

'BUSTING THE BANDS IN HSC GEOGRAPHY'

**Hints and tips to improve results and establish or maintain
a dominant Geography culture in your school.**

OVERVIEW OF PRESENTATION



National Geographic, 2017

- What is ‘Busting the Bands’/Bowerbirds?
- How to build a dominant GEO culture that attracts talent and improves results
- Strategies that improve student performance (sharing is caring)
- 10 Hints & Tips for those new to HSC GEO.



MY EXPERIENCE..

BUILDING GEO FROM THE GROUND UP

Engadine High School 2011 onwards.

PDHPE to GEO and SOC, 2012 1st HSC class and Elective GEO.

16, 24, 40, 40+....

Invest in Stage 5 programming, fieldwork, technology and making it contemporary and passionate.

Upskill Historians (40% of teachers teaching GEO are not qualified:ACER)

Capitalise on AUS Curriculum

WHAT IS 'BUSTING THE BANDS'?

...is the process of implementing techniques and strategies into our Geography lessons to move students up into the next Band. This is a highly valuable method of boosting the profile of Geography in our schools whilst creating a dominant culture that will ultimately boost our subject numbers and drive HSC results.

One of the most effective starting points at EHS was to identify the subjects and the relevant subject teachers in our school that have scored or continue to score quality results in the HSC. This led to whole staff PL sessions termed: 'Bowerbirds', where we ran 'rob the nest style/hunting and gathering PL', where teachers worked collaboratively across KLA's and stole and modified ideas to suit their own KLA. We also continue to survey our students... (see Google DOC).

1. CREATIVE AND SUSTAINED COLLABORATIVE

LEARNING..

2. GAMIFICATION..

3. PEER MARKING, SELF ASSESSMENT AND FEEDBACK..

What is the #1
BEST form of
teaching/learning
that 'Busts the
Bands' for your
Geography
students?

THINK, PAIR, SHARE



BOWERBIRDS- STOLEN GOODS FOR HSC GEOGRAPHY

<p>Revision</p> <p>Speed Dating</p>	<p>Students are allocated topic areas, ideas, or syllabus dot points to revise in depth and detail, possibly with a set of questions. The class 'speed dates' through these topics/dot points so that they revise content <i>through</i> a peer—a good way to refresh, move around, and get talking.</p> <p>Students could then summarise their speed dating talk and add to a class set of study notes (perhaps a Google Doc). Students can discuss their best date, worst date topic etc.</p>
<p>Course Review</p>	<p>Using a list of topics or the course syllabus, students colour code (red, orange, green) or otherwise indicate how well prepared they feel for each topic/section (could also use a scale rating). This can inform the teacher's approach to revision, and also provide direction for students in terms of how they need to prioritise their own study notes and exam practice</p>

WHAT DO STUDENTS VALUE MOST IN GEOGRAPHY FROM THEIR TEACHERS?

- Class discussions
- Being tested in class on information in the course and applying it to actual pieces of writing. It sucks at the time but at the end of the day it's practice that helps heaps
- Videos and pictures as i am a visual learner and find it easier to understand the way in which it plays a role within the world
- the fact that we have done exercises (like the paddle pop sticks) that will stick in your brain
- Practice papers
- Personally, I like when things are explained to me in an engaging way because it's easier for me to retain, I find it more useful than simply writing stuff. For me, this is how I learn content, I don't need to constantly be writing info, I need an explanation.
- By giving us assignments in little groups which are presented the week after help me by staying on top of my work and working with others to share ideas and get a better idea of the topic.
- going through examples of band 6 essays and doing past papers in class
- Trial exam gave me hope
- Field work and videos
- Study cards / flash cards
- Completing past papers
- Answering past HSC questions and receiving feedback
- Note taking
- Just constant advice
- Past papers are the only things I can 100% say have contributed to my improvement in marks along with making flash cards. Any encouragement from my teacher also improves my confidence so much because I feel proud knowing I'm not only doing this for myself but that my teachers are proud of me too.

HSC POSSIBLE CASE STUDIES:

ECOSYSTEMS

- Great Barrier Reef
- The Everglades
- Towra Point

LARGE CITY

- Sydney

COUNTRY TOWN OR SUBURB

- Greensquare (urban renewal)
- Leppington (suburbanisation)

ECONOMIC ACTIVITY

- Viticulture
- Coffee production
- Tourism
- Wheat Production
- Beer
- Aquaculture
- Rice
- Coal

TEACH STUDENTS TO MASTER THE SYLLABUS.. #1

Students learn about:

ecosystems and their management

- biophysical interactions which lead to diverse ecosystems and their functioning
- vulnerability and resilience of ecosystems
 - impacts due to natural stress
 - impacts due to human induced modifications to energy flows, nutrient cycling, and relationships between biophysical components
- the importance of ecosystem management and protection
 - maintenance of genetic diversity
 - utility values
 - intrinsic values
 - heritage values
 - need to allow natural change to proceed
- evaluation of traditional and contemporary management strategies.

case studies of ecosystems

- TWO case studies of different ecosystems at risk to illustrate their unique characteristics including:
 - spatial patterns and dimensions: location, altitude, latitude, size, shape and continuity
 - biophysical interactions including:
 - the dynamics of weather and climate
 - geomorphic and hydrologic processes such as earth movements, weathering, erosion, transport and deposition, soil formation
 - biogeographical processes: invasion, succession, modification, resilience
 - adjustments in response to natural stress
 - the nature and rate of change which affects ecosystem functioning
 - human impacts (both positive and negative)
 - traditional and contemporary management practices.

The selected ecosystems at risk could include areas such as coastal dunes, freshwater wetlands, inter-tidal wetlands, coral reefs, arid areas, alpine areas, rainforests, temperate forests.

Reduces non-attempts (RAP) and responses which are from the wrong syllabus dot point.

SYLLABUS JIGSAW..



SPEED DATING

BUILD YOUR STUDENTS CAPACITY TO **DECODE** QUESTIONS AND RESPOND CORRECTLY..

Marks	Key Words	Skills	Example:
1-3 mark Brown represents dirt – very basic	Name / Define / recommend Identify Outline	Name: List areas/ State meaning and identify essential qualities <i>(What is it?)</i> Identify: recognise and name Outline: State in general terms; indicate the main features	2014 HSC: Recommend ONE traditional management strategy that may be used to protect an ecosystem (2 marks)
4-8 marks Green represents grass – more complicated than dirt	Describe Explain Analyse	Describe: features and characteristics <i>(What does it look like?)</i> Explain: the significance (purpose/function/role/problem/issue being addressed) Analyse: explain how/why; relationship(s)	2011 HSC: Describe the effect of ONE natural and ONE human-induced change on an ecosystem at risk that you have studied (4 marks)
8-20 marks Blue represents the sky – The sky is the limit include everything you know	Critically Analyse Evaluate Discuss Justify Assess	Critically Analyse: add a degree or level of accuracy, depth, knowledge and understanding. <i>(Explain the positives and negatives)</i> Evaluate: To understand the success or suitability of the content. Discuss: Explain the positives and negatives Justify: support an argument, opinion or conclusion Assess: Make a judgement of value, quality, outcomes, results or size.	2015 HSC: Discuss how management strategies could be used to address the human impacts that are placing TWO ecosystems at risk (20 marks)

Deepens responses (5-6 pages),
forms stronger arguments that
HIT the directive term.

#2

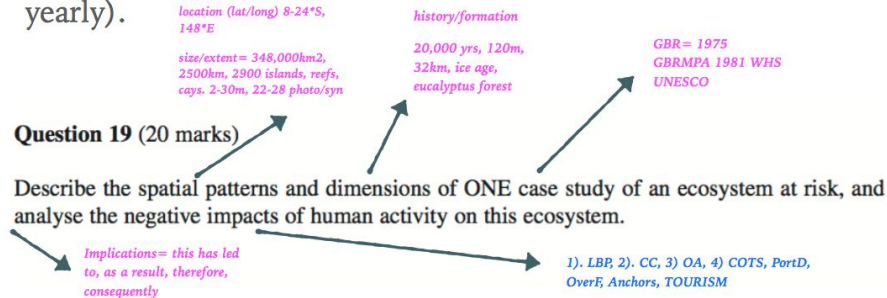
**DETERMINES LENGTH AND COMPLEXITY
PREVENTS STUDENTS FROM RESPONDING INCORRECTLY (LESS NON ATTEMPTS AND 0-1'S IN RAP)
ALL EMPHASIS IS ON THE DIRECTIVE TERM.**

- Most questions are more complex than they seem. Read the question several times, underlining the key terms and concepts.

Question 19 (20 marks)

Describe the spatial patterns and dimensions of ONE case study of an ecosystem at risk, and analyse the negative impacts of human activity on this ecosystem.

- Once you have **highlighted** the key terms and concepts, you need to begin the thought process on how to best answer the question in a **sustained** and **cohesive** manner (5-6 pages OR 2 booklets).
- This will generally be in the reading time when you go straight to the essays (5 minutes in the HSC, Trial and 1/2 yearly).



SELECT EPIC CASE STUDIES..

1. ARE YOU PASSIONATE AND HIGHLY KNOWLEDGEABLE? Students will feed off this!
2. DEPTH AND SCOPE WITHIN SYLLABUS? Use it as a checklist
3. DOES TRADITIONAL MANAGEMENT EXIST??
4. ARE THEY DIFFERENT CASE STUDIES & CAN STUDENTS ACCESS ADDITIONAL INFORMATION?
DEEP KNOWLEDGE OF BOTH!
5. IS FIELDWORK POSSIBLE?

Engages them in meaningful
learning that CONNECTS!

#3



SPEAK GEOGRAPHY TO GEOGRAPHERS..

TOPICS AND SYLLABUS DOT POINTS

Terrestrial
Aquatic
Biotic
Abiotic
Vulnerability
Resilience
Ecotone
Elasticity
Keystone species
Dynamic equilibrium
Interdependence
Anthropogenic
Over exploitation
Ecosystem simplification
Biodiversity

Prediction Bingo

What terms or geographical concepts do you think will occur in the reading with the heading: *Dynamics of weather and climate*?

#4

Produces more refined answers
that are geographical in
nature and impress markers

KEEP IT CURRENT!

GOOGLE NEWS/ MEDIA RELEASES

PUBLICATIONS/REPORTS

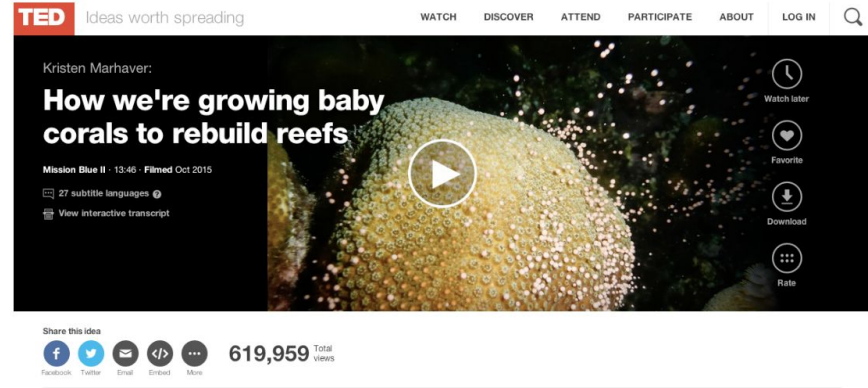
TED TALKS

SOCIAL MEDIA (FACEBOOK, TWITTER ETC)

NEWSPAPER ARTICLES

STUDENT SHOW AND TELL? GOOGLE DOC OR GOOGLE CLASSROOM..

#5



The image shows a screenshot of a TED talk video player. At the top left is the TED logo with the tagline "Ideas worth spreading". Navigation links include WATCH, DISCOVER, ATTEND, PARTICIPATE, ABOUT, and LOG IN. The video title is "How we're growing baby corals to rebuild reefs" by Kristen Marhaver. Below the title, it says "Mission Blue II · 13:46 · Filmed Oct 2015", "27 subtitle languages", and "View interactive transcript". A play button is centered over a video thumbnail showing a close-up of a coral reef. On the right side, there are icons for "Watch later", "Favorite", "Download", and "Rate". At the bottom, there are social sharing icons for Facebook, Twitter, Email, Embed, and More, along with a view count of "619,959 Total Views".



The image is a cover page for the "HIGHLIGHTS of the Reef 2050 Long-Term Sustainability Plan". It features the Australian Government and Queensland Government logos at the top. The background is a deep blue with a photograph of a vibrant coral reef at the bottom. The text is centered and reads "HIGHLIGHTS of the Reef 2050 Long-Term Sustainability Plan".

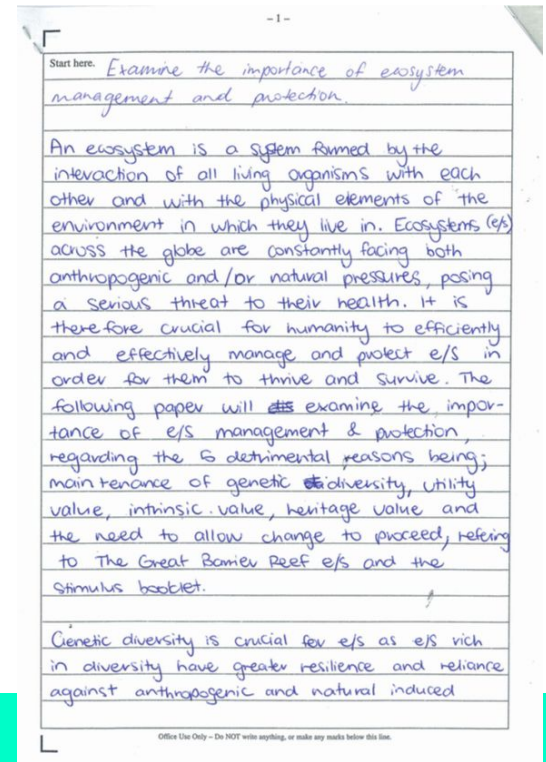
NAIL STUDENTS WITH SAMPLES (FROM VARIOUS GRADES), PAST PAPERS & TIMED RESPONSES

Ranges are important!

Students could rewrite or annotate to 'bust
the bands' in a provided sample..

Reduce exam anxiety.. (train like game day)

#6



USE STATISTICS & EXPLICITLY TEACH HOW TO INCORPORATE THE STIMULUS WHERE POSSIBLE..

Question 22 (continued)

Answer part (b) with reference to Source L on page 4 of the Stimulus Booklet.

- (b) Gullfoss was declared a nature reserve in 1979. Recently, plans have been discussed to harness the area for electricity production, placing the ecosystem at risk.

3

Explain why it is important to continue to protect and manage Gullfoss nature reserve.

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NSW EDUCATION STANDARDS AUTHORITY | 2017 HIGHER SCHOOL CERTIFICATE EXAMINATION
Geography Stimulus Booklet

Source A – Climate graph for Iceland

Month	Average precipitation (mm)	Average maximum temperature (°C)	Average minimum temperature (°C)
J	10	4	-2
F	10	4	-2
M	10	4	-2
A	10	4	-2
M	10	4	-2
J	10	4	-2
J	10	4	-2
A	10	4	-2
S	10	4	-2
O	10	4	-2
N	10	4	-2
D	10	4	-2

Source B – Location map of Iceland

Source C – Synoptic chart, Iceland

Speed (km/h)	Symbol
1–2	—○
3–7	—○
8–12	—○
13–17	—○
18–22	—○
23–27	—○
28–32	—○

KEY
 — 1010 isobar with value (hPa)
 L Low pressure
 H High pressure

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CONDUCT FIELDWORK & EXPLICITLY TEACH
STUDENTS TO REFER TO THIS IN THEIR
RESPONSES..

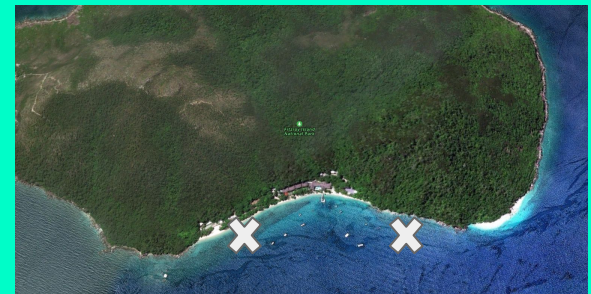


#8

Fitzroy Island

Observations/measurements:

High coral mortality, algae growth, coral rubble and <6m visibility (secchi disk). Minimal keystone species compared to Norman and Hastings Reef.



ECOSYSTEM FUNCTIONING..

HOW HUMAN IMPACTS AFFECT THE WAY ECOSYSTEMS FUNCTION..

- 1) *disruption of energy flows through changes in solar energy uptake and changes in TROPHIC structure in food chains/food webs.*
- 2) *Ecosystem Simplification: reduction in species diversity, less complex food webs and ecosystem collapse.*
- 3) *Behavioural changes in species, genetic defects and excessive or depleted amounts of nutrients.*
- 4) *Interruptions to the interaction of the 4 biophysical components.*

Question 22 (continued)

- (c) Describe how the nature of and rate of change in ONE ecosystem at risk affect its functioning.

6

Ecosystem at risk:

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#9

MARK THE HSC...

#10

