

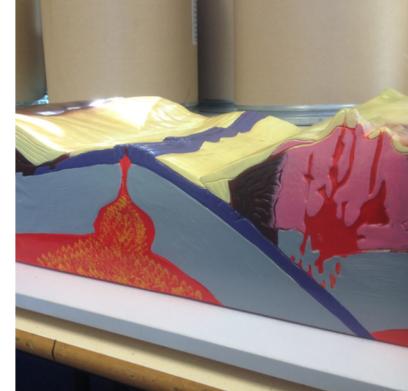
CURRICULUM RESOURCE GEOLOGY

EDUCATION LEAD: BEN NEWSOME CF
UTS CHANCELLOR'S AWARD FOR EXCELLENCE
& CHURCHILL FELLOW



OVERVIEW

This resource provides a comprehensive, multi-modal framework for teaching Earth and Space Sciences (Geology). Designed to translate planetary-scale processes into classroom-ready inquiry, the unit focuses on the composition of the Earth, plate tectonics, mineralogy, and geomorphology for Grades 3–6.



PEDAGOGICAL FRAMEWORK: VARIABLE-LED INQUIRY

While the content is highly engaging, the underlying pedagogy is rooted in the Scientific Method.

- **Variable Isolation**

Designed to teach students how to identify, change, and measure variables.

- **Tactile Modelling**

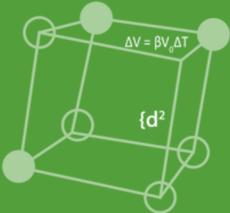
Students move beyond 2D diagrams to 3D representations using models to visualise the hidden scale of the crust, mantle, and core.

- **Field Methodology**

Teach students to use professional classification tools, such as the Mohs Scale of Hardness, applying consistent scientific protocols to everyday materials.

REGULATORY COMPLIANCE & DOCUMENTATION

- Comprehensive alignment with Australian Curriculum v9.0, NSW 2024 Syllabus, Victorian F-10 v2.0, IB PYP & MYP, Cambridge International, US NGSS, The Ontario Curriculum & The New Zealand Curriculum
- Assessment Tools with formative knowledge quizzes and summative marking rubrics for student projects.



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CORE INVESTIGATIONS

- **Planetary Stratigraphy**

Modelling the internal structure of the Earth to analyse volume and heat distribution.

- **Mineral & Soil Analysis**

Applying Field Geologist protocols to classify geological & soil specimens.

- **Seismic Engineering**

Designing and testing "Earthquake-proof" structures to understand wave energy and plate movement.



IMPLEMENTATION & DATA PRIVACY



- **Resource Neutral**

Evidence-based experiments are designed around safe, accessible, everyday materials to minimise departmental overhead & reduce risk.

- **Privacy Compliance**

100% student data security. The platform requires zero student accounts, ensuring no PII (Personally Identifiable Information) is collected or stored.

RESOURCE ACCESS SUMMARY

- **Instructional Access**

On-demand expert video guest-teaching (30-day or 12-month access).

- **Permanent Library** with all technical documentation, safety frameworks, and student worksheets retained by the school as permanent teaching assets on download

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ABOUT FIZZICS EDUCATION

Founded in 2004, Fizzics Education is a global leader in the design and delivery of high-impact science education. Our mission is to provide educators with the tools and expertise required to foster deep inquiry and scientific literacy in the primary classroom.

PROVEN GLOBAL IMPACT

• 4 Million+ Students

Our programs have been delivered to students across Australia, the USA, and over 40 countries via live video conferencing and in-person workshops.

• Corporate & Government Partnerships

We provide STEM outreach for leading organisations, including the NRMA, Optus, the GWS Giants and many more

• Award-Winning Pedagogy



"rated excellent"

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EXPERT LEADERSHIP: BEN NEWSOME CF

Ben Newsome CF is a qualified science teacher, 2013 Churchill Fellow, and founder of Fizzics Education. Having reached over 4 million students, his work has earned the UTS Chancellor's Award for Excellence and a spot as an ASETNSW Ambassador. Author of 'Be Amazing!' and host of the FizzicsEd Podcast,



Ben serves on international boards such as Educating for Leadership (Alaska) and as a board advisor to the Center for Interactive Learning & Collaboration to advance global STEM learning.