

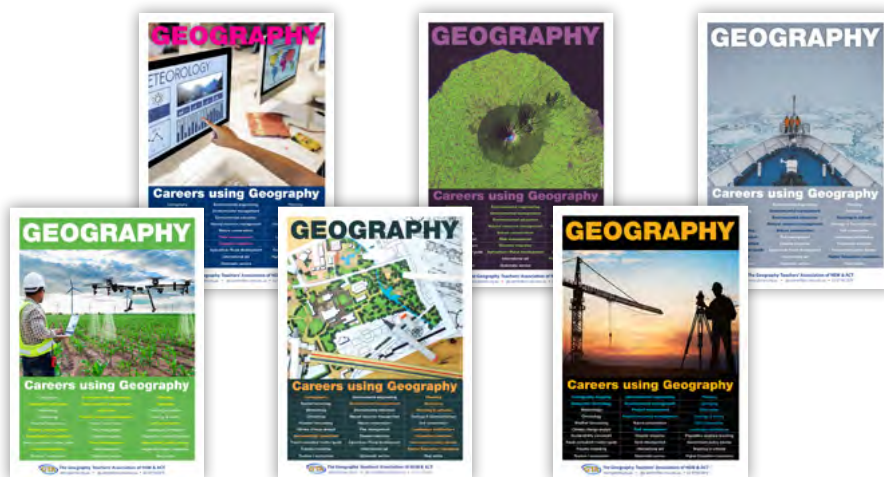


NEVER MISS AN OPPORTUNITY

Lorraine Chaffer

It is important that our students can see the value of Geography, not only for understanding the world, but also the place of geographical knowledge and skills in career pathways and the career opportunities they can investigate further.

GTA NSW & ACT CAREERS POSTERS



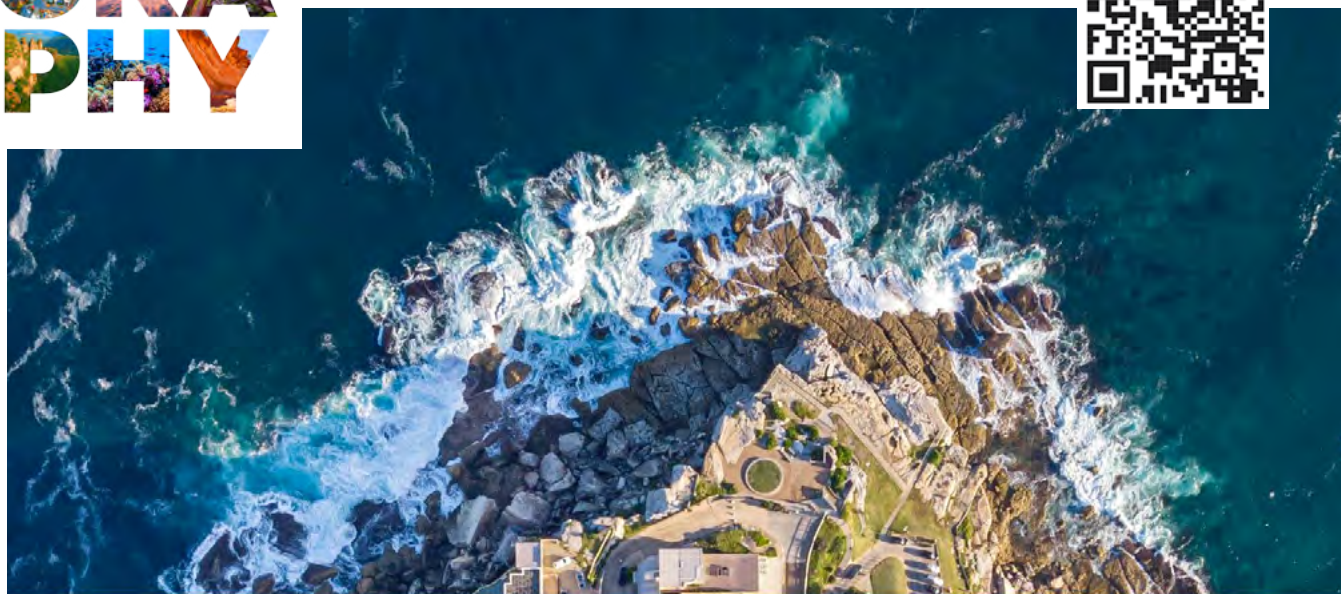
One approach is to display posters that showcase links to careers in Geography. When teaching individual topics ask students to identify, or draw their attention to, potential careers linked to the content and skills being taught.

GTA NSW & ACT Careers posters have been developed for this purpose. They range from large A1 sized posters to a set of six smaller sized A3 posters.



AGTA CAREERS WEBSITE #GOWITHGEO







This rich website provides students further insights into careers linked to studies in Geography. It can be found using the weblink <https://www.gowithgeo.com.au> or the QR here.



GEOGRAPHY: IT'S ALL AROUND US!

ESRI WEBSITE

Watch these careers video clips HERE <https://www.esri.com/en-us/what-is-gis/careers>

 <p>Climate Scientist Ned Gardiner, NOAA Climate Program Office The National Climatic Data Center uses the world's largest climate data archive to provide climatological analysis to all sectors of the economy.</p>	 <p>Conservationist Michael Fay, Wildlife Conservation Society Conservationists travel the world, using data collection and mapping technology to identify and preserve national parks for future generations.</p>	 <p>Forester Chris Ferner, Colorado State Forest Service Foresters manage the use and development of forests and natural resources, using GIS technology to improve the land's health and productivity.</p>
 <p>GIS Manager Ingrid Bruce, City of Rancho Cucamonga GIS Managers leverage location technology to plan, assist, and improve their cities. Learn how this city uses GIS mapping to fight wildfires.</p>	 <p>Health Geographer Seth Wiafe, Loma Linda University Health Geographers deploy a powerful combination of GIS, remote sensing and GPS technologies to prevent diseases and stop them from spreading.</p>	 <p>Helicopter Firefighter Steve Robinson, Los Angeles Fire Department Helicopter firefighters use GIS to map incidents from the air, sharing vital information with incident commanders and city leaders to save lives.</p>

SHE MAPS – CAREERS USING DRONES

SHE MAPS have created a set of posters you can also print for your classrooms:

- 28 Future Drone Careers infographic
- Careers poster biographies showcasing women who use drones in their job.
- Drones in forestry infographic

The infographic and samples of the career posters are included in this edition.

The SHE MAPS / FOREST LEARNING resources for Stage 4 and 5 'Drones in Forestry', have excellent resources on careers in forestry and the use of drones in those careers. Activities for students include creating a biography for a forestry worker. Visit the website here to download these free resources. <https://shemaps.com/blog/drones-in-forestry-teacher-resources>

A message from She Maps



The Australian Drone industry is booming, reportedly contributing AUD5.5 billion to the country's economy and by 2040, the economic impact of this industry is expected to reach AUD14.5 billion. The use of drones in different industries continues to grow and, as such, we are seeing an amazing array of new career pathways opening up for your students.

To uncover 28 Future Drone Careers, we highly recommend that you download our poster and display it in your classroom to continuously inspire your students.

Future Drone Pilot Infographic

A recent report The Australian Surveying and Spatial Workforce – A National Roadmap highlighted the continued workforce shortages for surveying and spatially related occupations.

At She Maps, we are passionate about the geospatial industry, but career options in the geospatial industry are invisible to the large majority of students. This is why we've developed a series of career posters so that schools can help inspire the next generation of geospatial experts.

CAREERS: DRONES

Print and display the posters in your office, corridors, or classroom. Incorporate the posters into your teaching or use them for class discussions. The posters are suitable for upper primary and secondary levels.

Environmental Scientist



“Drones are amazing tools that **allow us to see what our eyes cannot, and they have **revolutionised the way** I think about solving environmental problems.”**

CHIPPIE KISLIK

I use drones to investigate drought conditions in plants, as well as to identify algal blooms that float on the surface of the water. Drones allow me to examine changes over time in the environment, and help me detect issues related to water stress and water quality. I love having the freedom to plan, capture, and analyse my own data from start to finish!

Favourite subjects at school: Geography, English, Music, Cartography

Further study: Bachelor of Science in Conservation and Resource Studies

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 CONSERVATION
  MAPPING
  SATELLITE

 DRONE WORK
  BIODIVERSITY
  WATER QUALITY

 PLANTS
  DROUGHT
 

Land Surveyor



“I love being able to work on big projects, and **turn data into 3D models for virtual reality.”**

LAUREN HOLLAND

Favourite Project Name: Winston Churchill's Old War Office

Favourite Subjects at School: Geography, Music and Food Technology

Tertiary Study Completed: Bachelor of Geography

Your Favourite Tools: Favourite tool is Leica M560, it is a total station and a laser scanner.

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 GPR
  LEICA M560
  LEICA BLK2GO

 LEICA AIBOT DRONE
  LEICA RTC360
  LEICA SCANNER

 THE SURVEYORS' TRUST
 

Cadastral Surveyor



“I like the **challenge of surveying including the maths, logic and not to mention field work and travel.”**

JEMMA PICCO

Favourite Project Name: Cape York Peninsula Tenure Resolution Project

Favourite Subjects at School: Geography, Maths

Tertiary Study Completed: Bachelor of Surveying and Bachelor of Information Technology (double degree)

Your Favourite Tools: Total Station (favourite), GPS, prisms, compass, tape measure, tripod

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 TOTAL STATION
  GPS
  COMPASS

 TAPE MEASURE
  PRISMS
  TRIPOD

 THE SURVEYORS' TRUST
 

Land Surveyor



“There is such a **variety of work, everyday is different. You get to **see some pretty cool places**, not just stuck in an office!”**

GEORGIA ROONEY

Favourite Project Name: Powerhouse Museum

Favourite Subjects at School: Geography, Maths, Physics, Physical Education (P.E.)

Tertiary Study Completed: Bachelor of Surveying, Registered Surveyor NSW

Your Favourite Tools: 3D scanner is my favourite because it can record millions of points very quickly unlike traditional measurements with a theodolite where you record single points.

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 THEODOLITE
  PRISMS
  3D SCANNER

 TAPE MEASURE
  DISTO
  GPS ROVER

 THE SURVEYORS' TRUST
 

Earthquake Geologist

“I love using drones and science to **tell stories** about how earthquakes and tectonics are still changing our seemingly **ancient outback landscapes.**”



TAMARAH KING

Tamarah is an earthquake geologist and PhD student at the University of Melbourne. She uses field observations, drone imagery, and satellite data to study earthquake damage to investigate the past and future of Australian earthquakes. Her research allows her to explore remote parts of Australia and the world, travelling across the deserts of Australia, Timor-Leste, Indonesia and Scotland to look at geology and tectonics.

Favourite subjects at school: English, Women's Studies, Biology, Music

Further study: Bachelor of Science (Earth Sciences); Masters of Earth Sciences

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Landscape Architect

“There are a million ways that you can use your passions to **make the world a better place;** drones happened to be mine.”



SARA WEBBER

Sara Webber is a small business owner, drone/gaming nerd, landscape architect, and certified drone operator. She is passionate about her career using drones for photography, film, photogrammetry, and 3D design. She uses drones to create accurate maps of the landscape for site context analysis, and to create an “Artist’s Impression” of how different designs will look when situated in their environment.

Favourite subjects at school: Fine Art, Legal Studies, Maths and English

Further study: Bachelor of Environments; Permaculture Design Certificate

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Solution Engineer

“I’m inspired by the **different perspective of the world** that drones give me, the applications are endless!”



CHRISTINE MUNISTERI

Christine is a Junior Solution Engineer and drone pilot at GEO Jobe GIS. She developed her interest in geospatial technologies while working with students in Belize as they mapped marine debris and studied flooding and disaster management. With her team at Citizen Science GIS and Open Reef, she uses drones to collect high-resolution imagery of coastal communities and vulnerable islands to assist with island inventories, environmental research, and educational endeavors.

Favourite subjects at school: Geoscience, Remote Sensing, Italian, and Marine Biology

Further study: Bachelor of Arts in Environmental Studies

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Marine Biologist

“I love **working with people** all over the world to help them use their drones to **benefit humanity and protect wildlife.**”



ALICIA AMERSON

Alicia Amereson is a published author in marine biology, small business owner, and international speaker. She is a visionary with expertise in international marine conservation and biodiversity research projects and drone technology. Alicia is trailblazing the path to create a robust drone stewardship program focused on responsible practices for flying drones technology to benefit humanity and respect wildlife and wild spaces.

Favourite subjects at school: Science, Debating

Further study: Bachelor of Science (Biology); Masters of Science (Marine Biodiversity and Conservation/ Ecotourism)

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Drones in Forestry



MANAGEMENT

Canopy cover, tree numbers and volume estimation



CANOPY

Monitor forest 'stands' and regeneration



MEASURING

Measurement of forest stockpiles and quarry material



RESTORATION

Conduct rapid surveys that reduce the cost and time for land restoration



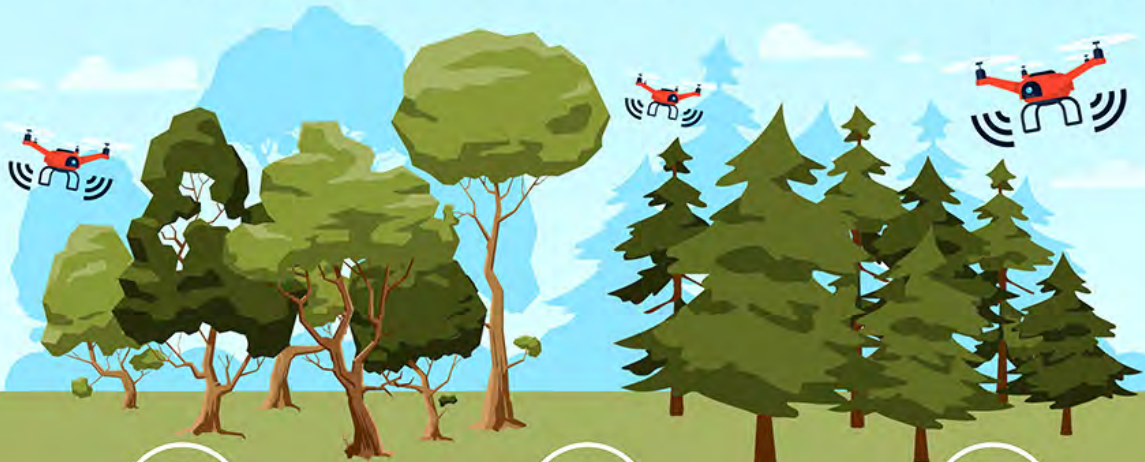
PLANTING

Distribute seedlings and seeds in a fast and efficient manner



MAPPING

Secure 2D and 3D mapping of forest carbon storage, boundaries and monitoring



PLANTATION MANAGEMENT

Payload equipment can now spread fertilizer or spot herbicide over large, inaccessible areas



SECURITY

Monitor illegal logging



DEFORESTATION

Surveillance to capture images of people or activities that are involved in illegal deforestation activities



PLANNING

Measure area, boundaries, forest stands, ecology surveys, and forest tree species



BUSHFIRES

Monitoring and management activities including hazard reduction burns, smoke spotting detection and use of thermal imagery to identify hot spots



DISEASE

Check for forest pests and diseases

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Career Pathways for Drones



Photography, Film & TV



Drones Mapping



Drone Transportation



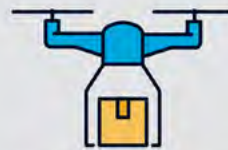
Healthcare



Drones Surveying



Search & Rescue



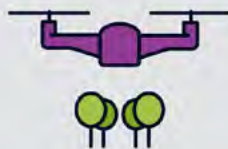
Delivery/Fulfillment



Agriculture



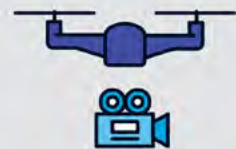
Wildlife Tracking



Forestry



Researcher



Drone Journalism



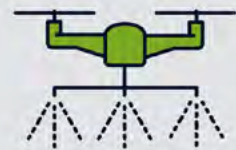
GIS Mapping & Analytics



Data Analysis



Logistics



Aerial Weed Spraying



Swarm Artist



Theatre Choreographer



Police Drone Operator



Insurance



Real Estate



Construction



Building Inspection



Mining



Roof & Solar Inspection



Energy Inspection



Bridge Inspection



Stockpile Assessment