Geography Teachers Association NSW & ACT

GEOGRAPHY BULLETIN

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Teaching political nuance

Building hope in the face of a changing world

White Rock

The power of inquiry-based learning

IN THIS ISSUE:

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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.

Executive Report

Dear Members,

Here we are again in the thick of another school year and the publication of our first Bulletin for 2025! The GTA NSW & ACT team have a lot of exciting events and happenings planned for our members this year. Here is a tiny preview.

The launch of our new-look and more intuitively functional GTA NSW & ACT website.

This has been a long time coming and we are very pleased to provide you with a site that is both beautiful to look at and easier to navigate. Each member will have their own dashboard where they can manage passwords and store favourite items to refer to whenever they choose. There will even be a streamlined shopping experience for GTA resources such as the fabulous Powerful Geography series.

The Annual Conference took place at the Amora Hotel in Jamison Street, Sydney on Friday 16 May and Saturday 17 May 2025.

We were chuffed to have landscape architect, TV presenter, author and all-round good guy, Costa Georgiardis, from Gardening Australia in the room. Costa's charm, charisma and passion are invigorating and irresistible, he has a gift for making his important messages engaging and highly entertaining. Something he has in common with teachers!

There was also time to examine the new HSC and 7-10 syllabi, talk about skills and fieldwork, practical hands-on advice from colleagues and inspiration from filmmakers, researchers and experts in their field. It was also a lovely occasion to meet, network and share with other passionate geographers.

That's not all – there are also webinars, the Young Geographer Awards and regional events planned with more information to come.

Through our website, regular newsletters (an innovation in 2025) ,and the usual social channels, we will endeavour to keep you, our members, up to date with all the news. If there is an issue you would like addressed, or you have something you would like to share by contributing an article to the Bulletin, please get in touch.

We have a contact page on the website or you can email us at admin@gtanswact.org.au or editor@gtanswact.org.au for Bulletin business.

Our mission is to communicate, advocate, support and educate – please don't hesitate to speak with us or get involved.

Diana Gearside Executive Officer. GTA NSW & ACT

Contents

Editorial

Welcome to Edition 1 for 2025.

This year sees the first HSC Geography under the new Stage 6 Geography syllabus, a period of familiarisation, planning and preparation of the new Stage 4 & 5 Geography syllabus with implementation planned for 2027, as well as consultation and release of the Elective Geography syllabus, due for implementation in 2028.

The Annual Conference took place on 16 and 17 May at Amora Hotel in Sydney. Fleur Farah and Jenni Wenzel, representatives from NESA, introduced the new 7–10 syllabus and led teachers through the support materials available. We were lucky to secure a screening of White Rock, a documentary which addresses an impact of climate change – the population explosion of long-spined sea urchin on Australia's kelp forests. This film is currently touring Australia, and provides excellent insight for those teaching the Great Southern Reef as part of the Ecosystems and Global Biodiversity case study for Stage 6 Geography. There was a range of content and fieldwork experts and class practitioners sharing their expertise to enhance your teaching of our subject.

Teachers are strongly encouraged to share your ideas, experiences and expertise by writing articles for the Bulletin throughout the year. We all bring something different, but equally valued to the association. Fresh ideas and approaches to teaching our subject are always welcome.

Louise Swanson

Councillor, GTA NSW & ACT
Geography Bulletin Editor

We'd love to publish your success stories!

Do you have an effective teaching activity, resource, or classroom practice that you'd love to share?

The GTANSW & ACT welcomes contributions and encourages educators to submit articles to the *Geography Bulletin*.

We prefer to receive articles in Microsoft Word, with any images attached as separate files. Placing images in Word to indicate where they should appear can be helpful, however images embedded into Word become compressed and lose data, so please ALSO supply the original images as separate files.

If you have questions, or to send articles for consideration, email editor@gtanswact.org.au.

GTANSW & ACT citation

Outstanding Professional Service to the Association (OPSA)

Geography Teachers Association NSW & ACT

Dr Alex Pentz (Councillor)

Dr Alex Pentz joined the Council of the Geography Teachers Association of NSW and ACT (GTA NSW & ACT) in 2018. Alex continues to showcase a spirit of sharing and mentorship around the development of innovative, research-informed learning, teaching and assessment programs.

One of Alex's greatest contributions to the Association is through the webinar programs where she has moved from being a regular presenter, to holding a supporting role in webinar delivery, to being a leader who as revitalised and reconceptualised the focus and purpose of this event.

Alex's reputation as an exemplary geography educator is evidenced through her sustained involvement in connecting her own classroom practice, with Association priorities.

Upon release of the Stages 4 and 5 Geography syllabus in 2016, Alex pioneered the development and sharing of concept-driven programs of work under the banner of "Innovative Geography" which prioritised fieldwork, outcomes, and geographical concepts to generate connections across units within each stage of schooling rather than silos of units.

Alex shares insightful ideas through Annual Conference presentations and regular submission of articles to the Geography Bulletin. Alex's advice about program design is often sought.

Alex's careful interpretation of syllabus documents, proactive stance in developing adaptable resources, and desire to shape a mentoring initiative has resulted in Alex redesigning the webinar program to become Geo-Gatherings. This is conceptualised as a community of practice where a connected series of webinars include instructional moments and interactive break-out room activities where the collective expertise of attendees can be digitally captured and shared to create an evolving, member-centric resource. Current focus of Geo-Gatherings is around the newly released Stage 6 syllabus. Feedback from webinar delegates indicates strong support for continuation of this initiative.

Dr Alex Pentz has made an outstanding contribution to the Association. Her time, ideation, and service are greatly appreciated.

GTANSW & ACT citation

Outstanding Professional Service to the Association (OPSA)

Geography Teachers Association NSW & ACT

Drew Collins (Councillor)

Drew Collins joined the Council of the Geography Teachers Association of NSW and ACT (GTA NSW & ACT) in 2017. Drew continues to demonstrate the attributes of being a forward-thinking, solutions-focused Councillor.

Drew shares well-informed, thoughtfully considered viewpoints about the teaching of Geography and strategic directions of the Association. Drew's outstanding contribution is that he "walks his talk" through active contribution to many aspects of Association work. For example, Drew was actively engaged in the design and implementation of a recruitment process for an Executive Officer during 2024.

Further, Drew was editing the newly released Powerful Geography textbook series during 2023 and 2024 ensuring that content was concisely and clearly presented.

He has also written about programs happening in his schools or shared teaching resources for the Geography Bulletin. Drew also judged the national awards for teaching resources as part of the Australian Geography Teachers Association Awards in 2022.

Since joining Council, Drew has been proactive in encouraging colleagues to share their quality practice by contributing articles to the Bulletin. Drew also continues to share expertise in the conceptualisation and delivery of presentations at each Annual Conference since 2017 and other events such as HSC preparation workshops.

Drew has worked across metropolitan and regional NSW contexts, and across school sectors. Drew takes an active role in mentoring teachers of Geography across the Hunter region through the co-ordination of smaller, informal in-person meetings and encouragement to join Association events.

Additionally, Drew actively and meaningfully supports a community of Geography teachers via the Association HSC focused Facebook group with emphasis on advice being focused on understanding how to implement geographical tools and skills as part of regular teaching practice.

Drew Collins has made an outstanding contribution to work of the Association; his time and service are immensely appreciated.

How can teaching political nuance benefit Year 10 Human Society and its Environment (HSIE) Students?

David Massingham, King's Senior School

Introduction

The skill of political nuance can be taught to Year 10 Human Society and its Environment (HSIE) students through immersive and engaging teaching strategies such as political simulations.

According to the English Language and Usage online dictionary "nuance" is a subtle difference in meaning or opinion or attitude (Stack Exchange, 2017). The investigative journalists from Denmark's Constructive Institute define political nuance as the ability to view politics and reality in colours other than black and white. It can be grey and must have multiple layers to be real (Constructive Institute, 2017). The latter definition ties in closely with one of the main foci of this paper, namely the benefit of role plays and digital simulation scenarios on student learning and geopolitical understanding.

Geopolitics is defined as the study of the relationship of political power and Geography; and the belief that if a nation controls key geographical areas (heartland) it will be able to dominate the surrounding territory (Hill, 2001). Another definition is that geopolitics is largely concerned with international relations and international interactions, as influenced by geographical factors.

Many socio-cultural and historical factors also shape and influence the world of geopolitics. The understanding that the world isn't just shaped and influenced by greats of history such as Julius Caesar or Napoleon Bonaparte, but by real people, can help to give students greater contextualisation of the world.

Political Simulations and the Teaching of Nuance and Geopolitics?

Political simulations are a vehicle that can provide an opportunity for students to communicate and understand the motives of nation states and their actions in a regional and international context. Political nuance is a by-product of this communication and understanding. Political simulations provide a forum for students to engage and demonstrate in a practical sense, historical skills such as significance and contestability (Board of Studies NSW, 2012), which other than in the context of submitting a formal assessment task for a teacher, are skills that may otherwise not be given a chance to be flexed by students. Possibly, the most direct link of political simulations to the HSIE curriculum can be made to the Stage 5 Geography Elective Syllabus (Board of Studies NSW, 2019), most specifically the syllabus dot point of "investigating the roles of individuals, groups and governments in conflict resolution", which is tied to the Political Geography topic.

The simulation players best equipped to have the most authentic learning experience are the ones who stay most in character and dedicate their player actions to meaningful conflict resolution. Student understanding of their player role in the political simulation is key and is crafted by the humanities skills they have developed from the humanities curriculums linked to their courses of study. Social science education should prepare students for alternative viewpoints and give students the skills to argue, debate, and discuss the merits of public policy, cultural mores, and their own experiences in a thoughtful and non-violent way (Bittman, 2020).

Foucault (1997) called on educators to open space for resistance in the classroom, where students are allowed to challenge and be challenged. The political simulation fits into what Foucault refers to as "resistance in the classroom", as it provides an environment that, while academically and emotionally safe,

is also one that requires creative learning, or using one's imagination in confronting new situations (Spady, 2001). The environment of empathy, competition, and responsibility that the political simulation provides students would seemingly more closely emulate that of a professional workplace environment, rather than the often rigid, yet safe confines of schools. What Killen (2005) would describe as "value beyond school", with learners having to produce performances and discourse that have personal, aesthetic, or social significance beyond just demonstration of success to a teacher, is a strength of the political simulation experience for students.

Methods

Demographics and Structure

Figure 1 details the sequence of recommended prerequisite geopolitical knowledge as student prior learning, before engaging with the political simulation experience. The lesson totals outlined in Figure 1 are a suggested sequence for teachers, as is the method of assessment type for the political simulation.

Teaching and Learning of Political Simulation (Lesson Sequence)

Classes	Teaching Staff	Lesson Duration	Lesson Content	Type of Assessment

1 class (14-15 students)
 	
ALL students are Simulation players
	1 class teacher (Simulation player)
	
	1-2 Library or Support Staff (Simulation players)
		50-55 minute lessons
		
		12-13 lessons on **geo-political content** (Approx. 4 teaching weeks)
		
		3 lessons on **Political Simulation** (6 days total – includes homework/weekends)
			• Political Systems and Ideologies
			  ○ 3 lessons
			• Political Tension and Conflict
			  ○ 3 lessons
			• The Atomic Age and Nuclear Weapons
			  ○ 2 lessons
			• Super Power Politics (USA Case Study)
			  ○ 3 lessons
			• International Organisations
			  ○ 1 lesson
			• Diplomacy
			  ○ 1 lesson
			• **Political Simulation**
			  ○ Overview and logistics 1 lesson
			  ○ Creating/responding to posts 2 lessons
			
			16 lessons total
				Summative Assessment (Formal Assessment Task in 2022)
				
				Formative Assessment (2024)

Figure 1 Teaching and Learning of Political Simulation Lesson Sequence Source: TKS (2024)

Teaching Instrument

The "Ukraine Conflict Political Simulation", a formative task that builds on the students' knowledge and skills acquired throughout the study of the Political Geography topic in the Year 10 Geography Elective Course, was inspired by a formal assessment task during my study at Macquarie University. The Macquarie University Simulation, which was an assessable component of the *POL844 The Asia-Pacific and Australia – Australian Foreign Policy* course, required pairs of students to role-play for two and a half weeks, a person or organisation relevant to Australian foreign policy, e.g., the Australian Prime Minister or *The Sydney Morning Herald*.

The simulation was an interactive role-playing exercise conducted online to provide hands-on experience in politics and diplomacy. The scenario was loosely linked to Australia's foreign policy goals and policies in the Asia-Pacific region, against the backdrop of a world still very much reeling from the fallout of the

September 11 terrorist attacks of 2001 (the simulation occurring in August 2003). Some of the academic literature on the benefits of political simulations indicates that simulations promote soft skills, such as public speaking, negotiation and/or improved empathy (Clark & Scherpereel, 2024).

The Ukraine Conflict Political Simulation, which was conducted via the Canvas digital learning platform, as part of the Year 10 Geography Elective Course (Political Geography topic), was created as my vision for promoting and encouraging student learning and understanding of the geopolitical world. The Ukraine Conflict Political Simulation has advanced technology options (at least very advanced compared with the 2003 incarnation I was involved with) that allow the students to experience the simulation as it was intended … with a multitude of visual stimulus, video, and multi-media platforms and functions. The logistics of the political simulation included students being assigned a role (one nation or organisation per student player) and they needed to create original posts AND respond/reply to posts from other simulation players that directly impacted the interests/provided opportunities/posed threats to their player. Students needed to reply and create posts based on the historical political behaviours/traits of their player (or to put it another way, stay in character and behave in a predictable way that the real nation state or organisation might behave). Detailed simulation components, such as maps of Europe (ground zero for Ukraine Conflict); glossary of key geopolitical terms; player roles; and player alliances (who is friends with whom and which players are clearly identified enemies of other players) were fundamental ingredients of the simulation that needed to be engaged with, in some depth, before simulation posts could be created.

Despite their role being so abstract from their inexperienced knowledge of the world, students are expected and indeed held to account by other players in terms of simulation parameters. For example, if Student A, who has been assigned the role of Germany (see Figure 2 below), were to make a simulation post stating that they will act unilaterally to pre-emptively strike at Russia with nuclear weapons to eradicate a great military threat, then they have clearly missed the brief and not acted within the geopolitical constraints that define how their player would normally behave or their economic and military capabilities. The acquisition of deep knowledge, which comprises the central ideas that form the basis of a topic; coupled with the web of relationships among those central ideas; and how these relationships link to other knowledge associated with the discipline (Killen, 2005), is necessary for simulation players to fully embrace their assigned simulation roles and also to help students have the knowledge to hold fellow simulation players accountable within the game confines.

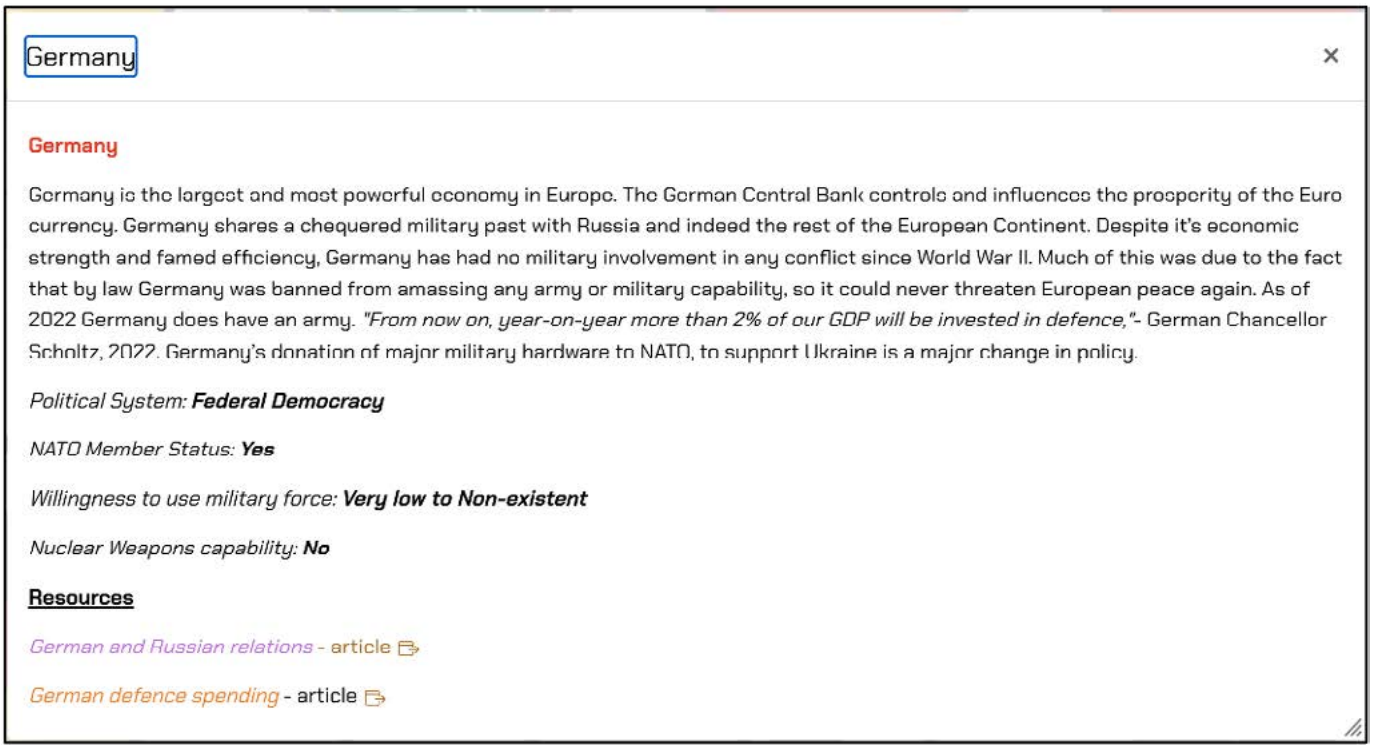

Figure 2 Russia-Ukraine Political Simulation (Individual Player Profile, 2024) Source: TKS (2024)

Disciplined Inquiry and Problematic Knowledge Related to Political Nuance

Disciplined inquiry is a quality teaching approach that ties in terrifically well with the teaching of political nuance, as teachers can help students to focus on gaining in-depth understanding of limited yet specific topics, such as geopolitics and varying political viewpoints (Killen, 2005). The digital discussion board that the political simulation is conducted through, allows for, and encourages, student communication, such as video posts, annotated visual stimulus, and creative and humorous posts to help to learn and to express their understanding (Killen, 2005).

It is also important to impress upon students that the willingness to open one-self to be able to authentically engage with and understand political nuance, is itself to be celebrated, as it is a challenging and often divisive skill and knowledge sub-set. To embrace and best understand and indeed empathise with political nuance/s is to engage with controversial political issues that can often trigger specific elements of one's identity and one's connection to the collective that involve intense emotions (Ron & Gindi, 2023). Controversial political issues can be very divisive, so it is imperative that educators open up space for resistance in the classroom, where students are allowed to challenge and be challenged in a safe and supportive environment (Foucault, 1997).

Problematic knowledge, which is knowledge that can be open to question and debate, which is the basis of political nuance and political understanding is a way of thinking that needs to be increasingly fostered amongst our students (Killen, 2005). A student that can investigate the political, social and cultural influences that shape knowledge is demonstrating a growth mindset, with a lack of pre-determined and rigid ideas on how things are and should be, which can be very refreshing (Killen, 2005). For example, a student on the political simulation who is not hand-tied by absolutes of knowledge, may provide simulation output in their role as a Republican American President that might be far more progressive and liberal than what historical Republican party policy would normally manifest itself as.

The political simulation is a platform for creating a foundational understanding of the many nuances of the geopolitical world. The political simulation also helps to shine a light on "hard power" and "soft power", which is an excellent way to showcase problematic knowledge (Scappatura, 2019). Hard power most commonly

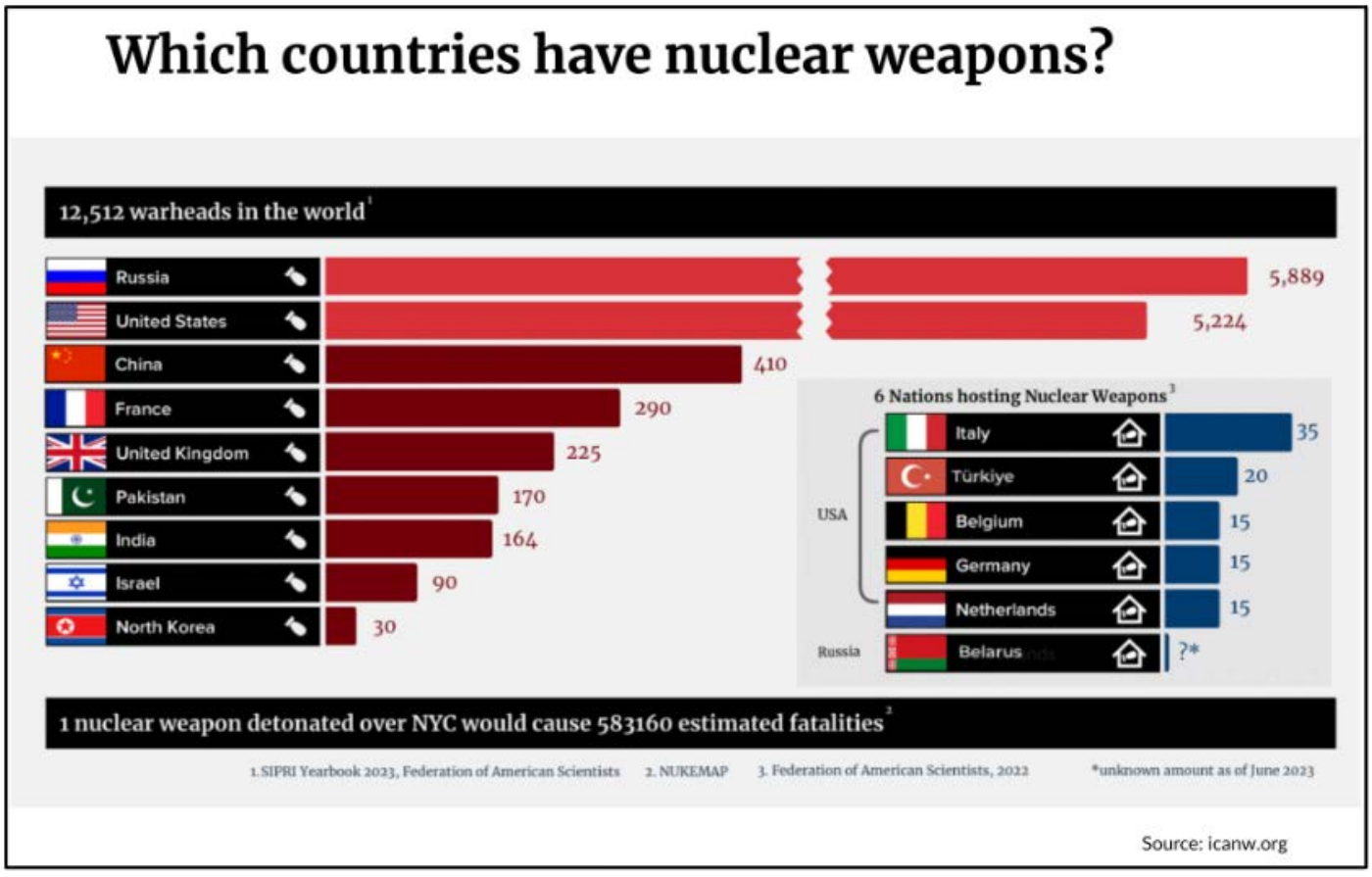

Figure 3 Countries possessing nuclear weapons Source: ICAN (2023)

refers to the possession (by a nation state) of hardware or military capability to launch large scale war, or, at the very least, have formidable weapons at their disposal to act as a deterrent threat (Scappatura, 2019). For example, Russia is a nation universally recognised as possessing hard power, due to its possession of more nuclear warheads than any other country (Russia has 5,889 of the world's nuclear warheads, see Figure 3).

Soft power often refers to the use of soft skills such as diplomacy, negotiation, and alliance-building that creates co-operation amongst nations and international organisations. Soft power can also refer to political influence through ideas and principles such as democracy, freedom and economic prosperity (Scappatura, 2019). A country like the Netherlands, which is neutral in its stance on military conflicts, is a nation that springs to mind when thinking about soft power. The understanding and identification of hard and soft power being used by players in the political simulation, allows students to apply their own political nuances in decision-making and to anticipate how nuance can be applied in varying geopolitical scenarios.

The nuances of power highlight to the students that politics is rarely black and white.

USA – A case study in Geopolitical Ambiguity

The Global Case Study on the USA as World Super Power is an important prior learning in the Political Geography unit, before attempting the political simulation. The study of the USA is a conduit through which the ambiguity of geopolitics and the contrasts of *hard* and *soft* power can be demonstrated. America is often portrayed as the global defender of freedom, democracy and capitalism. Despite this altruistic exterior, the United States has almost as many nuclear weapons as Russia (with 5,224 – see Figure 3) and easily has the greatest military arsenal in the world. The proof is in the statistics as well, with hard power being no certainty of the overall success of a nation. Russia, while possessing the world's greatest number of nuclear weapons, falls well short in key development areas such as health and wealth. Russia's life expectancy is 72.3 years and GDP per capita is $27,500, which ranks 76th in the world; whereas the USA has a life expectancy of 80.9 years and a GDP that dwarfs that of Russia with $64,600 per capita which ranks 14th in the world for GDP (CIA, 2024).

One could argue that the United States' ability to win "hearts and minds" through ideals (soft power), has given it the economic might and influence to become the most dominant military force in the world – hard power – (Scappatura, 2019). An understanding of the significance of the superpowers in the world of geopolitics, and indeed the political simulation, is important for students. Even the most seemingly subtle actions and decisions by superpowers, such as the USA and Russia, can have wide-reaching impacts on all simulation players within the game confines, in much the same way as the world of global geopolitics.

Results

10 Geography Elective Simulation and Student Exemplars

The level of nuance and grasp of complex soft skills required to meaningfully engage with this task is clearly illustrated via the very divergent events, topics and issues to respond to across social, economic and military/defence perspectives. Much like the dynamic and constantly changing world of politics and geopolitics (think changing borders/political regimes/military and defence alliances), students need to respond in a timely fashion to volatile political relationships, uncertain levels of economic and social stability, complex alliance systems that may commit nations to military conflicts, and ambiguous political perceptions and realities. In a task that involves such deep understanding of complex issues, not to mention the cultural empathy necessary to successfully negotiate with opposition players, the incorporation of humour into the education setting to boost student interest in the subject matter is beneficial (Gaufman et al., 2023). The ability to be creative and pivot when challenges/curve balls occurred in the simulation was a characteristic of the best performing students in the 2024 simulation.

Figure 4 illustrates an original student post by the Finland simulation player, which was a reply thread to a humorous, yet narrative driving post from a King's staff member. The Figure 4 student exemplar piggy-backed very successfully off a rather preposterous teacher-created post (again a demonstration of modelling creativity!) of the super alliance of Western Europe (NATOAHOFF) creating a super robot called 'Voltron' (taken from a 1980s cartoon series) to be the shield and ultimate weapon to defeat tyranny in the

form of a super Russian empire called GRBC (Russia, Belarus, Canada, China and Ireland). The allocation of prominent roles in the simulation to dedicated teaching staff, such as CNN World News and the President of the Russian Federation, allowed staff to help drive the narrative and create many different avenues and tangents that all students could engage with, which opened greater access to meaningful student learning. It also allowed staff to model how humour could be successfully integrated into the simulation. The incorporation of humour into the education setting (by both students and staff simulation players) not only boosted self-motivation and enhanced students' interest in the subject matter, but also played a crucial role in reducing anxiety and stress levels (Gaufman et al., 2023). The use of humour can also foster greater student engagement, encourage "deeper" research investigation and possibly help to draw out cause and effect within the simulation.

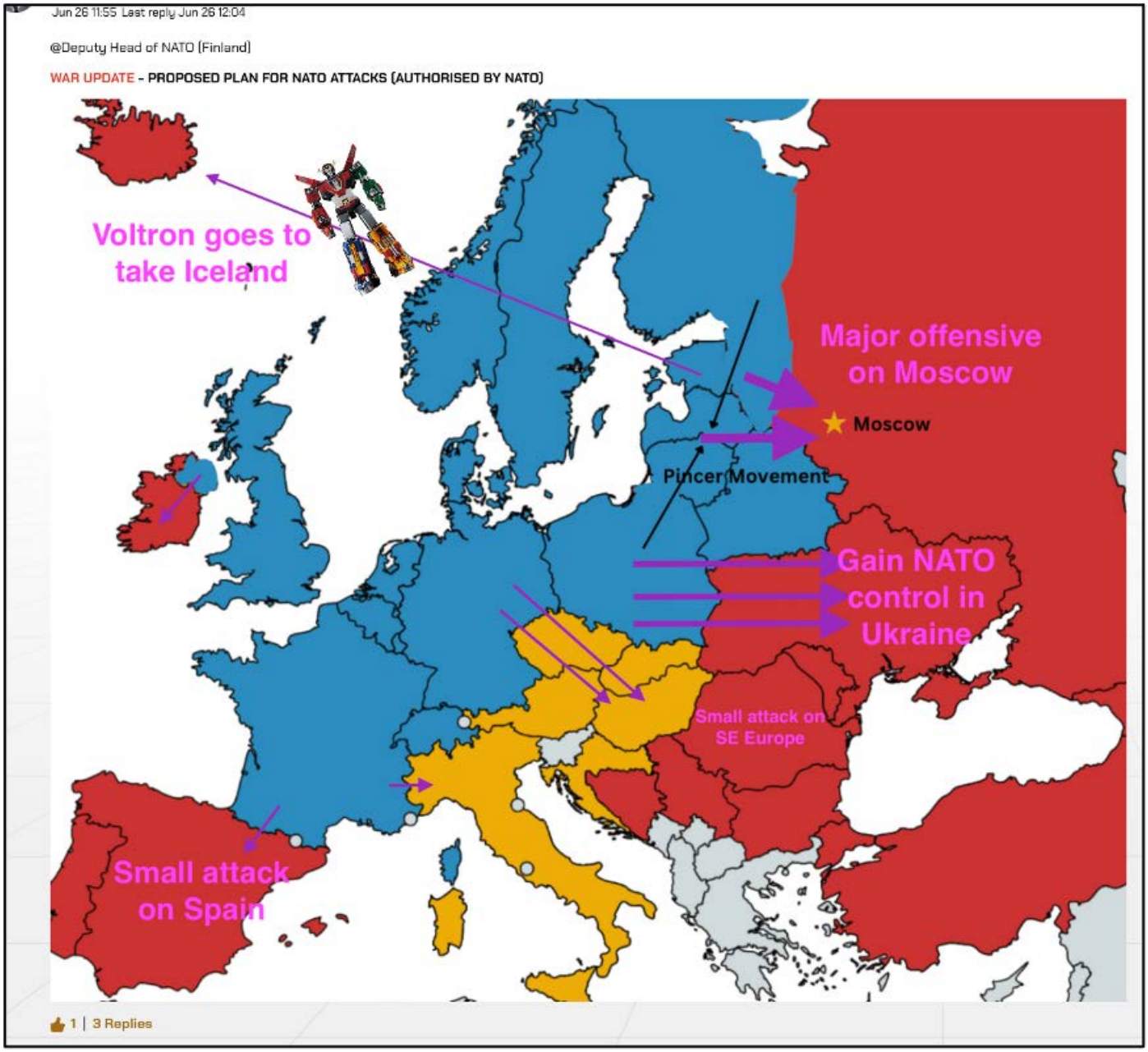

Figure 4 Ukraine-Russia Political Simulation (Student exemplar, 2024 Source: The Kings School (2024)

The simulation data also indicated that the humorous nature of many of the posts led to greater than expected student involvement, on the whole, with students spending a total of 125 hours and generating 968 posts whilst engaging in political simulation discussion activities over the six-day duration of the simulation (TKS, 2024). The jump from 180 posts in the 2022 political simulation to 968 posts in the equivalent 2024 simulation, both running for six days, shows that humour infused into the learning process led to greatly increased student involvement (The Kings School, 2022). A perfect example of humour being injected into a professional learning environment was the student that utilised Voltron (see Figure 4) as a weapons delivery system that helped to take back territories conquered by GRBC, eventually encircling

Russia with NATOAHOFF signatory nation-states. The Figure 4 simulation posting shows a multitude of geopolitical knowledge and nuance as well as geographical skills, such as annotating maps (arrows showing the advancement of military forces). Figure 4 is a concrete example of successfully checking for student understanding, as the post demonstrates the communication of geographical information, which is a skill that underpins the Stage 5 Elective Geography Syllabus (Board of Studies NSW, 2019).

In 2022, the political simulation was the major culminating assessment task (summative task) for the Political Geography topic. This impacted the formality of student posts and responses. In 2024, the political simulation was conducted as a formative task, which resulted in student posts that employed greater levels of experimentation and humour than their 2022 counterparts. Class teachers and support teachers were also more adventurous in their posts in the 2024 version of the political simulation, which created more tangents and avenues of political enquiry for students to engage with. The 2022 and 2024 political simulations were both conducted over 6-day periods, including class time, homework, and weekend periods. The brief, but heavily concentrated, focus of the political simulation, hard up against the teaching of geopolitical content, led to positive consolidation of student learning in both 2022 and 2024 and is a tangible method to gauge student learning and understanding.

Discussion

The political simulation cultivates critical thinking to the point that students are not only aware of the many nuances and machinations of global geopolitics, but also have the nous to detect "double speak" and accurately determine trustworthy sources. An example of the nuance required to fully understand geopolitical decision making is the Nazi-Soviet Non-Aggression Pact, that was signed between Hitler's Germany and Stalin's Soviet Russia on August 23, 1939. The pact paved the way for Nazi Germany and the Soviet Union to invade and occupy Poland in September 1939. It permitted Germany and Russia to carve up spheres of influence in eastern Europe, while pledging not to attack each other for 10 years (Christian, 2002). While it may have looked to the casual observer as though this pact was a coming together of two great dictators as a new alliance, the reality was far different. Stalin knew all too well that Hitler was a great threat and in 1939 Soviet Russia was powerless to oppose the might of Germany. The pact bought Stalin a reprieve from invasion and bought him more time to better prepare Russia for an inevitable war with Germany. The complexities of political brinkmanship, and the ambiguous truths of the narratives fed to the public by national governments, are important lessons for our students to learn and highlight why a strong understanding of political nuance is critical in the world beyond school.

Spatial Distributions (Global Variations)

An understanding of spatial distribution and global variations in levels of development, is another nuance that is helpful for students to have a grasp of. For example, the Cold War classifications of first and second world countries (now antiquated terms), tied in nicely to an understanding of the world when there were the two mighty ideological power blocs that held the fate of the world in the palm of their hand due to the "MAD" principle. MAD or Mutually Assured Destruction was the viewpoint that neither side (NATO-backed or Warsaw Pact-backed) would send a first strike nuclear attack, as the reprisal attack would be guaranteed and millions of citizens in Russia and/or the USA would return to the dust instantly (Hill, 2001). With the end of the Cold War ideological struggle and no less than ten nation states in the world possessing thermo-nuclear weapons (See Figure 3), the MAD principle is just as important in 2024 as it was during October 1962, when the world held its breath over the Cuban Missile Crisis.

The political simulation also lends itself very nicely to the Cold War topic covered in Stage 5 Mandatory History (Board of Studies NSW, 2012). The existence of nuclear weapons in the world is a controversial political issue, with many opposing views in the public sphere (Ron & Gindi, 2023). The ability of our students to possess the nuance to understand how countries differ in their perception of defence and security is another skill that goes beyond the value of school (Killen, 2005).

Spatial Distributions (Attitudes Towards Humanity)

The last global variation that students can learn, through the multi-faceted focus of the political simulation, is that the importance placed on human life and equality can vary greatly from nation to nation and culture to culture. An example that may challenge the viewpoint that all human life is precious is the famous

adage often attributed to Stalin that "one death is a tragedy … a million deaths is just a statistic" (Ratcliffe, 2016). Stalin acknowledges that one death is tragic and regrettable, but millions of deaths and tragedies are sometimes necessary to achieve ends and goals of society. An understanding of the complexities of global geopolitics, combined with the complexities of the human beings that make the decisions that impact our world, will ideally provide our students with the ability to examine and debate issues of public importance (Hess & McAvoy, 2015).

Conclusion

The teaching and cultivating of political nuance in our students can not only help them understand the realities of the world, but also help socialise them as active citizens and critical thinkers about complex political issues. On the surface, the intersection of history, geopolitics and the spatial variations of human development would mean very little to most teenage Geography or History students. European dictators, American foreign policy and western cultural influence would seemingly have zero impact on most school students. A deeper analysis would show us that these complex interconnections between history, geopolitics and cultural ties mean a great deal and whether we acknowledge it or not, shape and create the world that we live in today and the world that our younger generations will live in tomorrow.

The political simulation is a way to expand and grow the geopolitical knowledge base of our HSIE students. The technological advancement of digital school learning platforms, particularly the use of discussion boards in the case of the political simulation, could be embraced as a teaching and learning opportunity that could help hone the skills that students will take with them into the world outside of school.

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Rising Up: Building hope in the face of a changing world

Kal Glanznig

I remember vividly the first time I was concerned about climate change, a year 10 science class where we watched 'An Inconvenient Truth'. Being faced with a future that I was told I was going to inherit, I felt super concerned.

Not sure what switched that afternoon when I got home from school, but I had the thought of "Okay, yes there's this problem. But what can I do about it?". The future I was shown in the documentary is unwritten. What can I do to rewrite it for the better?

This question led me on a two-year campaign to get solar panels at my high school where I ultimately fundraised $100,000 and became the first student in the country to do this.

It got a lot of media attention, and I had emails and requests all over the state on how as a 17-year-old kid from The Shire (Cronulla, not from the Lord of the Rings) I had pulled this off, so I made a template, and helped 20 other schools to follow suit and get their own solar.

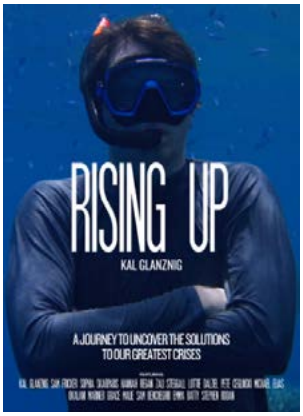
Fast forward five years, of asking this same question, the more I've faced these problems, the more I've devoted my life to trying to make a positive change. I co-founded an organisation Plastic Free Cronulla straight out of high-school to tackle plastic pollution locally after my local bay was heavily polluted with rubbish. I also built a business-movement that saw single-use plastic straws, cutlery and a bunch of other items banned in NSW. So next time you are annoyed with a soggy paper straw you can blame me. This win saw me invited to be part of the World Ocean Day Youth Advisory Council and then invited to be a delegate and speak at the United Nations COP27 in Egypt at the end of 2022.

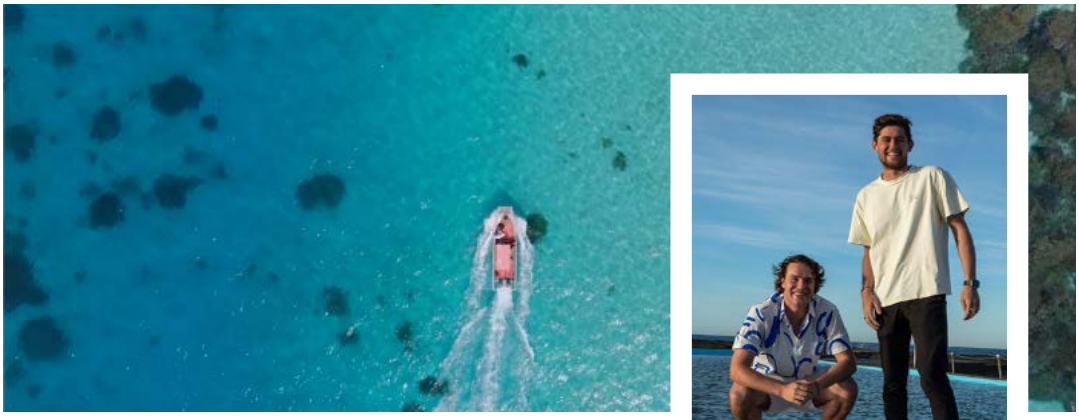
That experience at COP completely changed my life. I heard stories of other young people all across the world creating change in their communities and learnt pretty quickly that my generation holds the key to turning the tide on some of these huge problems … if we can believe in ourselves and take the first step.

For most young people, climate change isn't something they think they can make a difference about. We feel insignificant, that what is the point of these small actions? There's no sense of agency or self-belief. This is due in a large part to eco-anxiety and climate distress which, according to recent studies by Orygen in partnership with Mission Australia impacts the mental health of 67% of young Australians.

Eco-anxiety, is on the rise not just in Australia but across the world, with more natural disasters, more headlines and a lack of awareness of hope and solutions. You've probably noticed this in your own classrooms or with other young people, or yourself.

Cronulla Beach, NSW





Still from Rising Up (2024), Tuvalu ocean
Kal Glanznig & Cooper Chapman, co-creators of Blue Minds Youth Ocean Leadership

It is scary. But the future is unwritten and if everyone has the mindset of not doing anything, then nothing will change.

So to try and inspire youth to realise this power, we have to rewrite the future (and also to learn myself) I made a documentary over 2024 called Rising Up, where I travelled across the Pacific Islands of Tuvalu and Samoa, across Indonesia and Australia to unpack the untold stories of hope and solutions to climate change and plastic pollution. The documentary has been played across the country in cinemas, festivals, schools, community screenings and even in Federal Parliament last year for the Parliamentary Friends of Waste and Recycling group of politicians. It has just been uploaded to Clickview which is an exciting next step to have it seen by more schools as my inbox is filling up with requests to screen it.

The success of this documentary led me to leave my full-time corporate job and go all in to doing what I can to help the ocean and empower young people to not try to change the world, but change their own world.

With my good friend Cooper Chapman, an ex-pro surfer who's spoken with 40,000 students about mental health and the team at Surfers for Climate, we created the Blue Minds program to address eco-anxiety in the classroom through free one-hour workshops that incorporate the incredible knowledge and simple habits Cooper has accumulated with practical ways to look after our mental health, particularly through gratitude and mindfulness – with my knowledge of taking action for the environment. Hope lies in action.

We piloted the program late last year in Queensland to over 3,000 students and the success of the pilot has seen Blue Minds scale over 2025. We've delivered workshops across Victoria, New South Wales and are heading over to WA and SA later this year. We've also partnered with Orygen, the leading eco-anxiety research organisation, and have great insights that our workshop makes a lasting difference for the future outlook of young people.

Also, in the mindset of trying to focus on what's in my control to change, I've been continually concerned with the lack of progress of cleaning our local waterways so decided to run for local council in the Sutherland Shire last September as an independent Councillor. Much to the surprise of many local government political "experts" I was elected in a huge landslide victory – in one of the most conservative areas in the country.

The last couple of years has been a crazy rollercoaster journey but if there's one thing that I learnt it is that we all have an important role to play to remove the glass-ceiling that young people put on themselves that say that they can't do something. We need to focus on empowering youth to have a sense of agency in the future.

We may only be 20% of the population, but we are 100% of the future.

Kal Glanznig, a leading youth ocean and climate champion, created the documentary RISING UP, co-founded Plastic Free Cronulla, and launched Blue Minds to tackle youth eco-anxiety. A TEDx and UN COP27 & COP28 speaker, Kal was elected as an Independent Councillor for the Sutherland Shire. In high school, he led a 100kW solar project, leading to 20 schools to follow suit.

Learn More:

- www.blueminds.org.au
- www.risingup.tv
- www.clickview.net/au/secondary/series/90252350/rising-upw

Geography Teachers Association NSW & ACT

YOUNG GEOGRAPHER AWARDS

CLOSES 17TH OCTOBER 2025

Prizes for each category:

1st	2nd	3rd
$500	$250	$100

Award Categories

Geographical Research Award (K-10) - APPLY
This award allows students to demonstrate original geographic research on any topic from the Australian Curriculum or NSW K-10 Geography Syllabus. Students will identify an inquiry focus and should conduct both primary and secondary research to investigate this topic.

Geography in STEM Award (K-12) - APPLY
This award allows students to demonstrate geographic research on any topic from the Australian Curriculum or NSW K-12 Geography Syllabus. However, a significant STEM contribution must be present in the final product and Geography must drive the project. The STEM contribution may be explicitly evident in the collection of primary data, the tools used for analysis of data and/or in the final presentation and communication of the research.

NESA Geographial Investigation / IB Internal Assessment Award / ACT equivalent project (Year 11) - APPLY
This award recognises excellence in the NSW Geographical Investigation or International Baccalaureate Internal Assessment (IA) Projects. Those who study Geography in the ACT may also submit Geography research projects of a similar scope.

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

Entry Specifications

The projects submitted for all categories should:

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

Entry Details

Closing date: Friday 17th October 2025

Capacity: Each school is able to submit a maximum of four entries per category. The same project can be submited in multiple categories.

Cost: There is no cost for entry to the competition.

Judging: Will take place in December 2025

Announcment: Winners will be notified by March 2026.

Eligiblity: All schools that enter MUST be GTA NSW & ACT paying members

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

Geography Teachers Association NSW & ACT

The 2025 GTA NSW & ACT

Young Geographer Awards

Criteria	Outstanding	Commendable	Satisfactory	Needs further development
Identifies a relevant and engaging geographic inquiry topic	Topic is appropriate for the relevant syllabus. Topic is highly engaging Topic allows for research which is spatial in nature.	Topic is appropriate for the relevant syllabus. Topic allows for research which is spatial in nature.	Topic is inappropriate for the relevant syllabus. OR Topic does not allow for research which is spatial in nature.	Topic is inappropriate for the relevant syllabus. AND Topic does not allow for research which is spatial in nature.
Incorporates appropriate primary research for the inquiry topic	Outstanding demonstrations of accurate, well planned primary data collection. Clear and appropriate presentation of collected primary data.	Demonstrations of well planned primary data collection. Clear presentation of collected primary data.	Primary data is collected using appropriate methods.	Little or no primary data is collected. OR Primary data is collected using inappropriate methods.
Incorporates appropriate secondary research for the inquiry topic	Outstandingly detailed information and technical vocabulary used consistently throughout the project. An accurate, complete and consistently styled bibliography is presented.	Detailed information and technical vocabulary used throughout the project. A consistently styled bibliography is presented.	Some detailed information and technical vocabulary used in the project. A bibliography is presented.	Generic examples and generic language used throughout the project. No attempt is made to reference sources used.
Quality of geography research	Insightful analysis or discussion is made based on the collected primary and secondary data. Conclusions about inquiry topics are based on analysis or discussion of data.	Analysis or discussion is made based on the collected primary and secondary data. Conclusions about inquiry topics are based on analysis or discussion of data.	Primary and secondary data is used to draw conclusions.	Conclusions are based on superficial, generic or general information.
Communication of geographical information	Geographical information is presented in sustained, logical and well sequenced paragraphs. A variety of appropriate tools (photos, graphs, maps etc) are selected and used to convey geographic information engagingly.	Geographical information is presented in sustained, logical and well sequenced paragraphs. Appropriate tools (photos, graphs, maps etc) are selected and used to convey geographic information.	Geographical information is presented in logical paragraphs.	Geographical information is presented in paragraphs.
Capacity for active citizenship from the project	Evidence of active citizenship is present within the project.	Capacity for active citizenship is articulated within the project.	Capacity for active citizenship is alluded to within the project.	No capability for active citizenship is evident within the project.
Format and presentation	Project is highly engaging and is attractively formatted. 3000 words or less or under 10 minutes. Digitally submitted in correct file type and able to be accessed by judges.	Project is attractively formatted. 3000 words or less or under 10 minutes. Digitally submitted in correct file type and able to be accessed by judges.	Project exceeded 3000 words or 10 minutes by up to 10%. Digitally submitted in correct file type and able to be accessed by judges.	Project exceeded 3000 words or 10 minutes by over 10%. Digitally submitted in incorrect file type or unable to be accessed by judges.
STEM Award Category	Outstanding,sustained and innovative incorporation of Science, Technology, Engineering and/or Maths to support the enactment, collation and/ or communication of the geographical inquiry The contribution and purpose of STEM in the geographical inquiry is clearly and thoroughly explicated.	Commendable innovative incorporation of Science, Technology, Engineering and/or Maths to support the enactment, collation and/ or communication of the geographical inquiry. The contribution and purpose of STEM in the geographical inquiry is clearly explicated.	Some innovative incorporation of Science, Technology, Engineering and/or Maths to develop the enactment, collation and/ or communication of the geographical inquiry. The contribution and purpose of STEM in the geographical inquiry is explicated at times although mostly inferred.	Little evidence of innovative incorporation Science, Technology, Engineering and/or Maths in the enactment, collation and/ or communication of the geographical inquiry The contribution and purpose of STEM in the geographical inquiry is not explicated.

2024 Young Geographer Award Winners

At the end of last year, the Young Geographer Award (YGA) team marked the 2024 nominations with over 100 entries across the three categories.

The team would like to thank all teachers that entered their students' work into the competition and supported them in completing their projects. The standard of entry for 2024 was incredibly high and it was great to see students from across the whole of NSW and ACT engage with geographical inquiry.

Here are the winners for 2024 from each category. Congratulations to them all!

NESA GEOGRAPHICAL INVESTIGATION (GI) / IB INTERNAL ASSESSMENT AWARD / ACT EQUIVALENT PROJECT

1st Jericho Ellao, The Scots School, Albury: "Flying Foxes Conservation and Habitat in Albury-Wodonga under Climate Change Conditions."

2nd Darcy Rudd, St Joseph's College, Hunters Hill: "Impact of Biophysical Interactions in Monaro Farming."

3rd Erin Donnelly, Loreto Normanhurst: "Berowra and Glenorie: A Comparative Study."

GEOGRAPHICAL RESEARCH AWARD

1st Rosie Baxter & Oceane Olivie, Cammeraygal High School: "Impact of the Crows Nest Metro."

2nd Bridie Bourke, Orange High School: "Liveability in Molong and Orange."

3rd Sophia Gong, Arden Anglican School: "This fieldwork activity explores the changes to Epping's liveability, both positive and negative, due to the recent process of urban intensification in the Epping Town Centre."

GEOGRAPHY IN STEM AWARD

1st Jasmine Taing, Elizabeth Macarthur High School: "Bow Bowing Creek: Channelisation on Surrounding Processes."

2nd Ellie Baxter, Sofia Dal Pozzo, Ayza Obaid, Cammeraygal High School: "Impact of the Crows Nest Metro."

3rd Aaliyah Moreley, Orange High School: "Assessment of water management in Orange NSW."

TEACHER AWARD

1st Carolyn Neeson, De La Salle Catholic College, Caringbah: "Livability Fieldwork in Inner Sydney."

2nd Nathalie Newton-Walters, Lindisfarne Anglican Grammar School: "Coastal Management Fieldwork at Casuarina."

3rd Paris Cooper, Canobolas Rural Technology High School: "Biodome Project Based Learning."

In addition to receiving a certificate, winners of each category have won $500 in prize money with 2nd place receiving $250 and third place $100.

Nominations are now open. It would be great to see even more nominations across NSW and ACT in 2025.

https://www.gtanswact.org.au/wp-content/uploads/2025/06/YGA-2025-POSTER.pdf

Warm regards,

Kieran Bonin, YGA Coordinator

White Rock: A Hidden Crisis Gripping Australia's Underwater Forests

Giant kelp in Port Davey, Stefan Andrews, courtesy Great Southern Reef Foundation

Great Southern Reef Foundation

In a coup for GTA NSW & ACT there was a special screening of *White Rock* at the recent annual conference. With relevance to all teachers of Geography, this Australian production explores the challenges created by environmental change and responses to those challenges – a contemporary story to relay to students and stimulate discussion.

This session was introduced by Catia Abreu De Freitas, from the Great Southern Reef Foundation, and Lorraine Chaffer, lead author of *Powerful Geography 1&2*, featuring a new Kelp Forests and Great Southern Reef case study. Catia also held a Q & A session, and ran a workshop related to relevant resources.

White Rock is a new documentary that highlights the growing environmental threat posed by longspined sea urchins on the Great Southern Reef. The spread of *Centrostephanus rodgersii* (Centro) is now a critical threat to Australia's temperate reef ecosystems, calling for national leadership and urgent action. Native to New South Wales, these urchins have expanded southward into eastern Victoria and Tasmania due to rising ocean temperatures.

In many areas, their populations have exploded, leading to overgrazing and the formation of barren reefs where kelp forests once thrived. The shift to urchin barrens has also destroyed traditional fishing areas that were maintained for thousands of years.

Kelp is essential to the health of temperate reef ecosystems. It provides critical habitat, supports biodiversity, and sustains some of Australia's most valuable wild-caught fisheries, including abalone and rock lobster. If kelp loss continues unchecked, these fisheries face potential collapse.

The Centro crisis is both an environmental and economic opportunity. With strategic management and investment, Australia has the potential to restore its kelp forests and emerge as a global leader in sustainable urchin fisheries. With stunning visuals and powerful storytelling, White Rock brings together science, policy, and sustainable seafood to support the recovery of Australia's threatened reefs.

For additional information about White Rock, visit https://greatsouthernreef.com/white-rock To book tickets, visit https://greatsouthernreef.com/white-rock-tour.

Kelp at Sydney, Louise Nott, courtesy Great Southern Reef Foundation

Urchin barren, Eden NSW, Scott Bennett, courtesy Great Southern Reef Foundation

Shark Tank–Sustainable Solutions Challenge

Christina Kalinic HSIE Teacher Stella Maris College

Shark Tank – Sustainable Solutions Challenge is a purposeful teaching and learning resource to consolidate and challenge Stage 5 Geography students. The resource can be used as an end-of-year activity. This factors in all previously taught Stage 5 units. Students will be required to work in groups/teams to create and pitch an innovative, sustainable product or initiative designed to reduce the impact of climate change.

OBJECTIVE:

Working in groups, you are to create and pitch an innovative, sustainable product or initiative designed to reduce the impact of climate change.

You will be required to present your ideas in a "Shark Tank"-style format to a panel of "investors" (teachers, peers, or guest judges), who will evaluate your proposal based on creativity, feasibility, and environmental impact.

STEP 1 – *Form Group.*

- Organise the class into groups of 4–5 students.
- Each group will act as a company developing a sustainable product or solution.

GROUP NAME:

_____

STEP 2 – *Understand the Problem:*

- Research the impacts of climate change.

ENVIRONMENTAL IMPACTS

Consider – *rising temperatures, melting ice and rising seas levels, extreme weather events, loss of biodiversity, etc.*

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ECONOMIC IMPACTS

Consider – *agriculture and food security, infrastructure damage, economic inequality, etc.*

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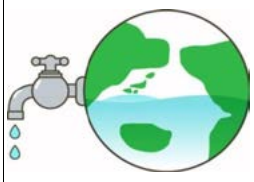
SOCIAL IMAPCTS

Consider – *health risks, water scarcity, climate migration, etc.*



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POLITICAL IMPACTS

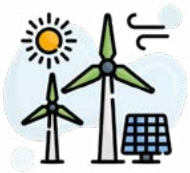
Consider – *Resource conflicts, governance challenges, etc.*

STEP 3- *Understand Current Sustainable Strategies:*

- Research current strategies that are working towards responding to the impacts of climate change.

Suggested areas to focus on…

RENEWABLE ENERGY:



WASTE MANAGEMENT:

SUSTAINABLE AGRICULTURE:

Shark Tank- Sustainable Solutions Challenge

OCEAN CONSERVATION:

URBAN PLANNING:

STEP 4- *Develop Your Solution:*

- Brainstorm a product or initiative that addresses one or more climate change issues.

Examples:

⇒ *A device that converts plastic waste into reusable material*

⇒ *A solar-powered irrigation system for drought-prone regions*

⇒ *A subscription service encouraging sustainable food practices (e.g., plant-based meal kits)*

BRAINSTORMING **(continued over the page)…**

STEP 5- *Create a Pitch:*

- **In groups, prepare a persuasive 5-minute presentation that includes the following:**
  - ⇒ **Problem Statement:** *Define the climate issue your product addresses.*
  - ⇒ **Solution Description:** *Explain your product or initiative and how it works.*
  - ⇒ **Target Market:** *Who would use this product?*
  - ⇒ **Environmental Impact:** *How does it reduce climate change effects?*
  - ⇒ **Financial Viability:** *Basic cost and pricing to demonstrate feasibility.*

STEP 6- *Design a Prototype or Visual Aid:*

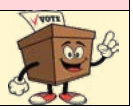
- Create a simple prototype (using recycled materials) or a digital representation (poster, video, etc.)

ASSESSMENT CRITERIA FOR "SHARKS":

1. **Innovation (10 points):** *Is the idea original and creative?*
2. **Sustainability (10 points):** *How well does the solution address climate change?*
3. **Feasibility (10 points):** *Is the idea realistic and achievable with current technology?*
4. **Presentation (10 points):** *Is the pitch clear, engaging, and persuasive?*
5. **Team Collaboration (10 points):** *Did the team work together effectively and distribute tasks evenly?*

CLASSROOM VOTE

After all pitches, each student can vote for their favourite product in categories- i.e., *Most Innovative, Most Likely to Succeed.*



Finding Your Students' "Physical Geography head"

Reprinted with permission: Teaching Physical Geography Blog, Geographical Association Special Interest group.

Introductory comment

This blog post by the Geographical Association Physical Geography Special Interest group summarises many of the strategies I have used over my significant number of years teaching geography to assess student existing knowledge and understanding of an area of content.

By the time students reach year 10 they have been in the world for around 15 years, studied geography and earth science during that time and have a lot of knowledge – however, they do not often know what they know, and that it is geography. If we reteach what they know we create boredom or allow incorrect perceptions or ideas to continue , and geography deserves so much more than that.

The screen captures from the PowerPoint presentation are just some of the key strategies, easily used at the start of a new topic or discussion. Many teachers already use pre testing and quizzes for this purpose.

The link to the downloadable presentation by Duncan Hawley is included.

Lorraine Chaffer GTANSW & ACT

Images: Tourists at Los Glaciares National Park, Argentina. © iStock.
Students cleaning up a beach.

Finding Your Students' "Physical Geography head"

All students, of every age, will hold some prior knowledge and understanding of the physical world and physical geography – of its components (features), processes, cycles and systems, and will bring this to the geography classroom.

This knowledge will vary, and often it is 'imperfect'. It will have been drawn from a variety of information sources – both informal and formal.

The informal includes information acquired from personal experiences from interactions with the physical world in their everyday lives, in their local area or from visits to more distant places and environments. However, it is often acquired from content viewed and 'consumed' from internet sources (or TV) and can establish an idea in a student's head in their own attempt to make sense of what they view.

Commonly, internet information sources are taken directly 'on trust' as 'authoritative' knowledge, which a student can recall but the information lacks 'useful' understanding for the student that enables them to develop the 'powerful knowledge' that enables them to apply, interpret, recognise and make sense of similarities and differences across a range of contexts. Knowledge acquired informally can often be based on intuitive reasoning, rather than thinking geographically (and 'scientific' reasoning) which helps to develop a powerful geographical knowledge perspective.

Formal information is gained from the school curriculum, 'acquired' from previous teaching in lessons and learned from textbooks.

Formal knowledge tends to be more structured, as thinking geographically is often expected to be involved in the learning process. Nevertheless, making sense of prior formal learning experiences can be similar to (and sometimes influenced by) a student's experience and understanding from encountering informal information sources.

In summary, what I have described above is a concept of learning known as 'constructivism', which focuses on how individual experiences affect learning and asserts that students' varying perspectives (drawn from their formal and informal experiences) will mean that they approach new knowledge in different ways and from different starting points. Constructivism emphasises knowledge residing within the individual rather than being a 'standard' knowledge.

Many teachers will have used the 'pitching the lesson' approach in attempting to tackle the constructivism issue. How often have you judged

where to meet the level of knowledge and cognitive understanding that you think are likely to be held by the majority of students in a class? Seductive though it is, 'pitching' can be a dangerous and serendipitous business – a rather hit and miss affair – especially with physical geography where students' encounters with topics are likely to be outside personal experience and second-hand and consequently much of the students' knowledge will be informal, imperfect and less structured than we might assume.

A much more effective alternative to the guessing of 'pitching' a lesson is to formatively explore students' knowledge of physical geography topic by getting inside every student's 'physical geography head' to find their starting points, knowledge gaps so as to discern where to focus and use teaching and learning, whether targeted at individuals or at the class, to help students develop and progress.

This workshop from the GA's annual conference in Manchester earlier this year explores how to devise strategies and activities that help teacher to find the student's physical geography head. I hope you find it stimulating and helpful, and perhaps help you realise that 'finding the physical geography head' is relatively simple to do, is often revealing and can empower both you as a teacher and your students in developing a better (and more accurate) knowledge and understanding of the physical world.

Download the PPT HERE or view more posts by the Physical Geography Blog authors.

Workshop

GA Conference, Manchester 2024

Duncan Hawley

GA Physical Geography Special Interest Group

duncan.hawley.geography@gmail.com

Believe it or not

WHAT ARE YOUR IDEAS ABOUT THE GREENHOUSE EFFECT?

- Mark those statements you think are **true** with a ✓ or T
- those statements you think are false with a X or F

Discussion

1. What did **you** learn from that activity?
2. If you did that that activity with your students
   – what do you anticipate they answer correctly?
   – what (most likely) would they misunderstand?
3. **Why and when** might this sort of 'getting inside the physical geography head' activity be useful in your teaching?

Gives insights into:

- knowledge held
- ideas – how accurate /misconceptions /
- indicator of sources of information
  - how reliable are these?
  - how to think 'critically' (PK4)

Can be used to help plan:

- 'pitch' of lessons (not teach/repeat what is already known)
- identify gaps in knowledge/understanding
- what aspects of topics/ might need particular focus/attention

Two ideas about how glaciers do geographical work

How would you use these two 'models'

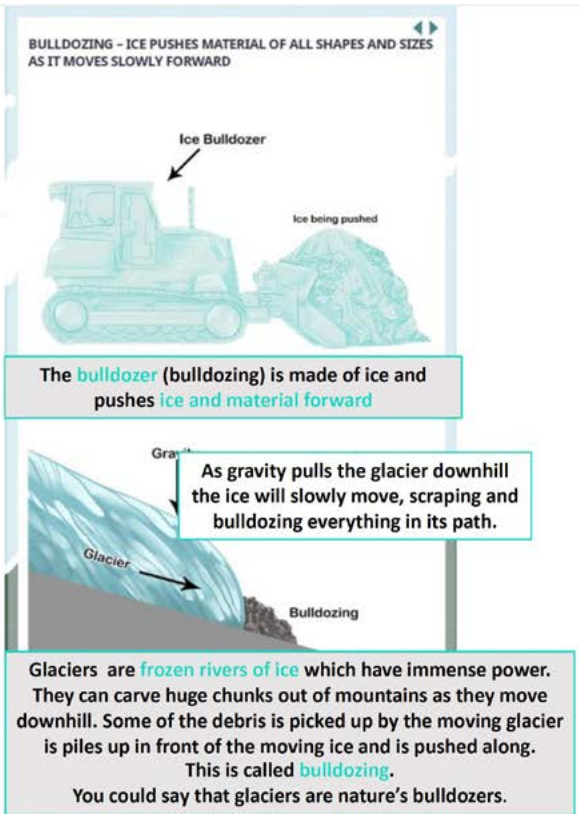
to discover what is in student's heads?

Diagram Disparities

Pupils are presented with two diagrams explaining the same topic in different ways, or with contradictory views

- **Pupils choose which diagram they think is correct**
- **Pupils discuss/argue for their decisions**
- **Accurate version/answer is given by the teacher (via teaching)**
- **Pupils identify which parts of the diagram they explained with 'false ideas'**
- **Pupils decide what to change and/or reflect on what they have learned.**

A



The bulldozer (bulldozing) is made of ice and pushes ice and material forward

As gravity pulls the glacier downhill the ice will slowly move, scraping and bulldozing everything in its path.

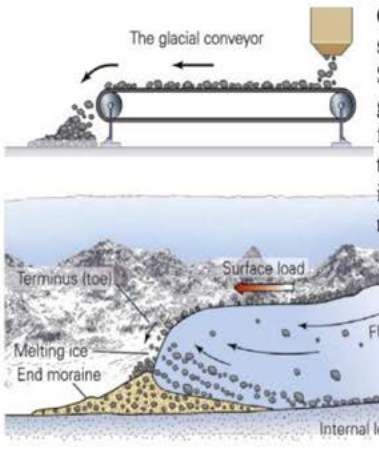
Glaciers are frozen rivers of ice which have immense power. They can carve huge chunks out of mountains as they move downhill. Some of the debris is picked up by the moving glacier is piles up in front of the moving ice and is pushed along. This is called bulldozing.
You could say that glaciers are nature's bulldozers.

Source:https://mammothmemory.net/geography/geography-vocabulary/glacial-landscapes/bulldozing.html

B

Finding the student 'Physical Geography Head'

Glaciers are Conveyor Belts



Glaciers act as large-scale sediment conveyor belts. Sediment falls onto a glacier and gets plucked up from below. This material is transported to the toe where it piles up as an end moraine.

Source: https://geologylearn.blogspot.com/2016/03/deposition-associated-with-glaciation.html

Common misconceptions about glaciers

by Bethan Davies www.antarcticglaciers.org

Glaciers are bulldozers

Another common misconception is that glaciers erode by pushing rocks. In fact, the weight of the ice above causes pressure melting (ice takes up more volume than water, so it melts under pressure). You can try this yourself by weighting a cheesewire and laying it over an ice cube. It will melt through the ice cube and refreeze above it.

When a glacier encounters an obstacle (such as a boulder), the boulder inhibits the glacier's flow by internal ice deformation. The increase in pressure results in melting water around the boulder. The water refreezes on the boulder, and 'plucks' it – it picks it up and carries it off.

The rougher the base of the glacier, the more pressure melting you get, and this can result in faster ice flow. Glaciers also abrade: they grind rocks against each other, making fine clays and silts. You cannot drink the meltwater that flows out of a glacier because it contains all this 'rock flour'.

Abrasion results in smoothed, rounded surfaces, and boulders that have been glacially transported typically are faceted (they have faces or sides), rounded corners, and sometimes have scratches (striations) where they have come into contact with other rocks, and been dragged across each other.

Unlocking Curiosity: The power of inquiry-based learning in Geography

Jaye Dunn - HSIE Teacher Killara High School

What is inquiry-based learning?

Inquiry-based learning isn't just setting students work and expecting them to find the answers; it is so much more. Inquiry builds on what is taught through high impact, quality explicit teaching of skills and content. It acts as a platform for students to foster their curiosity, their critical thinking, and to explore the subject content through more than a text or syllabus dot point.

Year 10 Questioning example, post-it notes board.

Inquiry-based learning in Geography

Geography can be described as the why of where because geographers examine the world and try to explain what they see. Like a detective at a crime scene, they follow a line of inquiry by asking geographical questions, collecting evidence, evaluating and interpreting the evidence to find the answer, communicate their findings, reflect on what they learnt and finally, decide on a course of action. Inquiry-based learning in Geography encourages students to ask questions, explore, and investigate geographical phenomena. It gives students the opportunity to actively engage with the content, deepening their understanding. Geography is not just about memorising facts like place names or physical features; it's about understanding complex processes and systems, such as sustainability, impacts of demographic change, and the impacts of events that form and transform places in our world.

Inquiry-based learning in Geography can stem from the NESA syllabus document's inquiry questions. These can be found in each syllabus content area. An example from Stage 4 Water in the World is shown below.

KEY INQUIRY QUESTIONS

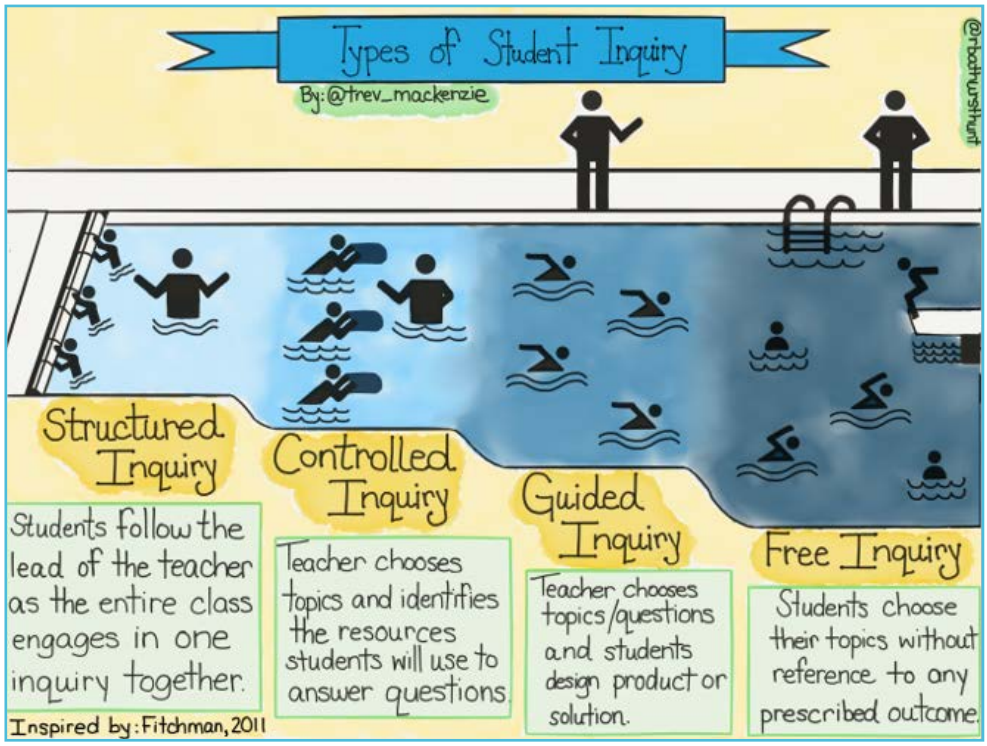
- Why does the spatial distribution of water resources vary globally and within countries?
- How do natural and human processes influence the distribution and availability of water as a resource?
- What effect does the uneven distribution of water resources have on people, places and environments?
- What approaches can be used to sustainably manage water resources and reduce water scarcity?

Source: NESA, K-12 Geography Syllabus, 2015

Each inquiry question allows for deep learning through the use of directive words such as why does? how do? "what effect? or what approaches can be used?. This encourages critical thought and the development of problem-solving skills in students as they work toward answering the Key Inquiry Questions. All stages in the NESA Geography syllabus include these questions and they build in depth and analytical skills with each learning stage.

How can inquiry-based learning be structured in Geography?

Trevor Mackenzie outlines four clear types of student inquiry. These are seen in Figure 1. Student ownership of learning and teacher direction gradually decrease through the inquiry process. Each of these types can be used to support learning in Geography.



Structured inquiry

Teachers act as the guide to learning and select the topic, research question and provide the resources including scaffolding for student learning and success. Teachers may explicitly teach the skills of research, analysing evidence and scaffold the final product for students. This method is commonly used in assessment tasks in Geography and smaller class tasks. The entire class participates in the inquiry together, with the teacher guiding the inquiry process. All students demonstrate their understanding in a similar manner. Starting with this approach allows learners to become familiar with the inquiry process.

Here is an example from a Stage 4 Water in the World assessment task. The questions are clearly outlined for students and are directly linked to syllabus content. The output of this task is the same for all students and the content is controlled by the teacher. Students will have the opportunity to evaluate the reasons and impacts of the flood and suggest and justify a solution which allows for some inquiry, but it is still within the confines of the teacher and is more rigid in the scope of information being explored and collected. This is an effective starting place when teaching students about inquiry. Having clear parameters and expectations allows for skill development, but with clear and present guidance.

Task description: You are going to research a hydrological/atmospheric hazard – Floods - and prepare a podcast of no more than 3 minutes in length to answer the following questions:
Definition of a flood.
An explanation of a recent flooding event from across the world in 2021, including a description of the location.
A description of the social (to people), economic (to the economy) and environmental impacts of the recent flood.
An outline of the reasons why the recent flood was so severe; you must relate this to weather and/or climate.
A suggestion of ONE management strategy that would reduce the impact of a similar event in the future.
Your report must include: • Details of locations and places • Correct use of geographical terminology • Correct podcast format

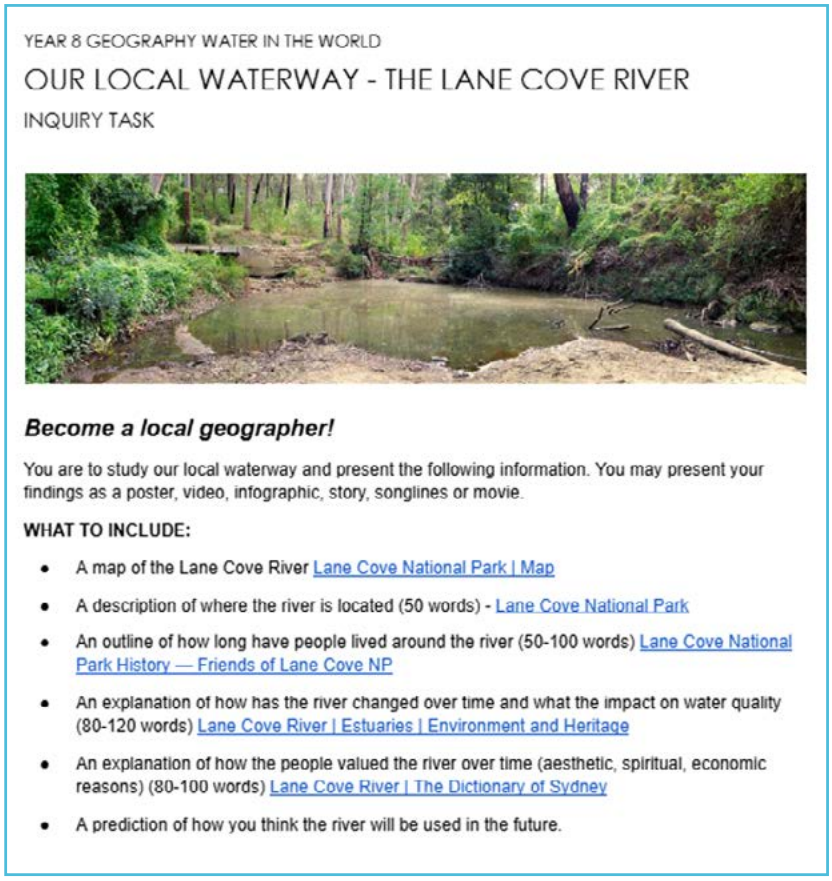
NESA, Stage 4 Water in World Assessment Outline

Controlled inquiry

As students become more confident and competent in the inquiry process and content matter being studied, the teacher can slowly relinquish some control and students are invited to take small steps toward ownership over their own learning. In this type of inquiry, teachers choose the topics, select and provide some of the resources but students will do their own investigation to find and present answers.

It is important that the teacher does not provide all the guiding questions or structure the instructions in a way that allows student inquiry. For example, using directive terms such as explain or analyse requires students to locate cause and effect and engage in critical thinking to find possible answers.

Stage 4 Water in the World Task - J Dunn



YEAR 8 GEOGRAPHY WATER IN THE WORLD

OUR LOCAL WATERWAY - THE LANE COVE RIVER

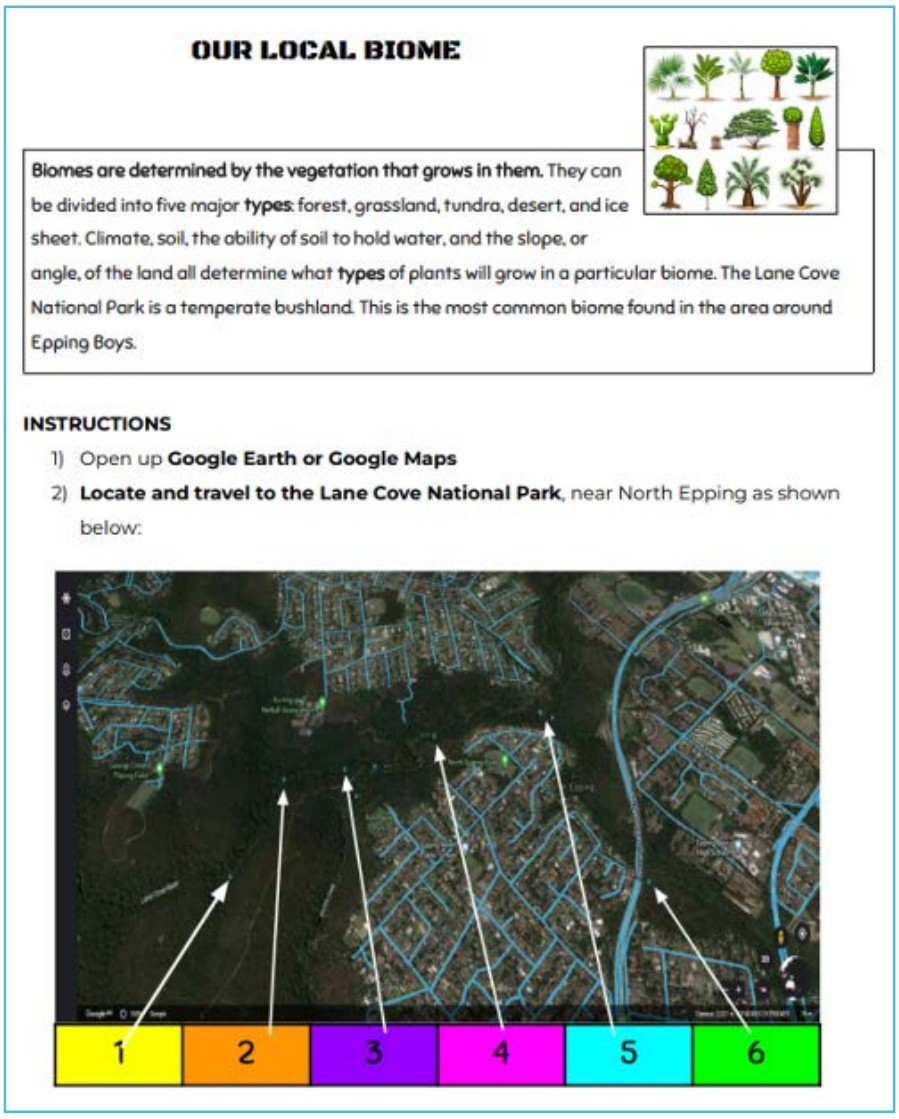
INQUIRY TASK

Become a local geographer!

You are to study our local waterway and present the following information. You may present your findings as a poster, video, infographic, story, songlines or movie.

WHAT TO INCLUDE:

- A map of the Lane Cove River Lane Cove National Park | Map
- A description of where the river is located (50 words) - Lane Cove National Park
- An outline of how long have people lived around the river (50-100 words) Lane Cove National Park History — Friends of Lane Cove NP
- An explanation of how has the river changed over time and what the impact on water quality (80-120 words) Lane Cove River | Estuaries | Environment and Heritage
- An explanation of how the people valued the river over time (aesthetic, spiritual, economic reasons) (80-100 words) Lane Cove River | The Dictionary of Sydney
- A prediction of how you think the river will be used in the future.



OUR LOCAL BIOME

Biomes are determined by the vegetation that grows in them. They can be divided into five major **types**: forest, grassland, tundra, desert, and ice sheet. Climate, soil, the ability of soil to hold water, and the slope, or angle, of the land all determine what **types** of plants will grow in a particular biome. The Lane Cove National Park is a temperate bushland. This is the most common biome found in the area around Epping Boys.

INSTRUCTIONS

1) Open up **Google Earth or Google Maps**
2) **Locate and travel to the Lane Cove National Park**, near North Epping as shown below:

Teachers should only give some resources to allow for student independent discovery, as they work toward mastery of inquiry skills.

Controlled inquiry can take the form of assessment tasks, or in-class formative activities to gauge student understanding and promote problem solving.

Some examples are found below.

Stage 5 Sustainable Biomes investigation using spatial technologies tasks - J Dunn

3) **Click on the little yellow person** in the bottom right corner, this will open up the StreetView function.
4) In the Lane Cove National Park, several blue dots will appear. **Click on each dot** to visit the site and inspect the types of vegetation that surrounds it.
5) Once you have visited the site, **refer to the RFS Vegetation Classification Guide** to identify the types of vegetation that you see. You must use the names and terminology that is included in your table.
6) In your book, **draw up a table** like one found below and complete information under the correct heading.
7) Complete the **"Consolidation of Learning"** Tasks found below. These are to also be written in your book. Write the question AND answer in full sentences or paragraphs.

TABLE TO COMPLETE

LETTER/ LOCATION	DESCRIPTION OF THE TYPE OF VEGETATION IN THIS SITE
A	
B	
C	
D	
E	
F	

Consolidation of Learning Activities

1. Summarise the types of vegetation that were common across all areas within the temperate forest biome.
2. Detail any differences that you noticed between places.
3. Explain the impact of the river and urban development on types of vegetation in the biome.
4. Hypothesise what type of animals may live in the places that you visited.

Guided inquiry

This is when the teacher steps back from leading the learning even more and students are given a choice of their resources, as well as their presentation method, but not the topic or question. The Geographical Investigation in Stage 6 is a perfect example of this type of inquiry, however, there are other opportunities through the syllabus.

The Department of Education support materials provide an excellent sample program and resources for this section of the course and the link is found at Geographical investigation. These types of inquiry tasks can also be integrated into Stage 5.

For example, the Human Wellbeing unit can include a task in which students select a group in society, collect and analyse primary data, gather secondary research about the current state of wellbeing.

The final part of the task asks students to suggest ways to improve wellbeing, allowing for the display of problem solving and relevance to real world situations. Other opportunities for guided inquiry include the Department of Education Game Changer Challenge (GCC), Da Vinci Decathlon and Tournament of Minds. Details of these competitions can be found via the relevant websites. Note, the GCC is only available to Department of Education schools and students.

Examples include:

- What factors make places the same or different?
- What environmental and human processes form and transform landscapes and landforms?
- What approaches can be used to improve the liveability of places?
- What approaches can be used to sustainably manage water resources and reduce water scarcity?
- What are the consequences of a globally connected world for people and places?
- What strategies can be used to increase global food security?
- How can we feed the world's population sustainably?
- What strategies are used to manage environmental change in urban places to enhance sustainability?
- What are the causes and consequences of change in environments and how can this change be managed?

Some examples are found below.

Community gardens are places where people come together to grow food, foster good health, green urban environments, support lifelong learning and cultivate vibrant communities.

Think about your local area and school. As the population grows, there is a need for more food and places for the community to; gather and meet, learn about the environment

In groups of no more than 4 students, you are to learn about the process of ***Design Thinking*** to ***complete the "Greening your World" Activity Grid, design a prototype and pitch your plan.*** Your group must complete **all** tasks in the Activity Grid and present the finished product as a portfolio using the folder provided.

You are to design and build a prototype of a community urban garden for a specific location at High School.

As part of the design process, your group must complete ALL tasks in the Activity Grid. The two tasks highlighted in bold are to be presented to judges and an audience.

Your prototype will be presented as part of a pitch. Your group must also submit a portfolio containing all the tasks in the activity grid.

Stage 4 Community Garden task overview and prototype task - J Dunn

Stage 3 Tiny House prototype - J Dunn

"A tiny solution to a big problem" is a Stage 3 High Potential and Gifted Education (HPGE) project to design a solution to issues surrounding sustainability and housing.

Students are to design and prototype a house that uses sustainable methods of building and supporting life.

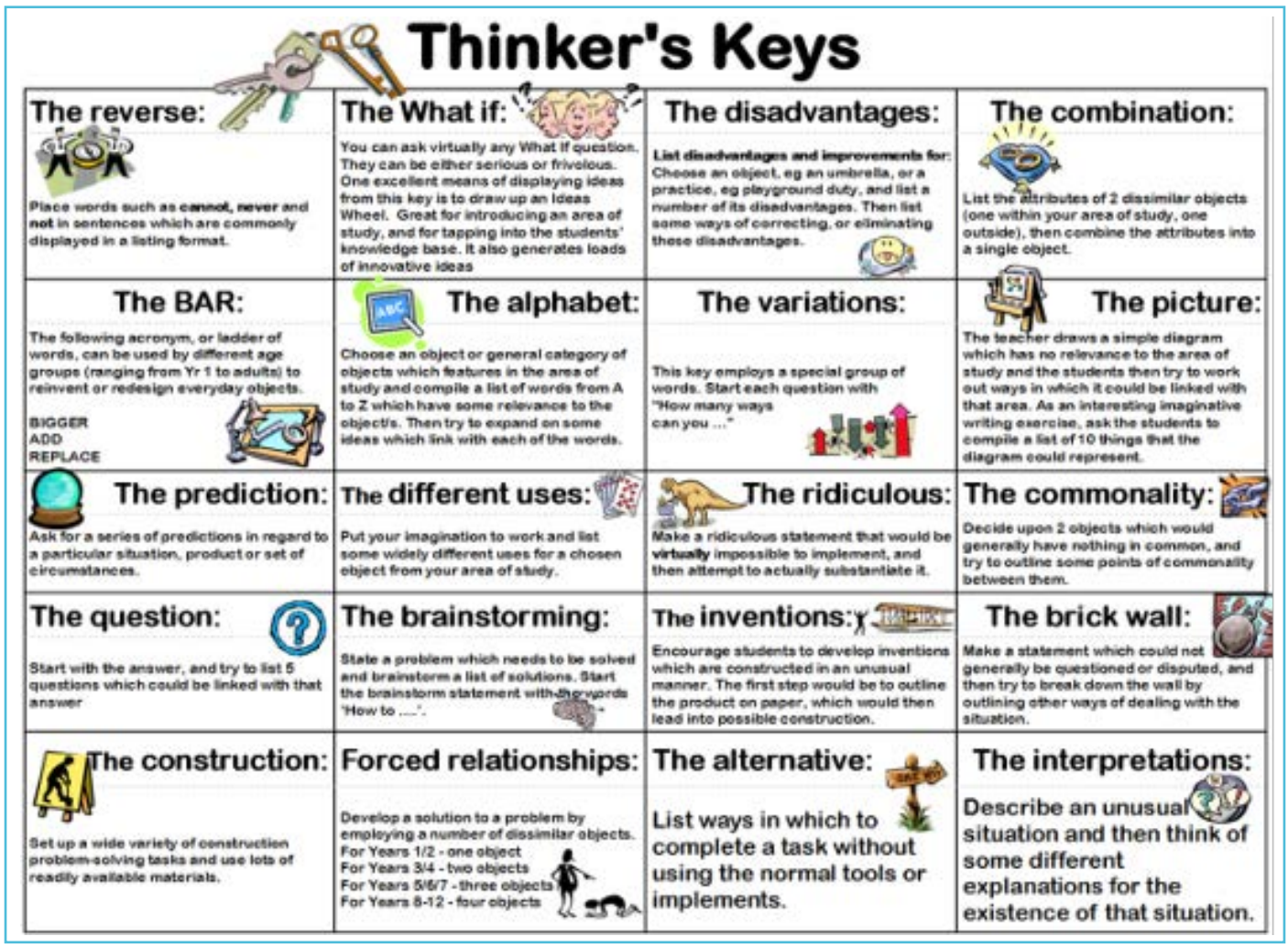
Students are taken through sessions on the importance of sustainability in homes and the design process, but the output is determined by the planning and creativity of the group.

A similar example for Stage 4 leads students through the process of designing an urban garden for the school.

Free inquiry

This is where the teacher takes the role of a coach and students take control of their learning by selecting their own topic, resources and method of presentation. A common example is a passion project or genius hour task. Sometimes it can be hard for students to create their own questions, or line of inquiry. Some ways to build this skill are suggested below.

The Thinker's Keys, developed by Tony Ryan, is a set of question prompts designed to stimulate divergent thinking and inspire creativity in students. These keys offer a framework for teachers to enhance their lessons and encourage deeper thinking across a range of subjects.

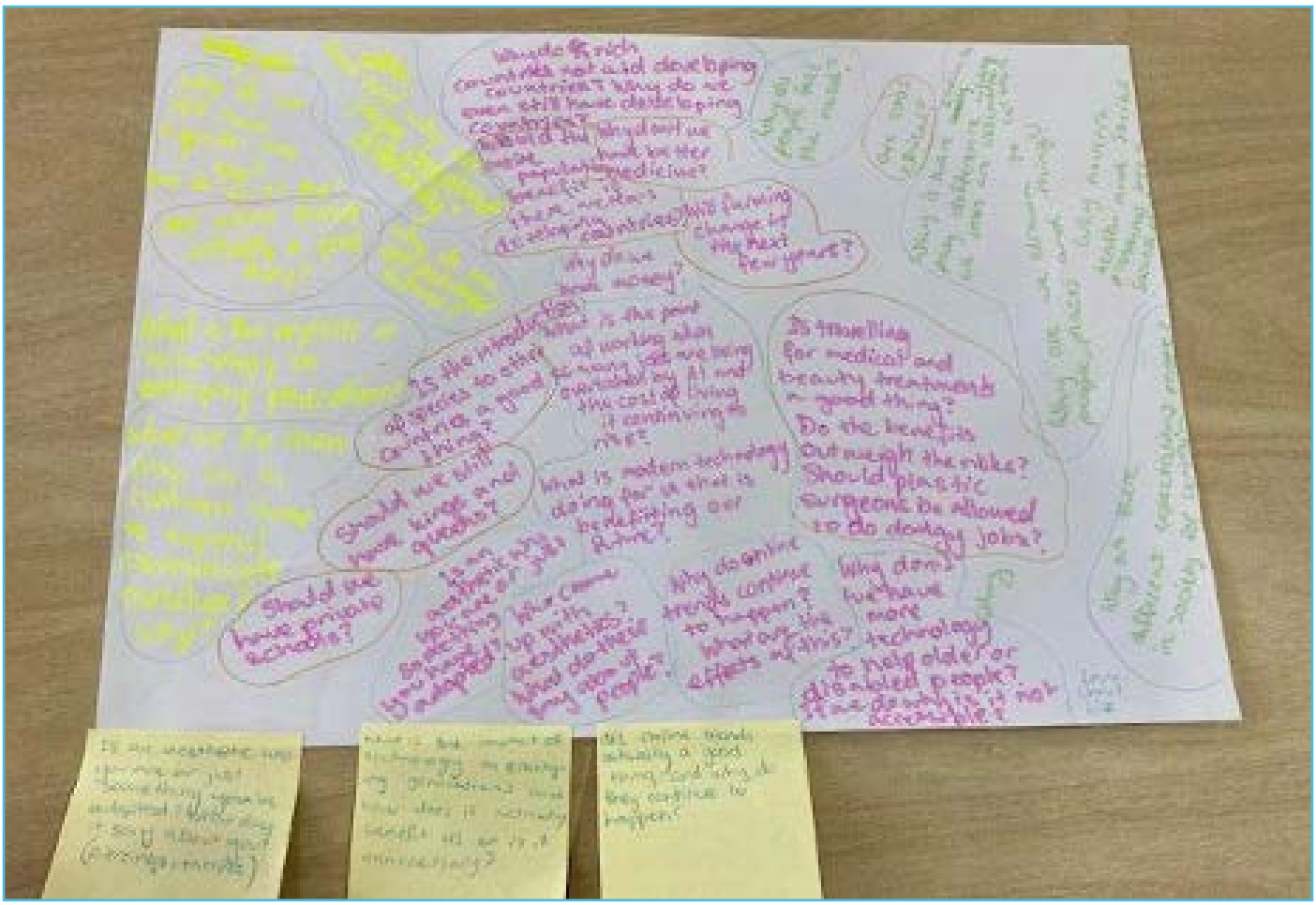


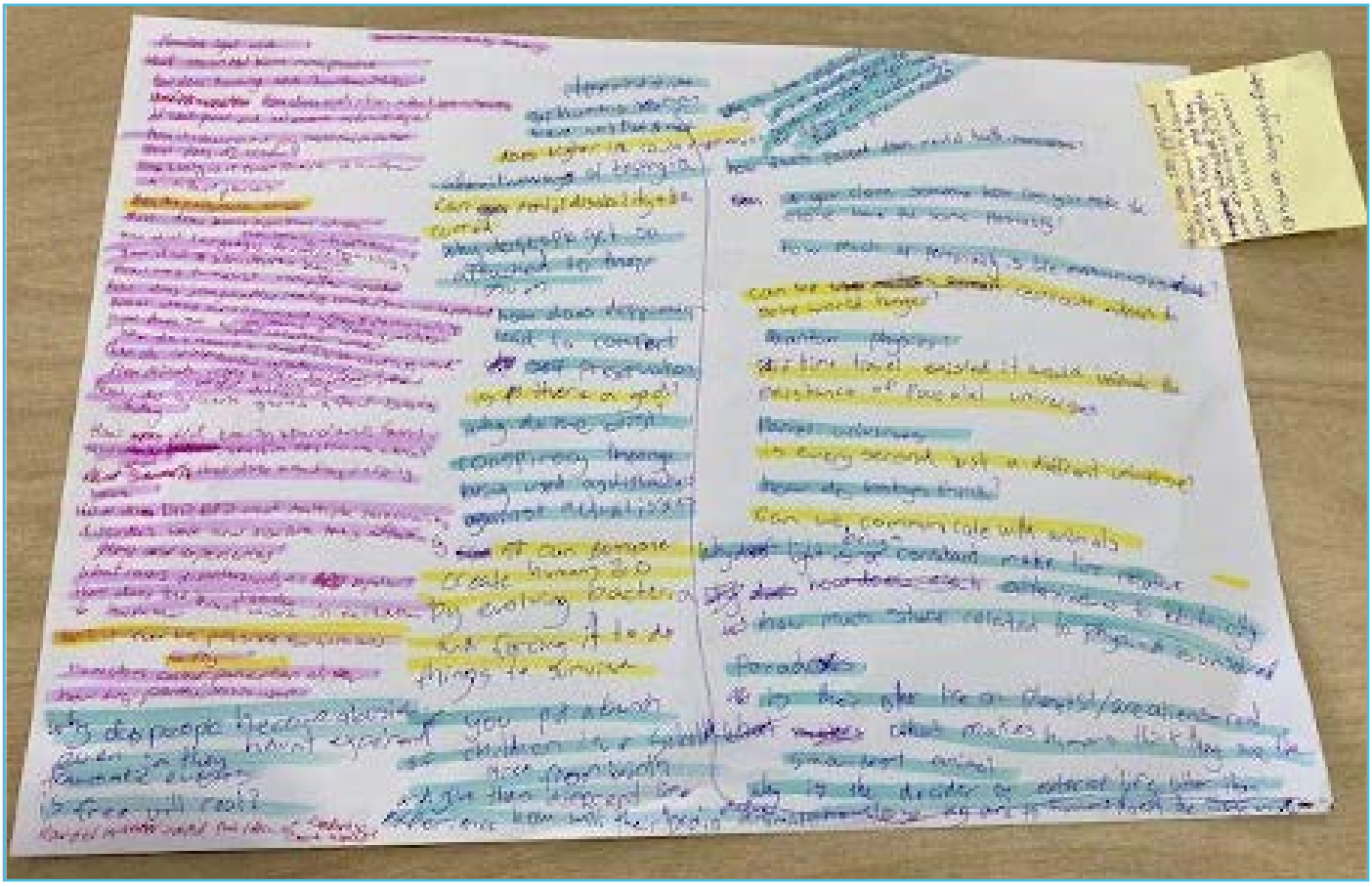
T Ryan, Thinker's Keys; https://www.thinkerskeys.com/

The Thinker's Keys are individual activities that guide students through different strategies for developing their thinking skills, fostering both critical and creative problem solving.

The Question Formulation Technique (QFT) is a process for brainstorming questions. This strategy is fun, but comes with rules.

- In small groups, have students come up with as many questions as they can in the 5 minutes!
- They must use and write for the FULL time!
- Students are to write each question down. This can be done on large butcher's paper style sheets or on Post-it notes.
- **Remind students not to stop** to answer, judge, or discuss the questions.
- Students are to write down every question exactly as it is stated.
- If some are just ideas of statements, have students change any statement into a question.
- Students can then select a question of their own, or someone else's, to investigate for their free inquiry.





QFT examples from Year 10 ACE HPGE program - J Dunn

Similarly, the Question Pencil (QP) technique is used in the same way, however, it usually focuses on one particular topic or theme. The QP can be implemented whilst watching a video or exploring a source. Students are given ten Post-it notes and are to write questions they have using the prompts in the QP. A picture is shown below. This was an example created by a Year 11 Geography class after watching a video on the Polder Lands in the Netherlands.

Year 11 Question Pencil

Planning for inquiry

Planning for inquiry-based learning is essential because teachers must ensure there is a structured yet flexible approach that maximises student engagement, critical thinking, and deeper understanding. Here are some steps for success.

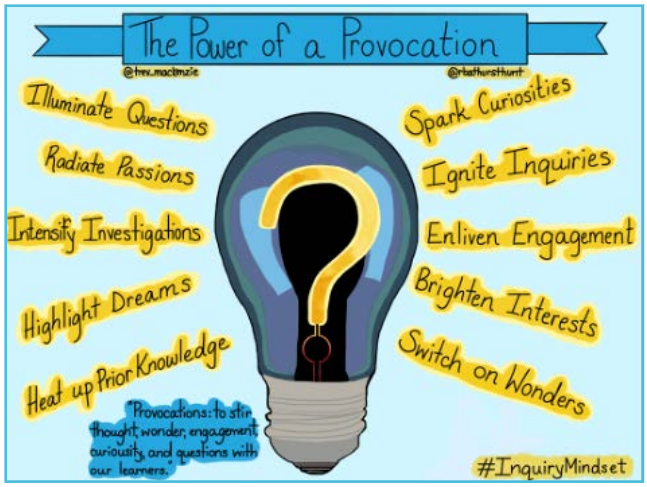
1. Define clear learning objectives – What do you want students to learn?

Start by identifying the key skills, knowledge, or concepts students need to grasp by the end of the inquiry. These objectives should align with your curriculum while fostering curiosity and exploration. It is recommended that a mix of content syllabus dot points, inquiry questions, the skills continuum and key competencies are used in the planning. All can be found in the NESA K-10 syllabus. For example: for a geography inquiry on water resources, objectives might include understanding water distribution by mapping, the impact of climate change on water by using fieldwork and spatial technologies, and how to address water scarcity by using critical thinking.

2. Develop an engaging and meaningful question or problem

Teachers should create an open-ended question or task. The inquiry process begins with a question that sparks curiosity. It should be open-ended to allow for exploration and multiple perspectives. Some of the ways this might be done is to use a provocation such as a video, image or data. Some examples are below.

T Mackenzie, Inquiry Mindset 2018



Food security and food waste, The Guardian

Drought and water scarcity, Food Unfolded

Impacts of deforestation, The Guardian

Wellbeing and income divide in Sao Paulo, The Guardian

Regrowth after fire, Forestry Corporation

3. Plan the Inquiry Process

The teacher needs to carefully select appropriate activities, resources and materials that will be needed to support teaching and learning, To do this, teachers should work through the following checklist:

- What deeper understanding will students acquire through this inquiry?
- What knowledge will students need in order to progress toward this understanding?
- What specific skills do I hope students will improve through this inquiry?
- What learning attitudes or behaviours will this inquiry encourage and help students develop further?
- Which learning outcomes will be targeted in this inquiry?
- What types of tasks, products and projects will be used to assess students' knowledge, understanding, skills, and critical thinking?

4. Choosing assessment:

There must be a mix of strategies and inclusion of assessment of, at and as learning. Teachers should plan to incorporate formative assessments to monitor students' progress throughout the inquiry process. This could include class discussions, check-ins, peer feedback, or short reflective activities. At the end of the inquiry, summative assessment tasks should evaluate how well students achieved the learning objectives. This could be through written reports, presentations, or group projects that demonstrate their research and understanding.

5. Foster a creative and collaborative environment

Where possible, incorporating teamwork can enhance the inquiry process. Allow students to collaborate, share ideas, and solve problems together. Group work encourages peer learning and diverse viewpoints. Facilitate opportunities for students to share their findings with the class. This can take the form of presentations, debates, or collaborative projects. The skills of collaboration should be explicitly taught either before or during the inquiry.

What happens after a fire? J Dunn, Westleigh Park, 2024

6. Schedule deliberate reflection

At various points during the inquiry, ask students to reflect on their learning process. What questions have they answered? What are they still wondering? How has their understanding changed? Encourage students to reflect and share with their peers and embrace teacher feedback. Pausing for feedback needs to be deliberate and purposeful to enhance the learning.

So, why should you do it too?

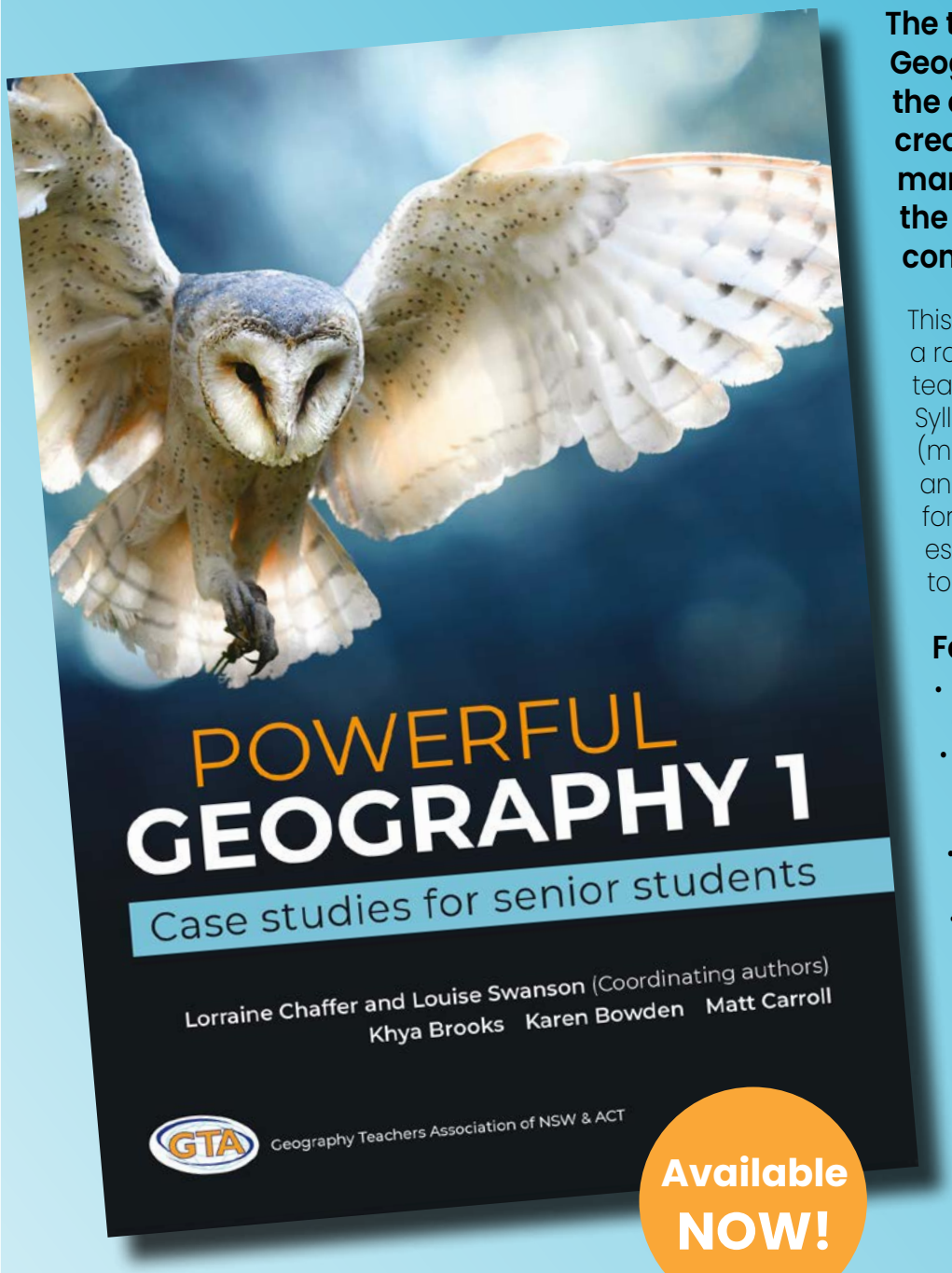
Inquiry-based learning in Geography is a powerful educational approach that fosters curiosity, critical thinking, and problem-solving skills. By encouraging students to ask questions, explore topics in depth, and seek out their own answers, inquiry learning empowers them to take ownership of their learning journey. This method not only deepens students' understanding of content but also equips them with the skills needed to navigate an ever-changing world. With its emphasis on exploration, collaboration, and reflection, inquiry-based learning in a subject that is all about creating global citizens prepares students to become lifelong learners and active, thoughtful participants in society. Ultimately, it nurtures the skills and mindset necessary for success in both academic and real-world contexts.

References:

Mackenzie, T. (2019). *Dive into inquiry: amplify learning and empower student voice*. Victoria, BC, Canada

Mackenzie, T. (2018). Inquiry mindset: nurturing the dreams, wonders, & curiosities of our youngest learners. Elevate.

POWERFUL GEOGRAPHY 1



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The team of authors for Powerful Geography 1 are excited about the case studies they have created, the beautiful illustrations, many never seen before, and the inclusion of Visualise This, concept explainers.

This book offers teachers and students a range of case studies to support teaching the NESA Stage Geography Syllabus (2022). The use of GEO stories (micro studies), large case studies and a visual dictionary (Visualise This) for each Content Focus Area covers essential content knowledge, concepts, tools, and skills.

Featuring:

- Contemporary case studies for each Content Focus Area
- GEO stories – micro case studies to simulate discussion and differentiate learning.
- Visualise This – key concepts explained using illustrations
- Student Activities – Core knowledge, Application, Extension, Fieldwork & Skills.
- A Google Drive of support materials for purchasers includes teaching programs, PPT presentations,, worksheets, chapter summaries and other resources. The link is posted with the books.

Teacher support, video links and general comments about teaching the course https://powerfulgeography.weebly.com/

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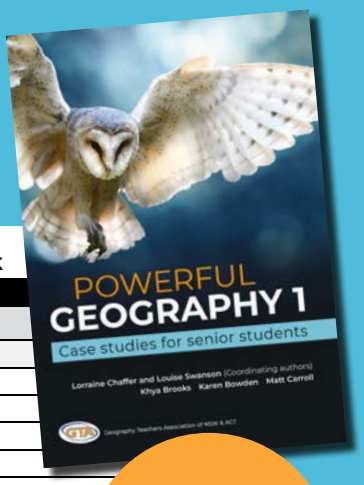

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CASE STUDY	Page	Where you can use this content
EARTH'S NATURAL SYSTEMS		
Small case studies / GEOstories		
Wildlife migrations	6	Wonder of nature, ecological systems
Forest elephants	11	Ecological systems *
Whales	15	Ecological systems *
Dust cycle	17	Geomorphic systems *
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The Arctic Region	358	Option topic: Geographic region
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North coast floods 2022 (Digital) **		Option topic: A contemporary Hazard Stage 4 Water cycle- hazard.
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Land cover change **	439	The Arctic region, SIDS, North coast floods
Antarctica's doomsday glacier	444	Land cover change
THE GEOGRAPHICAL INVESTIGATION		
A modelled approach to undertaking the Geographical Investigation – using examples from a student SGP		

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POWERFUL GEOGRAPHY 2

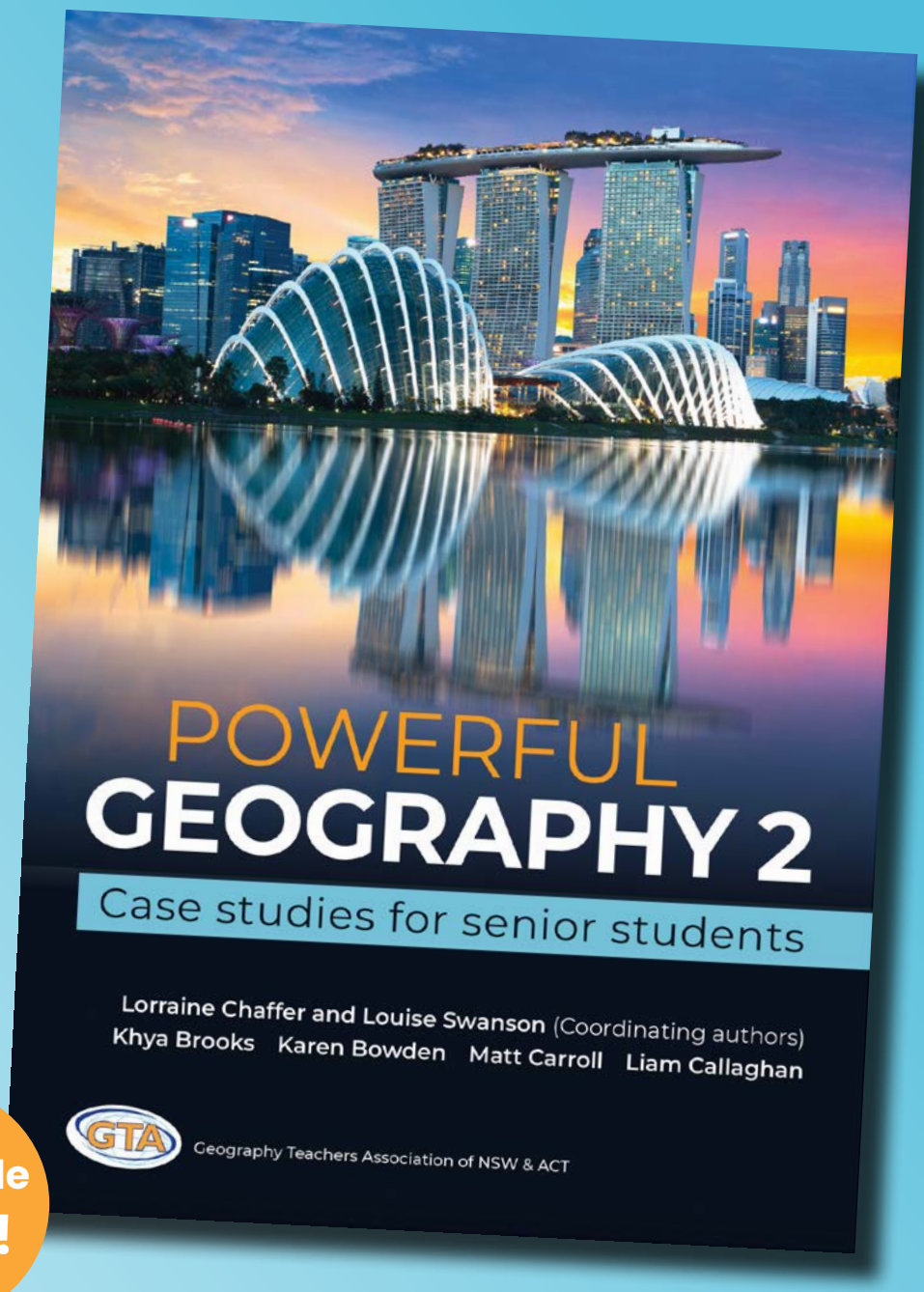
Powerful Geography 2's authors are excited about the new and extensively researched case studies they have created, and the supporting illustrative materials.

Contemporary case studies for each Year 12 Content Focus Area, GEOstories and Visualise This covers essential content knowledge, concepts, tools, and skills to support teaching the NESA Stage 6 (11-12) Geography Syllabus (2022).

The books were published in February 2025.

A Google Drive of support materials is available to all purchasers of PG2 and is emailed once an order is received. Teaching programs, PPT presentations, worksheets, topic summaries and other resources are available for each case study..

Teachers will continue to be supported via the Powerful Geography Year 12 Authors Blog where Teaching programs and relevant commentary and advice are being provided.



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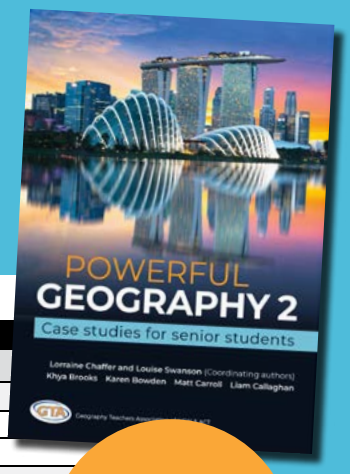

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Benefit sharing Agreement: The San peoples	Marlinja, Salmon, Bananas
Major case studies	
Banana Industry **	Global economic activity
Salmon Aquaculture **	Global economic activity
Fashion **	Global economic activity
Supporting concepts / Visualise This	
Criteria for evaluating industry sustainability	Banana, Salmon, Fashion & Avocado studies
Pillars of sustainability	Banana / Salmon / Fashion & Avocado studies
A Circular economy	Salmon /Fashion studies
Sustainable Development Goals	Salmon / Benefit sharing.
Benefit sharing	The San peoples, Banana Industry, Marlinja (RUP)
ECOSYSTEMS and GLOBAL BIODIVERSITY (EGB)	
Small case studies / GEOstories	
The Okavango Delta *	Nature and complexity of biodiversity / ecological and human stresses / strategies for management Comparative management study for Florida Everglades
Two communities: Traditional Ecological knowledge *	Role of Indigenous peoples in ecosystem management / Coral Triangle
Major case studies. * Option for Fieldwork	
Great Southern Reef: Kelp Forest Ecosystem (GSR) ** Comparative management- South Korea	Ecosystem case study in Australia * Comparative management – South Korea
Coral Triangle: Coral Reef Ecosystem (CT) Comparative management study – GBR**	Ecosystem case study overseas Comparative management – Australia *
Florida Everglades: Wetland Ecosystem (FEW) Comparative management- Okavango Delta	Ecosystem case study overseas Comparative management – Africa **Features of freshwater wetlands
Kosciusko National Park: Alpine ecosystem. (KNP) ** Comparative management- Greater Himalaya NP	Ecosystem case study in Australia * Comparative management- India
Supporting concepts / Visualise This	
Traditional ecological Knowledge	Role of Indigenous peoples in ecosystem management / CT, GSR
Feedback loops	GSR, CT, KNP
Tipping points	GSR, CT, FEW, KNP.
Shifting baselines	GSR, CT, FEW, KNP
Rewilding	Global biodiversity / Lake Eyre Basin (Year 11)
RURAL and URBAN PLACES (RUP)	
Small case studies / GEOstories	
Ljubljana, Slovenia. - European Green Capital - The Bee Path project	Strategies for the sustainable management urban places One successful initiative or project.
Malinga, Northern Territory - Solar farm and battery project	Strategies for the sustainable management of rural Places (remote). One successful initiative or project.
Wagga * - Managing urban salinity in Lloyd.	Strategies for the sustainable management urban places. One successful initiative / project.
Major case studies	
Bellingen **	One place in a rural setting
Green Square **	One place within a larger urban settlement.
Singapore	One large city over 5 million people
Supporting concepts / Visualise This	
Urban settlement patterns	Marlinja / Bellingen **
Urban hierarchies and spheres of influence	Bellingen ** / Singapore

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Advice To Contributors

Geography Bulletin guidelines

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

2. Content: Articles, not normally exceeding 5,000 words, should be submitted to the GTA NSW & ACT Office by email editor@gtanswact.org.au. Submissions can also be sent directly to the editor: Louise Swanson (editor@gtanswact.org.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 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.

Refereeing

All suitable manuscripts submitted to the *Geography Bulletin* are subject to the process of review. The authors and contributors alone are responsible for the opinions expressed in their articles and while reasonable checks are made to ensure the accuracy of all statements, neither the editor nor the Geography Teachers' Association of NSW & ACT Inc accepts responsibility for statements or opinions expressed herein.

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