



TESEP

Introducing Earth Science to young Australians

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tesep.org.au



Teacher Earth Science Education Programme

TESEP teaches the teachers

TESEP aims to:

Provide teachers with the knowledge, insights and materials to be comfortable with the subject matter.

TESEP delivers:

Professional Development materials in short webinars and face-to-face settings.

Unique, curriculum-linked resources for use in the classroom, the online classroom or the home-schooling environment.



TESEP teaches the teachers

The Teach-the-Teachers approach is designed to:

- Multiply the impact by knowledge transfer
- Multiply the impact on student understanding
- Engage and inspire teachers and students to learn more



TESEP PD Workshops for Teachers

- **PD1: Round and Round with Rocks**
(The rock cycle, ore bodies and crustal geology)
- **PD2: Riding the Climate Roller Coaster**
(The geological evidence for ancient and modern climate change)
- **PD3: Greening coal**
(Carbon capture and storage for coal and other sources of CO2)
- **PD4: Fossil sunlight**
(The story of the origin of all hydrocarbons)
- **PD5: Wet rocks**
(The story of groundwaters)
- **PD6: Hot rocks**
(Geothermal energy from all sorts of rocks)
- **PD7: Our Place in Space**
(An out of this world look at where we are in space)
- **PD8: Powerful stuff (the energy debate)**
(The geoscience of uranium ore and usage compared with all other energy sources)
- **PD9: Plate Tectonics (The reason for the challenging Earth)**
(How the theory of Plate Tectonics was developed and how it is now used to understand the Earth, past and present)
- **PD10: Critical minerals**
(Which minerals are critical and why?)



Teacher Earth Science Education Programme

2022 Partners

GOLD



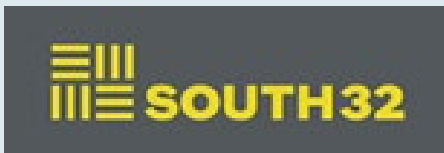
**AUSTRALIAN
INSTITUTE OF
GEOSCIENTISTS**

Supporting Geoscientists

Australian Institute of Geoscientists

SILVER PLUS

- Minerals Council of Australia, Victorian Division
- South32



SILVER

- Yancoal

BRONZE

- Government of South Australia, Department for Energy and Mining

In-kind partners:

- AusGeol.org – Virtual Library of Australia's Geology
- Australian Geoscience Council
- Australian Museum
- Australian National University - RSES
- Bureau of Meteorology
- Federation University Australia
- Geological Society of Australia
- Macquarie University
- Monash University
- Pyrenees Quarries
- Quantum Victoria College
- Scienceworks
- Victorian Space Science Education Centre



TESEP Rock Kits in Schools

2022 Sponsors

SILVER PLUS

- BHP Olympic Dam
- SMEDG
- South32

BRONZE

- Astron Corporation (Donald Mineral Sands)
- Ballarat Gold
- Bengalla Mining Co (New Hope Group)
- Glencore Coal
- Haines Educational
- Kalbar Operations
- Linex Pty Ltd
- MACH Energy
- Mercator Gold Australia Pty Ltd
- Navarre Minerals
- OZ Minerals
- Providence Gold Minerals Pty Ltd
- Stawell Gold Mine
- Whitehaven Coal
- WIM Resource
- Yancoal





TESEP Rock Kits in Schools

TESEP rock kits

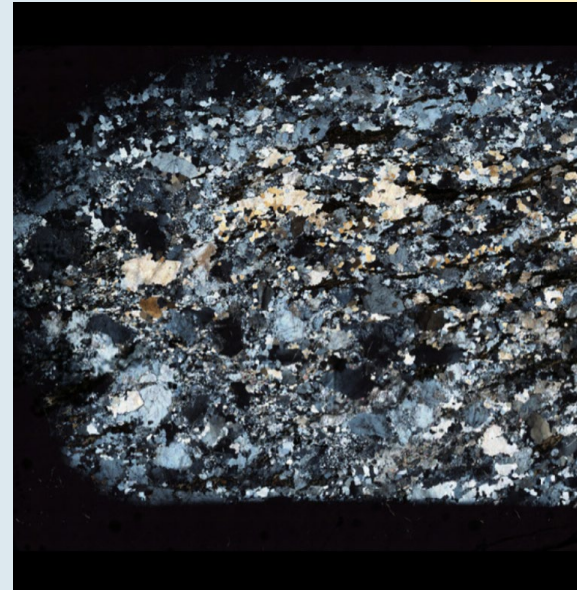
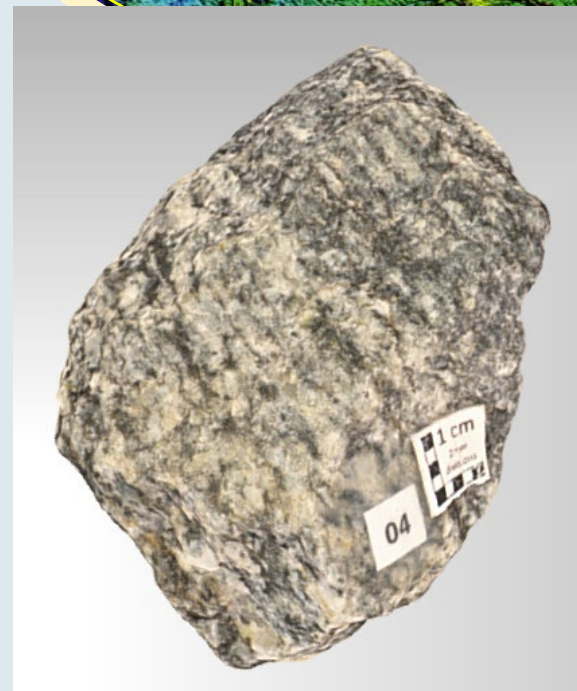
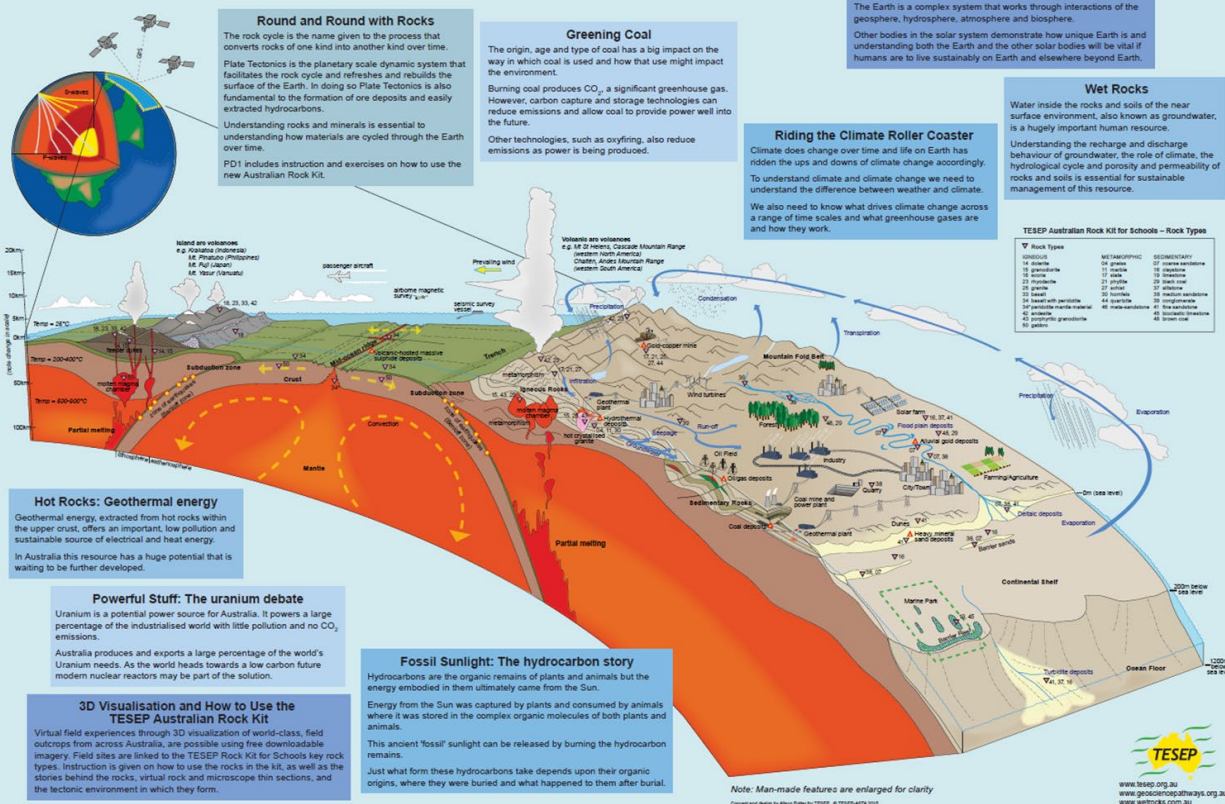
- Box each of igneous, sedimentary and metamorphic rocks
- Linked to plate tectonic poster to show where and how they form
- Also to online resources:
 - Photomicrographs (Mac Uni)
 - 3D photography (AusGeol.org)





TESEP Rock Kits in Schools

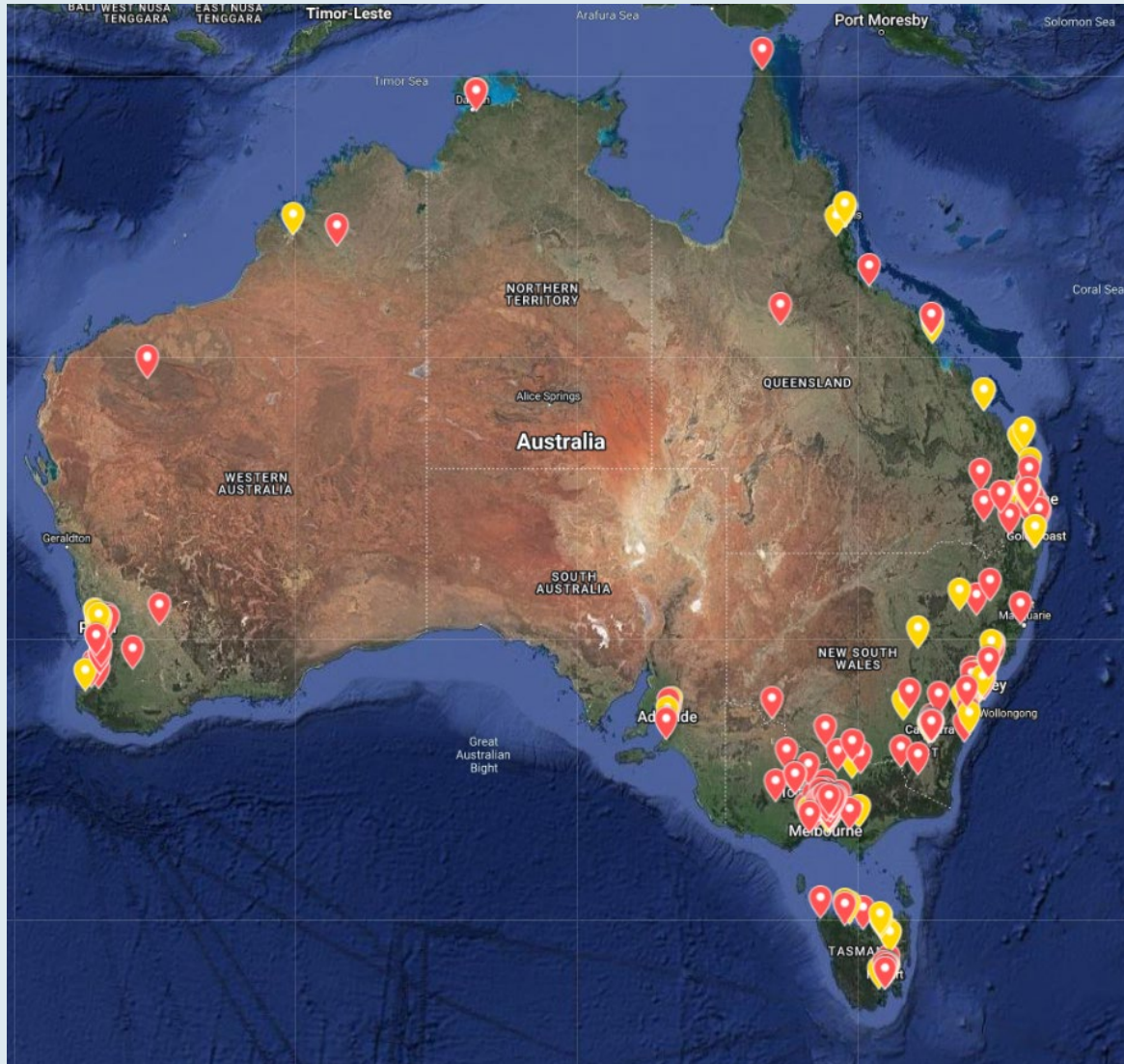
Plate Tectonics: The reason for the Challenging Earth



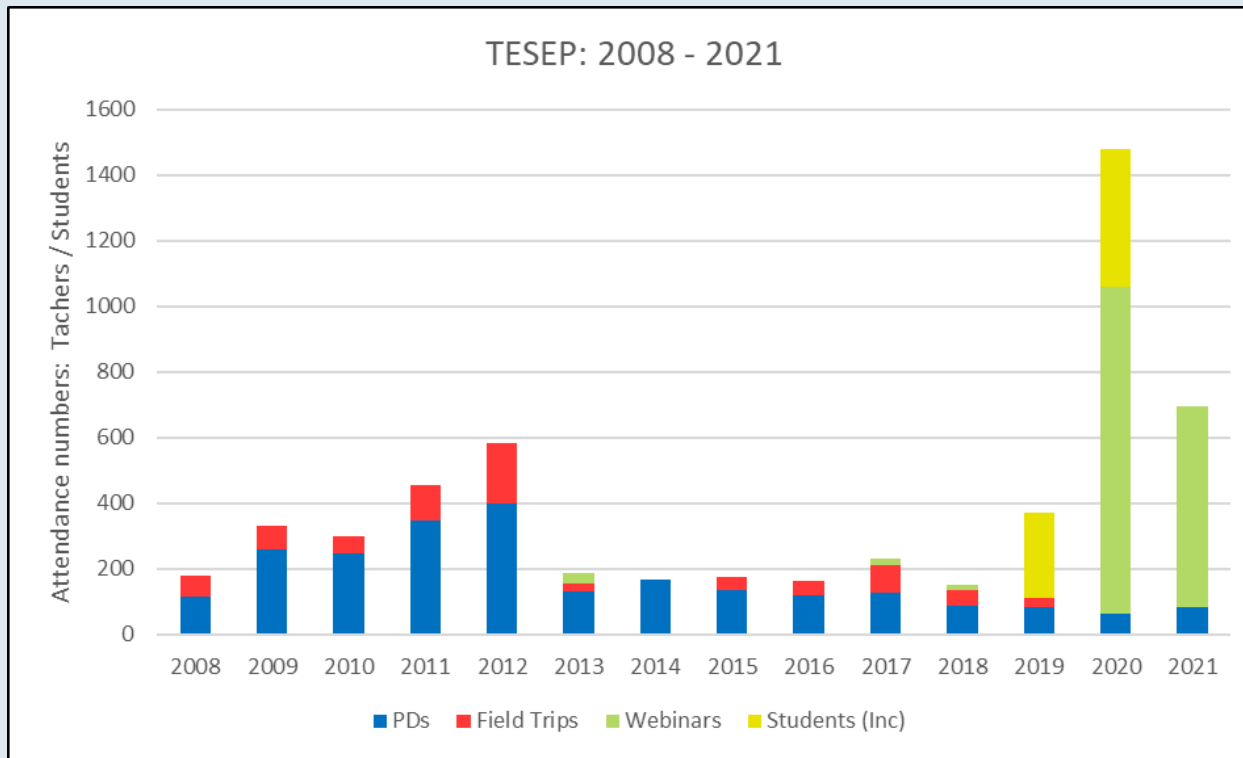
- Collection by AusGeol.org (@AusGeol) Sketchfab
- ImageMatrix Gallery (Macquarie University)



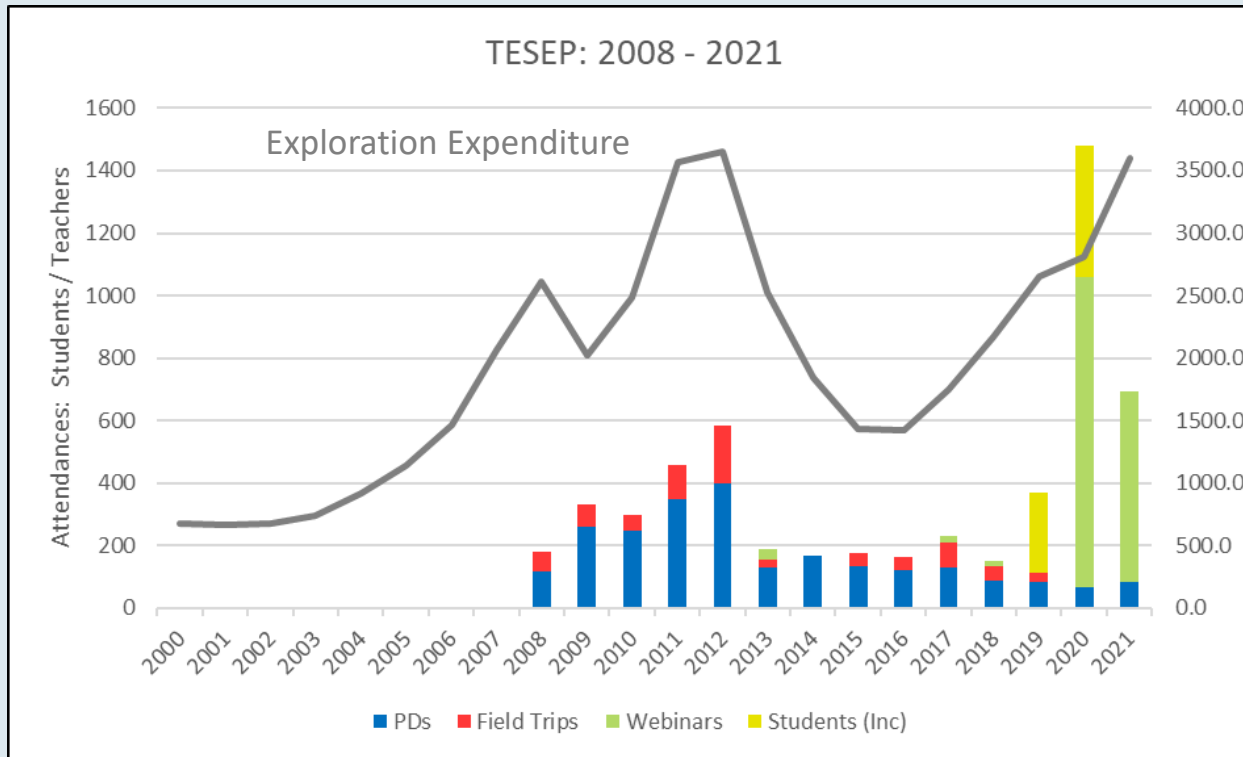
TESEP Rock Kits in Schools



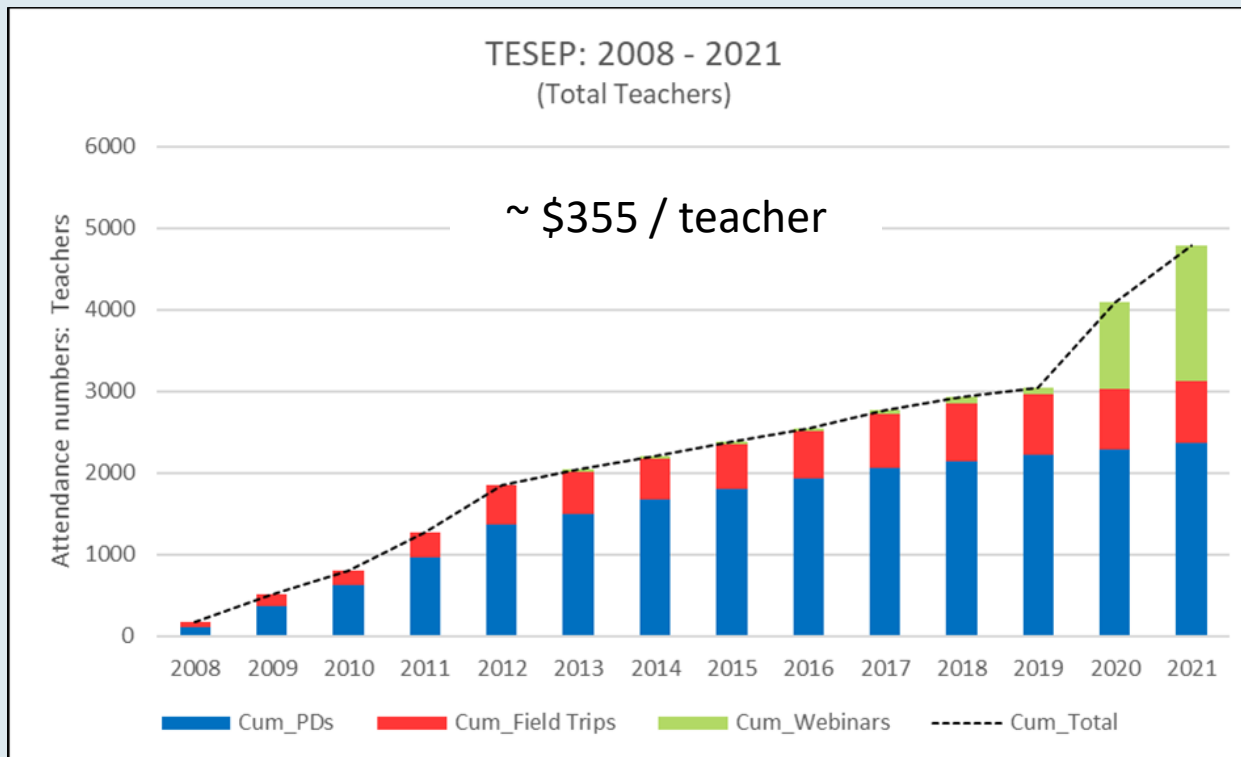
Annual Attendance Numbers



Annual Attendance Numbers



Cumulative Attendance Numbers





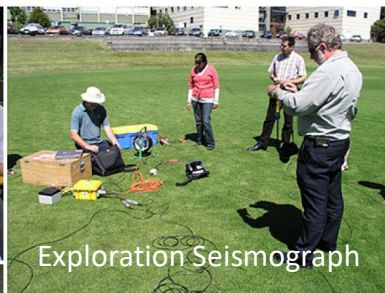
Multipliers

For each teacher attending a PD workshop...

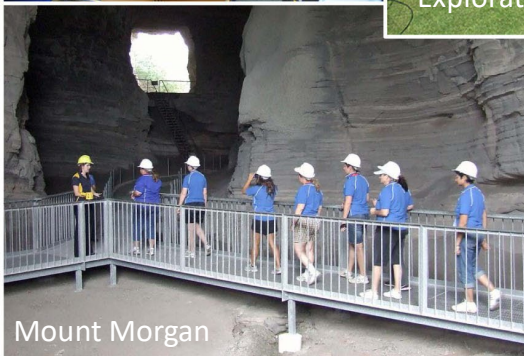
- Knowledge transfer to ~3 other teachers
- Each teacher has ~ 3 classes of 25 students
- One off transfer to 300 students

For 4789 teachers this means...

- ~1.4m student impacts in the first year
- Even more if transferred to more teachers or bigger classes



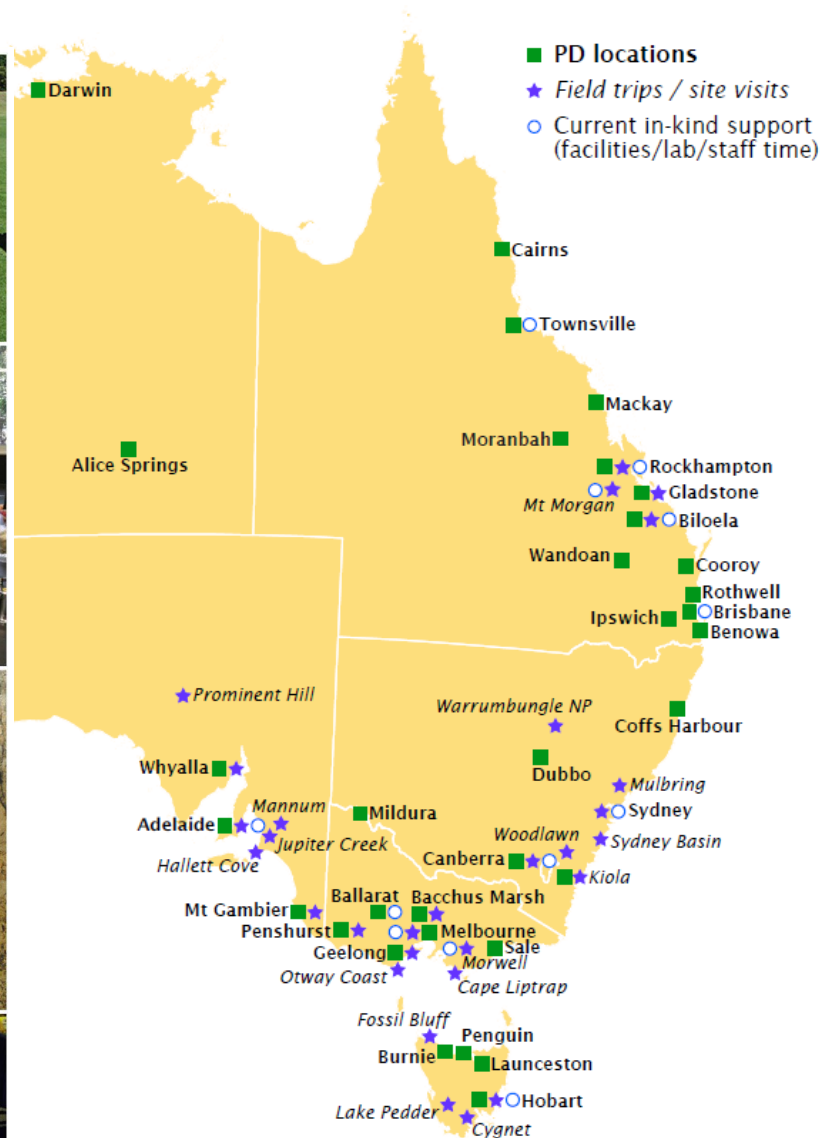
Exploration Seismograph



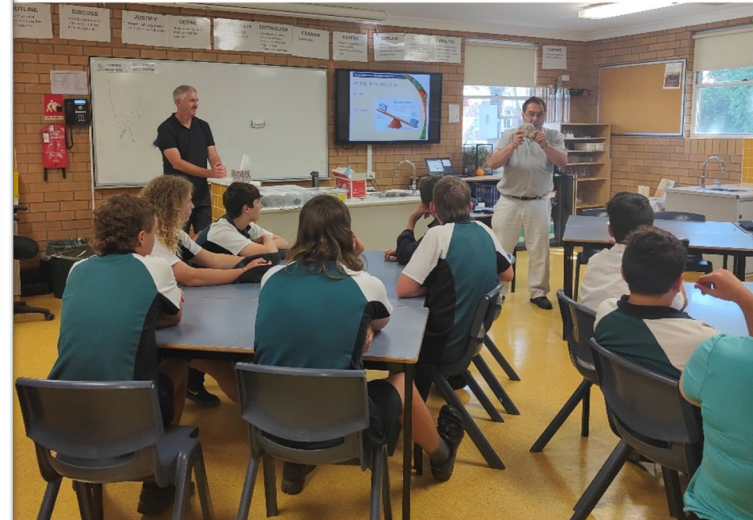
Mount Morgan



Prominent Hill



Hunter Valley





Teacher Feedback

(I will) have more confidence in addressing this topic in future.

Year 7-11 Mathematics/Science/Physics (1 year experience)

(These) activities were hands-on, easy-to-use and directly-connected to Science in the classroom!

Year 8-12 Science/Chemistry teacher (10 years experience)

I am so impressed, so blown away, actually! It was a FANTASTIC day.

Year 5/6 teacher (35 years experience)

Yes, I will increase the amount of Geoscience I teach at all levels of Science.

Year 8-12 Sc/Biol/Chem teacher (5 years experience)

Great to improve my content knowledge with up-to-the-minute information.

Resources—phenomenal. Presenters—excellent.

It gives you confidence to pass on knowledge gained to both teachers and students.



Where to now?

TESEP will continue to deliver high quality and curriculum-relevant teacher training in the immediate-term.

But...

TESEP will only succeed in the long-term with the support of its partners.

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www.tesep.org.au