whether statutory leases extinguish native title rights. The court found that the statutory pastoral leases under consideration by the court did not bestow rights of exclusive possession on the leaseholder. As a result, native title rights could co-exist, depending on the terms and nature of the particular pastoral lease. Where there was a conflict of rights, the rights under the pastoral lease would extinguish the remaining native title rights.



THE BARUNGA STATEMENT

We the indigenous owners and occupiers of Australia call on the Australian Government and people to recognise our rights:

- to self determination and self management including the freedom to pursue our own economic, social religous and cultural development;
- to permanent control and enjoyment of our ancestral lands;
- to compensation for the loss of use of lands, there having been no extinction of original title;
- to protection and control of access to our sacred sites, sacred objects, artifacts, designs, knowledge and works of art;
- to the return of the remains of our ancestors for burial in accordance with our traditions;
- to respect for and promotion of our Aboriginal identity, including the cultural, linguistic, religious and historical aspects, including the right to be educated in our own languages, and in our own culture and history;
- in accordance with the Universal Declaration of Human Rights, the International Covenant on Economic, Social and Cultural Rights, the International Covenant on Civil and Political Rights, and the International Convention on the Elimination of All Forms of Racial Discrimination, including rights to life, liberty, security of person, food, clothing, housing, medical care, education and employment opportunities, necessary social services and other basic human rights.

We call on the Commonwealth Parliament to pass laws providing:

- a national elected Aboriginal and Islander organisation to oversee Aboriginal and Islander affairs;
- a national system of land rights;
- a police and justice system which recognises our customary laws and frees us from discrimination and any activity which may threaten our identity or security, interfere with our freedom of expression or association, or otherwise prevent our full enjoyment and exercise of universally recognised human rights and fundamental freedoms.

We call on the Australian Government to support Aborigines in the development of an International Declaration of Principles for Indigenous Rights, leading to an International Covenant.

And we call on the Commonwealth Parliament to negotiate with us a Treaty or Compact recognising our prior ownership, continued occupation and sovereignty and affirming our human rights and freedoms.

Figure 11 Barunga Statement 1988. Source: https://www.commonground.org.au/learn/the-barunga-statement-and-agreement

Wik 10 Point Plan. The Native Title Amendment Act 1998 also commonly referred to as the "10-Point Plan" is an Australian native title law created by the response to the Wik Decision by the High Court.

The work in the Howard years, as described by Paul Kelly in Baraadja is seen as a:

> *"Missed opportunity for Australian conservatives… As reconciliation evolved into symbolic and practical dimensions, it became a natural position for a conservative leader. Labour was in denial of this truth and the liberals were blind to their opportunity."*

In this era the question of an Apology was significant in the public and political consciousness. It follows on the back of the Bringing Them Home Report of the National Inquiry into the Separation of Aboriginal and Torres Strait Islander Children from Their Families April 1997. This led to the National Sorry Day, or the National Day of Healing, an annual event that has been held in Australia on 26 May since 1998. The event remembers and commemorates the mistreatment of the country's Indigenous peoples, as part of an ongoing process of reconciliation between the Indigenous peoples of Australia and the settler population. The date was selected because on that date in 1997 the *Bringing*

Them Home report was published. There was the symbolic 2000 Sydney Harbour Bridge walk offering Reconciliation of the Centenary of Federation.

On 13 February 2008, Prime Minister Kevin Rudd moved a motion of Apology to Indigenous Australians. His apology was a formal apology on behalf of the successive parliaments and governments whose policies and laws "inflicted profound grief, suffering and loss on these our fellow Australians".

In this era the National Indigenous Council was terminated. The Government expressed a commitment to re-establish a national indigenous representative body and related issues and options were addressed in the Human Rights and Equal Opportunity Commission's *Building a sustainable National Indigenous Representative Body: An issues paper prepared by the Aboriginal and Torres Strait Islander Social Justice Commissioner*. Also, the Government's 2007 commitment to a 'new partnership' and 'closing the gap' was restated in the *Close the Gap, Indigenous Health Equality Summit, Statement of Intent* which the Commonwealth signed on 20 March 2008.

Prime Minister, Tony Abbott said the following:

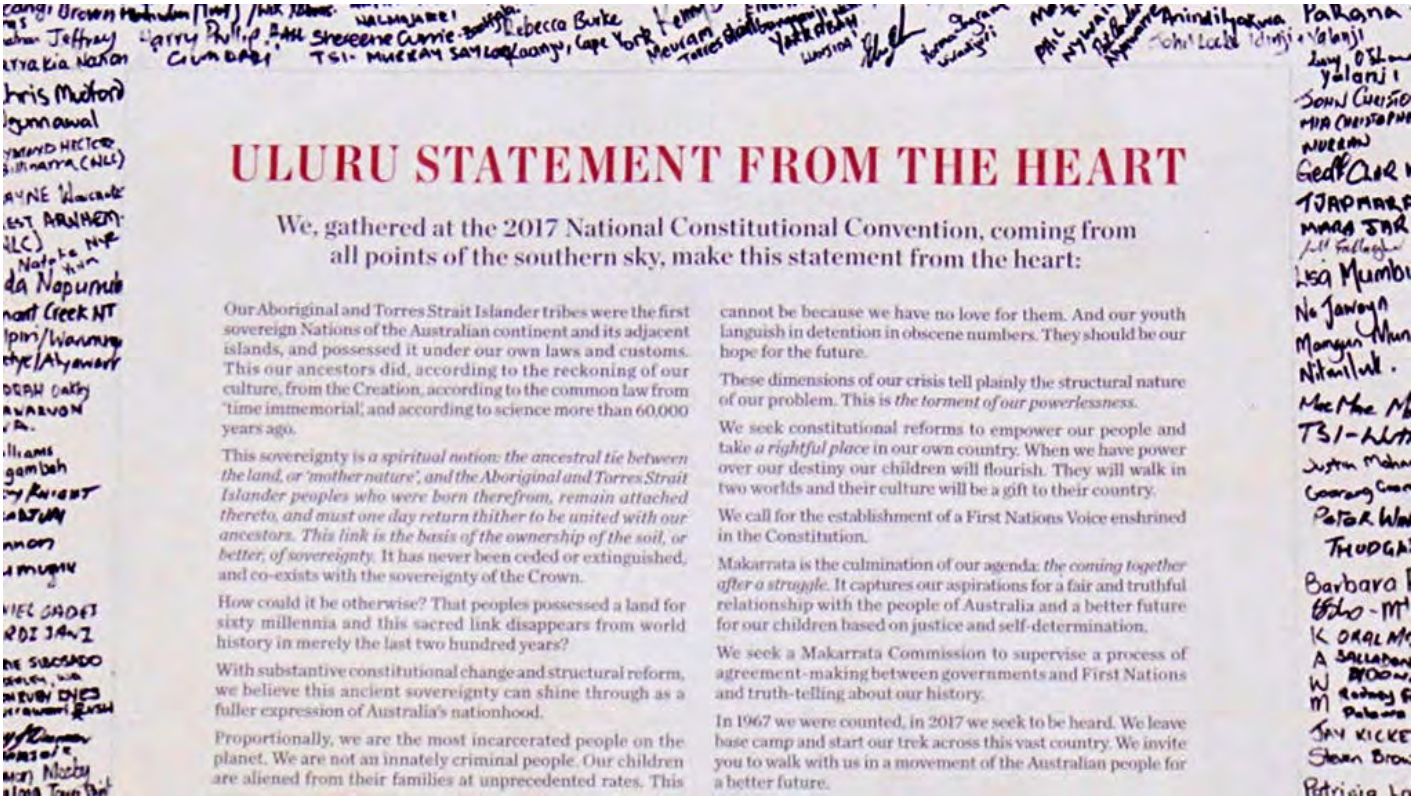
> *"As far as I am concerned. Indigenous recognition would not be changing our Constitution, but rather complete our Constitution; and until this is done our country will not be whole."*

A new section 51A was suggested for the Constitution in 2012. The Expert Panel's report on Constitutional Recognition of Indigenous Australia – Chair Mark Leibler and Patrick Dodson – was commissioned by Julia Gillard and released during the Abbott Years. The new section 51 A, recognised continent and islands first occupied by aboriginals, acknowledged continual relationships of ATSI with their traditional lands and waters, respected continuing culture, languages and heritage and recognised the need to secure advancement of ASTI peoples.

In 2017 the Voice emerges through the Uluru Statement **(Figure 12)**. The Leeser and Dobson Joint Select Committee on Constitutional Recognition provided a follow up period of consultation and reporting through 2018 and 2019. (Pluss, 2021).

On 4 January 2022 the *Ngurra: The National Aboriginal and Torres Strait Islander Cultural Precinct* was announced. The government will build Ngurra, an Aboriginal and Torres Strait Islander cultural precinct, on the shores of Lake Burley Griffin in the Parliamentary Triangle, on Ngunnawal country (Canberra).

On the 25 January 2022 the *Free use of Aboriginal Flag secured for all Australians* was announced. Harold Thomas will retain his moral rights over the flag and it can now be used without the need to be granted permission to use.



ULURU STATEMENT FROM THE HEART

We, gathered at the 2017 National Constitutional Convention, coming from all points of the southern sky, make this statement from the heart:

Our Aboriginal and Torres Strait Islander tribes were the first sovereign Nations of the Australian continent and its adjacent islands, and possessed it under our own laws and customs. This our ancestors did, according to the reckoning of our culture, from the Creation, according to the common law from 'time immemorial', and according to science more than 60,000 years ago.

This sovereignty is *a spiritual notion: the ancestral tie between the land, or 'mother nature', and the Aboriginal and Torres Strait Islander peoples who were born therefrom, remain attached thereto, and must one day return thither to be united with our ancestors. This link is the basis of the ownership of the soil, or better, of sovereignty.* It has never been ceded or extinguished, and co-exists with the sovereignty of the Crown.

How could it be otherwise? That peoples possessed a land for sixty millennia and this sacred link disappears from world history in merely the last two hundred years?

With substantive constitutional change and structural reform, we believe this ancient sovereignty can shine through as a fuller expression of Australia's nationhood.

Proportionally, we are the most incarcerated people on the planet. We are not an innately criminal people. Our children are alienated from their families at unprecedented rates. This cannot be because we have no love for them. And our youth languish in detention in obscene numbers. They should be our hope for the future.

These dimensions of our crisis tell plainly the structural nature of our problem. This is *the torment of our powerlessness.*

We seek constitutional reforms to empower our people and take *a rightful place* in our own country. When we have power over our destiny our children will flourish. They will walk in two worlds and their culture will be a gift to their country.

We call for the establishment of a First Nations Voice enshrined in the Constitution.

Makarrata is the culmination of our agenda: *the coming together after a struggle.* It captures our aspirations for a fair and truthful relationship with the people of Australia and a better future for our children based on justice and self-determination.

We seek a Makarrata Commission to supervise a process of agreement-making between governments and First Nations and truth-telling about our history.

In 1967 we were counted, in 2017 we seek to be heard. We leave base camp and start our trek across this vast country. We invite you to walk with us in a movement of the Australian people for a better future.

Figure 12: Uluru Statement From the Heart 2017, to read the full statement https://ulurustatement.org/the-statement/

The next section will briefly outline present day issues we can bring to the attention of geography students so they can make informed decisions now and into the future.

Current Issues

This brief section outlines some of the current issues which are useful follow up points of investigations for students.

1. Closing the Gap

The Close the Gap Campaign Steering Committee first met in March 2006. The patrons, Catherine Freeman OAM and Ian Thorpe OAM, launched the Campaign in April 2007. In 2018 Prime Minister's (Malcolm Turnbull) closing the Gap Report Outlined the progress in closing the gap

> *"Ten years on, the lives of Aboriginal and Torres Strait Islander people have improved but more gains need to be made.*
>
> *It is clear that continued effort and action is required."*

In 2021 the Morrison Government has released the Commonwealth's first Closing the Gap Implementation Plan, and with it committed more than $1 billion in new measures to support to help achieve Closing the Gap outcomes.

> *"...doing with rather than doing to."*

2. Aboriginal Flag

In 2020 there was an inquiry into the use of the Aboriginal flag. People seem to be using it less because of the arrangements for obtaining permission. Community groups were being issued invoices and cease and desist notices. The goal is to be able to use it in Parliament House and across other location in Australia. As mentioned above there has been progress in relation to the use of the flag as confirmed on 25 January 2022.

3. Symbolism

Symbolism can go a long way as well. There was the one word change in Advance Australia Fair. There are suggestions to create a reconciliation place in the Canberra Triangle which would also include the repatriation of Aboriginal remains in museums etal around the world. This was confirmed on 4 January 2022.

4. Delivering Reconciliation

The process of delivering reconciliation is evolving due to the Uluru statement, steps towards Constitutional Recognition, The Voice Co-Design process, truth telling, third chamber and treaty discussions.

Senator Andrew Bragg in *Baraadja* draws together possibilities. One option is to have legislation to have the Voice established in the Constitution. No detailed model has been proposed. The second option is the constitutional obligation to hear indigenous voices through legislation. The third option would be to a legislative voice where a government established body would provide the Voice mechanism without constitutional guarantee.

Our geography students may well be voting on this in the coming years and the work we do in the geography classroom could go a long way to keeping them informed.

5. Australia Day: the options

This requires a clear process around truth telling as achieved through the Unsettled Exhibition and engagement with schools. Take for example, an Australia Day goal could be to have Declaration of Recognition celebrate this on 27 January or as a service at the beginning of Australia Day. There is a path through this issue.

6. Australian's Together

Noel Pearson has stated to be an Australian involves an understanding and acknowledging of Aboriginal Heritage, British Institutions and Multicultural Australia. Geography teachers can help bring Australia together through the students they teach. The next step is to build positive, balanced and diplomatic engagement.

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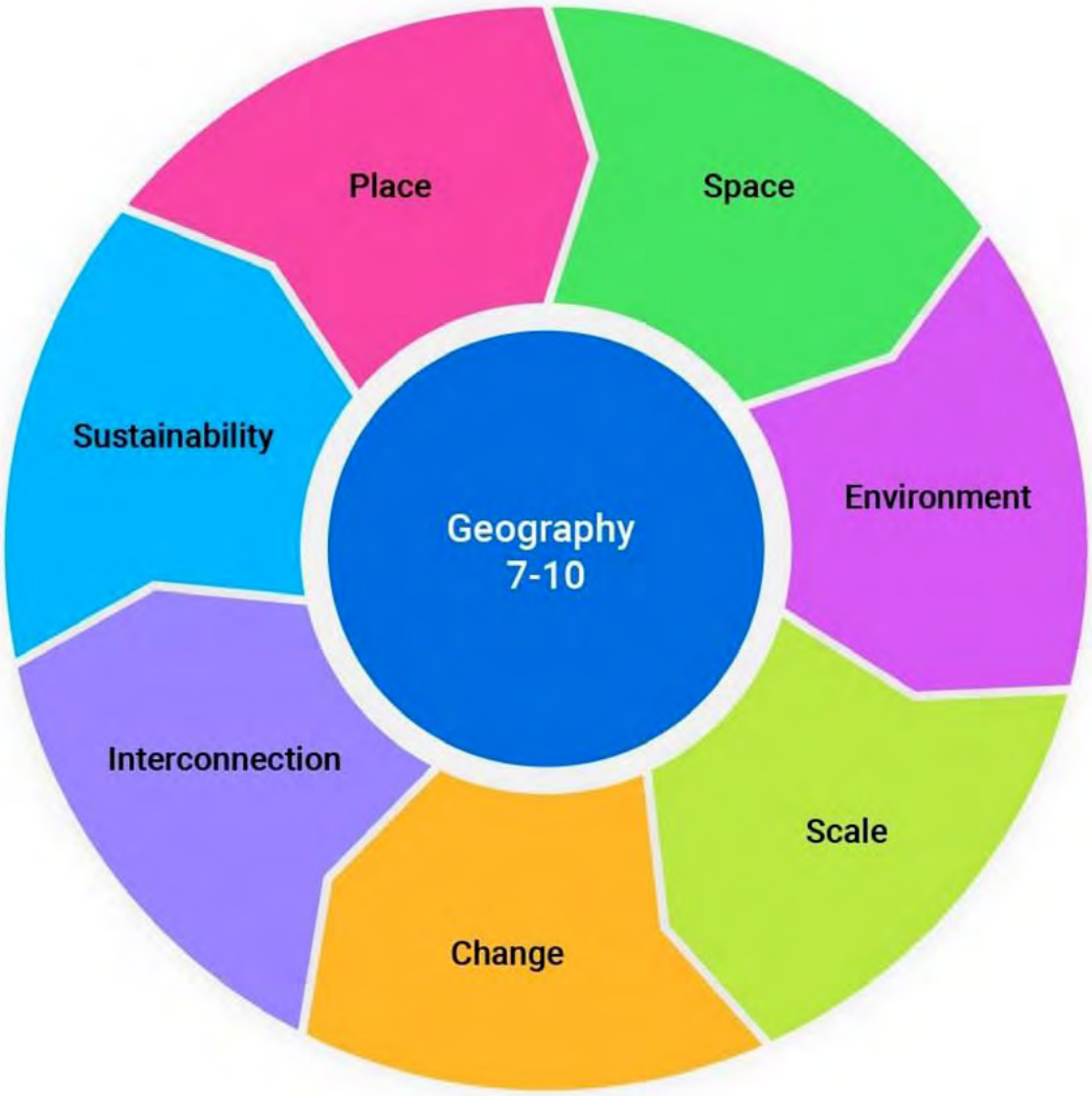
Using Flashcards in Geography

Christina Kalinic and Katerina Stojanovski
Stella Maris College



Core Geography Concepts. Image Source: ACARA 2021

Making your own flashcards is a popular an effective strategy to learn geography vocabulary in all the topics. Flashcards can be made using technology such as word, quizlet or canva or it can be as simple as writing the word and definitions on paper or carboard, and cutting them out. The templates for SPICESS can be adapted by incorporating other geography concepts and emailed to the students to be completed electronically or print them out so students have their own copy of SPICESS which they can have for Stage 4 and 5. Flashcards are a fantastic and fun way to revise for exams by allowing students to test themselves on key geography terms.

Tips for making and using your flashcards

- Write the term on the front and the definition on the back
- The information should be factual and brief to assist with recall
- Write clearly
- Use different coloured markers and different coloured paper
- Sort key terms in categories
- Include images, diagrams, mindmaps with text to make the content easier to remember
- Use one word per card to gain a deeper understanding
- Test yourself out loud by asking a peer to quiz you
- Mix up your flashcards so you study them in a different order
- Add to your flashcard pile as you learn new terms
- Use a system to revise with your flashcards e.g. The Leitner system

The Leitner System – Spaced Revision

The Leitner System is a form of spaced revision that involves you studying the keywords that you don't know as well more often than the keywords you know quite well.

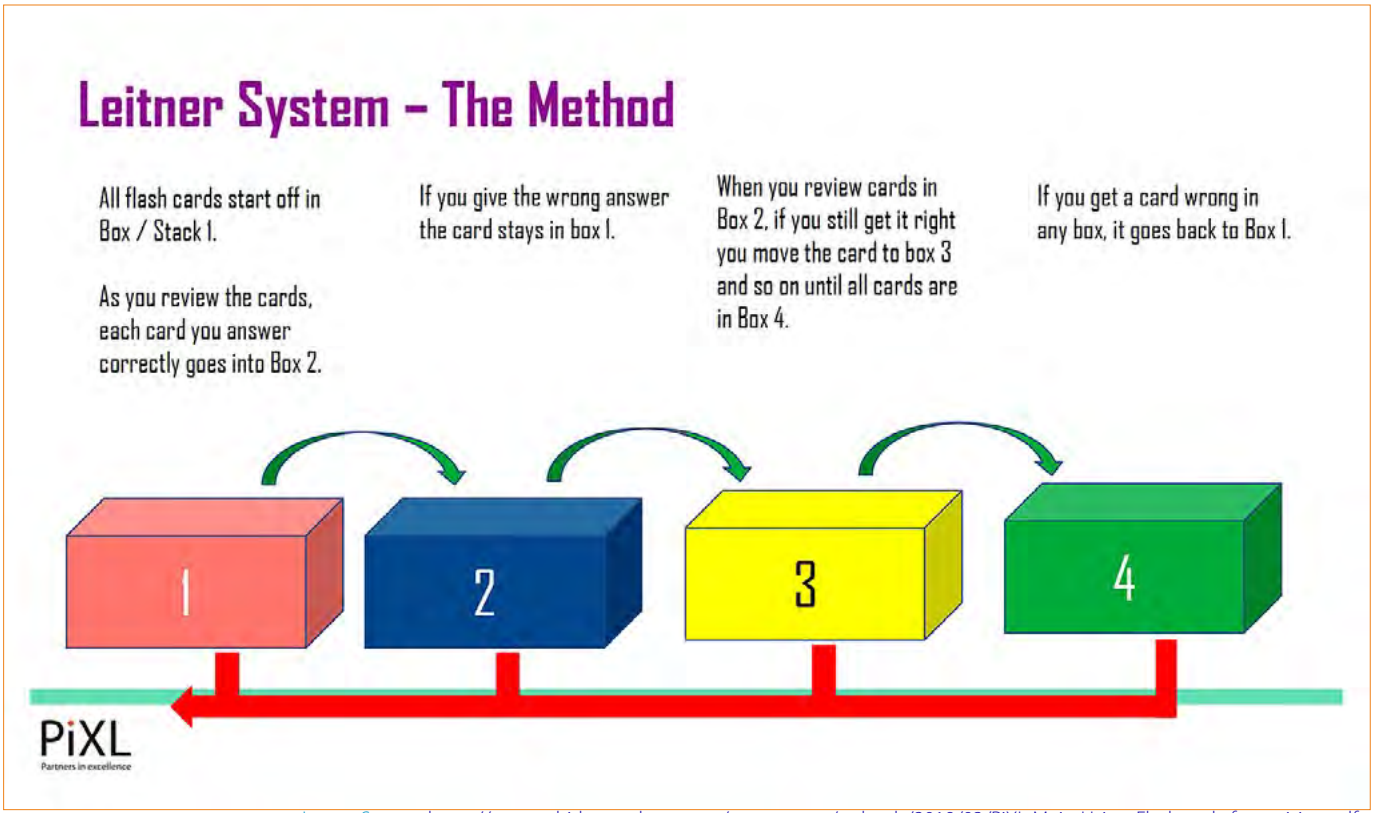


Image Source: https://www.whitleyacademy.com/wp-content/uploads/2019/03/PiXL-Main-Using-Flashcards-for-revision.pdf

Geographical Concepts – Key Terms Flashcards

TASK

Create your own flashcards:

1. Writing a concise summary for each Geographical concept (on the right-hand side).
2. Cut out each flashcard along the bold black line. Fold it in half along the dotted line.
3. Quiz yourself and your Geography peers!

Space	
Place	
Interconnection	

Change	
Environment	
Scale	
Sustainability	

Geographical Concept –

SPICESS

Name: ..... Class: .....

Geographical Concept –

Space

Geographical Concept –

Place

Geographical Concept –

Interconnection

Geographical Concept –

Change

Geographical Concept –

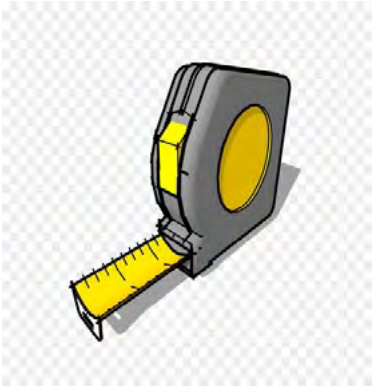
Environment

Geographical Concept –

Sustainability

Geographical Concept –

Scale



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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 editors: Lorraine Chaffer (lchaffer@tpg.com.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.
   - Tables should be on separate pages, one per page, and figures should be clearly drawn, one per page, in black on opaque coloured background, suitable for reproduction.
   - Photographs should be in high resolution digital format. An indication should be given in the text of approximate location of tables, figures and photographs.
   - Every illustration needs a caption.
   - Photographs, tables and illustrations sourced from the internet must acknowledge the source and have a URL link to the original context.

Note: Please try to limit the number of images per page to facilitate ease of reproduction by teachers.

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.

6. *Photo of Contributor:* Contributors may enclose a passport-type photograph and a brief biographical statement as part of their article.

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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