# **PROJECT GEOSCIENCE** SUMMARY

AUSTRALIAN GEOSCIENCE COUNCIL > NOV 2024



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# THE BUSINESS NEED

Historically, enrolments in Geosciences have been very cyclical with universities struggling to attract students on a consistent basis. Further, the overall trend in enrolments has been on a general decline over the last 10 years.

In order to strengthen future uptake of Geosciences in the tertiary education sector, the AGC needs to develop a deep understanding of the School student & Undergraduate target market, to feed into marketing, brand and recruitment strategies in 2024 and beyond.

## OUR APPROACH

WHA T	01 INITIATE	02 PREPARE	03 EXPLORE	04 VALIDATE	05 SHARE
МОН	KICK OFF SESSION One-hour session with Fiftyfive5 and AGC stakeholders to align on approach and share background understanding and ingoing hypotheses as context	EXAMINE PREVIOUS RESEARCH FiftyFive5 to review information recommended by AGC ahead of the qualitative research, to help inform final perspective	<ul> <li>ONLINE COMMUNITY</li> <li>4 Day online community with Prospective students (18 x current Year 12 school students) and Current university students (17 x first/second year science undergraduates).</li> <li>A mix of states (resource intensive and non-intensive); mix of schools &amp; universities; mix of university students chosen/not chosen geosciences as major</li> <li>ONLINE IN-DEPTH INTERVIEWS</li> <li>Graduates - 8 x 1-hour online interviews with recent Bachelor of science geoscience graduates.</li> <li>Influencers (Career Advisors only): 1 x 1-hour online interviews (Resource Intensive state).</li> </ul>	<ul> <li>QUANTITAIVE SURVEY</li> <li>15 min online survey with two target groups.</li> <li>Year 11/12 Students</li> <li>Understanding the awareness and perceptions of geosciences at the university level, the likelihood that they choose/not choose to pursue geosciences, and why (drivers) or why not (barriers)</li> <li>Study-journey mapping, and key points of influence, where do students go for information, and milestones throughout</li> <li>Second Year University Students</li> <li>Reasons for choosing/not choosing to pursue geosciences, and why (drivers) or why not (barriers).</li> <li>Intention to pursue further education, and/or careers in geosciences.</li> <li>Estimated sample:</li> <li>HS students in year 11 and 12 n=211</li> <li>First &amp; Second Year Uni = 159</li> <li>(best efforts based on response from list)</li> </ul>	<b>DEBRIEF SESSION</b> Fiftyfive5 to share the combined (quant/qual) debrief with the AGC team Include time at the end to discuss key findings and implications for AGC
UTPUTS	ALIGNENT ON APPROACH, SAMPLE, KEY OBJECTIVES AND OUTPUTS	UNDERSTANDING THE LANDSCAPE TO HELP INFORM RECOMMENDATIONS	CONSUMER LED INSIGHTS AROUND THE PERCEPTIONS, DRIVERS & BARRIERS TOWARDS GEOSCIENCES ACROSS THE TARGET MARKET	VALIDATE FINDINGS OF QUALITATIVE ANALYSIS AND PLACE THE INSIGHTS INTO A NATIONAL CONTEXT. DEFINE THE RELATIVE DIFFERENCES IN AWARENESS AND OTHER KEY METRICS ACROSS GROUPS.	CLARITY ON THE FINDINGS OF THE RESEARCH, WITH IMPLICATIONS AND OPPORTUNITIES FOR AGC



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# **KEY FINDINGS**

# NEED TO GET ON STUDENT'S RADAR EARLY - STUDY & CAREER ASPIRATIONS CAN BEGIN AS EARLY AS YEAR 8 BUT GENERALLY, BEGIN IN EARNEST FROM YEAR 10



#### YEAR 8 & YEAR 9

Triggers: choosing electives for the first time

- Starting to think about what their interests are, what they enjoy and their strengths and weaknesses
- Some thought about appeal of specific science careers/career areas but can change many times before end of school



#### YEAR 10

Triggers: Subject Selections end of year 10 for year 11/12; Career advisor initiatives

- Last year before serious work of HSC subjects begin
- Have time without HSC pressure to reflect & consider future steps
- Confirm strengths & weaknesses e.g. science vs English; chemistry vs biology etc
- Subject selection for Years 11/12 at end of year 10 is an important deliverable & consider matching to career areas of interest
- Time to assess ATAR ability
- School/Career Advisors expose students to range of careers to help inform subject choices/alternative pathways
- Many take advantage of work experience opportunities
- Often, it's the first time they gain an understanding of provider landscape and course content



#### YEAR 11

Triggers: Career Advisor initiatives; Performance in assessments

- Path to HSC begins
- Focus shifts from post-school goals to day –today performance
- Pressure to perform well
- Further career & provider events/experiences offered



#### **YEAR 12**

- Triggers: Performance in trials, looming HSC; beginning of application process
- Pressure of assessment/HSC performance at its peak
- Focus more on achieving best results vs life beyond school
- Post-school decisions often put on hold until after HSC
- Clearer expectations of how they will go and what they can achieve, particularly post trials
- Some finessing around what they want to study and where they might go – set realistic goals

#### AN EARLY OPPORTUNITY TO GET ON STUDENT'S RADAR

SWEET SPOT TO ENGAGE WITH STUDENTS & PROMOTE DEGREE/CAREER OPTIONS

ESSENTIAL TIME TO REINFORCE POSITION ON SHORTLIST

# INTEREST IN SUBJECT MATTER & FUTURE JOB/FINANCIAL SECURITY ARE KEY CONSIDERATIONS WHEN CHOOSING WHAT TO STUDY





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ial Base: C1 Which of these do you consider important when choosing what you want to study in the future? School students intending university study n=186, Uni students n=159

Extremely unimportant Unimportant Neither Extremely Important

# QUANTITATIVE DATA REINFORCES GEOSCIENCE/ EARTH SCIENCE IS ONE OF THE LESSER-KNOWN AREAS OF STUDY



© Fiftyfive5 2024 and confidential Base: A1 Which of the following areas of study are you familiar with at a university/ college level? School and University Students n=370

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# UNDERSTANDING OF GEOSCIENCE AS A SCHOOL STUDENT, APPEARS TO BE VERY LIMITED & SUPERFICIAL



#### FOCUSED ON ROCKS

- Some only see it as the study of rocks
- Looking at different types of rocks, how they are formed ... fossils
- About the past, not the present



#### SIMILAR TO GEOGRAPHY

- Others default to what they see as a familiar comparison point at school ie geography
- Can be off-putting for those who weren't interested in or didn't enjoy Geography at school



# A MIX OF GEOLOGY/GEOGRAPHY AND SCIENCE

- Some reach for meaning based on name alone
- Still unclear what it involves as geology also not well understood beyond the study of rocks

#### LITTLE UNDERSTANDING OF THE BREADTH AND CONTEMPORARY RELEVANCE OF GEOSCIENCE AMONGST SCHOOL STUDENTS



# GIVEN LACK OF FAMILIARITY WITH GEOSCIENCE, STUDENTS STRUGGLE TO CONNECT WITH CAREER PATHWAYS

A lot of **uncertainty around the kinds of jobs** they would qualify for with Geoscience.

A general assumption that it is a niche industry so career choices would be limited.

A tendency to see the bulk of opportunities being **anchored in mining** or perhaps construction



IMPORTANT TO TALK TO EMPLOYABILITY AND CAREER OPPORTUNITIES IN COMMS WITH PROSPECTIVE STUDENTS WHO HAVE LIMITED UNDERSTANDING OF THE AREA



# QUANTITATIVE SURVEY CONFIRMS LIMITED AWARENESS AND WHAT IS PERCEIVED TO BE 'BORING CONTENT' AS THE KEY BARRIERS TO STUDENT ENGAGEMENT



#### BARRIERS - GENERAL



# "OPPORTUNITIES TO TRAVEL/ GO TO UNEXPLORED LOCATIONS" AND THE INCLUSION OF 'ISSUES AROUND SUSTAINABILITY" ARE THE MOST APPEALING ASPECTS OF GEOSCIENCE, WITH MINING BEING THE LEAST

Q: How appealing do you find the following descriptions of Geoscience/ Earth Science?								
	A career as a professional geoscientist can provide numerous opportunities to travel, often to remote and unexplored locations.	3% 1	.8%	27%	39%	14%	53%	
	The field of Geoscience is increasingly expanding to include issues around sustainability, and geoscientists play an important role in a diverse range of environmental issues including creative solutions for climate change.	8%	21%	30%	34%	6%	41%	
	Geoscientists is a broad discipline, with geoscientist going on to be employed in many sectors of industry, government, research and cover a wide range of activities in the field.	5%	25%	31%	33%	5%	39%	
	Geoscience is a field that incorporates knowledge from many other disciplines such as chemistry, physics, data science as well as skil such as strategic planning and opportunities to work in a lab.		24%	31%	35%	4%	38%	
	Geoscientists are central to Australia's critical minerals sector and clean energy transformation. Geoscientists are a crucial part of a skilled, diverse, and growing workforce that enables the ongoing development of Australia	10%	29%	28%	30%	4%	34%	
	Geoscience is a discipline that aims to understand the origin and evolution of Earth, its ancient environments and climates, natural hazards and the formation of resources including petroleum, mineral deposits and groundwater.	9%	26%	32%	29%	5%	34%	
! <b>-</b>	Earth Sciences is the study of the Earth. It includes studies of tectonic processes leading to volcanic eruptions, earthquakes, and the generation of mineral, petroleum and water in the Earth's crust.	6%	27%	34%	28%	5%	33%	
 Ge(   	oscientists are vital to the mining industry and often become involved in several activities such as mapping and sampling, geotechnical site reviews, drilling and geophysical or geochemical surveys.	10%	25%	32%	28%	4%	32%	



Extremely unappealing Unappealing Unsure Appealing Extremely appealing

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ntial Base: D2 How appealing do you find the following descriptions of Geoscience/ Earth Science? Total Students N=370

# THE TREND TOWARDS SUSTAINABILITY NEEDS TO BE CONSIDERED: AROUND 4 OUT OF 5 STUDENTS REGARD SUSTAINABILITY, ENVIRONMENT AND CLIMATE CHANGE AS IMPORTANT

Q: How important is sustainability, the environment or climate change to you?



School Students 🔲 Uni Students

TAP INTO THEIR PASSIONS: HIGHLIGHTING THE ROLE GEOSCIENCE CAN PLAY IN THE FIGHT AGAINST GLOBAL CHANGE WILL HELP ALIGN GEOSCIENCE WITH STUDENTS' VALUES TODAY

## RENEWABLE ENERGY IS THE MOST ATTRACTIVE GEOSCIENCE CAREER FOR STUDENTS **CONSIDERING A STEM DEGREE**



Part of Accenture Song What industries or fields would you more likely be interested in? © Fiftyfive5 2024 and confidential

STEM considerers n=140

SECTION 5

# THE LAST FIVE MINUTES

## GOING FORWARD <sup>1 OF 2</sup>



#### PROMOTE & BUILD EXCITEMENT AROUND EES

Even for students at schools which offer EES, it is seen as a less popular, less familiar and potentially boring choice.

Need to find ways to get students and teachers talking about EES. Promote interesting content (e.g. sustainability & climate change) as well as highlight the opportunity for more hands-on learning eg field trips, experiments etc. Talk to the breadth of content EES covers beyond geography.

#### LIFT CREDIBILITY OF EES AS AN HSC CHOICE

Compared to other science subjects, there appears to be a perception that EES does not mark as well or offer as much leverage for future studies.

Bring to life successful student course pathways, as well as highlight the breadth of tertiary studies it can link to, to help get EES on their consideration list.

#### RAISE AWARENESS OF GEOSCIENCE & GET ON STUDENT'S RADAR FARI Y

**EARLY** Year 10 is a key junction point in a school students decision-making journey. They have to make subject choices which will ultimately impact their future course and job opportunities.

Schools recognize this in their curriculum, making it a sweet spot for careers advice and activity. Find ways to engage with schools and leverage career advisors at this time by providing them with written and digital information as well as experiential opportunities

#### FURTHER LEVERAGE GEOSCIENCE ALUMNI AND CURRENT STUDENTS

'People like me' can also be a key influence on school and university students. They represent a relevant and trusted source of information, particularly via school visits and Open Days.

Showcasing 'real life' stories of the Geoscience experience, as well as finding ways to connect prospective students with current students & industry contacts is impactful. The graduates we spoke to are keen to get involved and promote their industry **0** 

### GOING FORWARD <sup>2 OF 2</sup>





# INCREASE FAMILIARITY & APPEAL OF COURSE

Both school and university students have a limited understanding of the content covered in Geoscience. Compared to other sciences, it can be seen as less reputable and more niche.

Build its profile as an established and reputable field of study as well as highlight career opportunities to raise consideration at university. For science students, highlight the problem solving, critical thinking, creativity and hands on components of Geoscience.

#### BETTER CONNECT & ENGAGE WITH PROSPECTIVE STUDENTS

Leverage key channels that are commonly used by prospective students such as social media, university websites, Reddit and other forums.

Create engaging content such as eyecatching visuals, 'Day in the life' videos, and student/graduate testimonials to stand out and better connect with students.

Make Geoscience seem more relatable but showing them how it connects to their everyday lives.

#### SHOWCASE THE BREADTH & EMPLOYABILITY OF GEOSCIENCE CAREERS

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Career pathways, future earnings and stability are key considerations when majors and preferred careers.

Highlight the breadth of careers that can lead from the study of Geoscience. Talk to the high demand for graduates, future growth of industry as well as financial rewards for Geoscience roles. The opportunity for travel with Geoscience careers is an additional drawcard for some students.

#### TALK TO THEIR OPPORTUNITY TO MAKE A DIFFERENCE

Combating climate change and environmental issues are a big concern for this generation.

Demonstrate how the study of Geoscience can help them play a role in solving these challenges. As part of this, try to address the negative stigma around mining by showing how it can also be a part of the solution.

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