CURRICULUM RESOURCE
WATER SCIENCE

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

OVERVIEW

This resource provides a foundational, multi-modal framework for teaching Earth and Physical Sciences (Water Science) specifically tailored for Kindergarten to Grade 4. Designed to support classroom practitioners in delivering abstract concepts to younger learners, the unit bridges the gap between everyday observations and scientific inquiry, focusing on the water cycle, properties of liquids, and environmental stewardship.

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 Mechanics**
  Abstract forces—such as surface tension, cohesion, and capillary action—are made visible and tactile through hands-on modelling & investigations.
- **Environmental Engineering**
  Students are challenged to apply their knowledge to real-world scenarios, such as water filtration and oil spill management, fostering early critical thinking.

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

- **Hydrological Cycles**

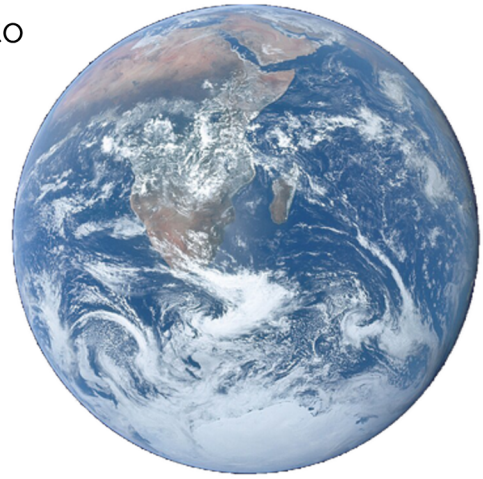
  In-class simulation of evaporation and condensation to visualise the movement of the Earth's water.

- **Surface Dynamics**

  Investigating water cohesion and adhesion tests.

- **Environmental Remediation**

  Engineering water filtration systems and modelling pollutant removal strategies



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**

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.