

# Science Education: Fit for Purpose

## A national summit

SCIENCE LEARNING HUB  
POKAPŪ AKORANGA PŪTAIAO  
sciencelearn.org.nz

2 July 2024, Auckland

80 participants, including 24 (30%) primary/intermediate teachers, 12 (15%) secondary teachers, 14 education researchers and/or teacher educators, 14 resource and/or PLD providers, 4 scientists, 6 Ministry of Education, 5 Royal Society Te Apārangi, 1 UNESCO.

### The programme

An opening video address by Hon. Judith Collins, Minister of Science, Innovation and Technology and Minister of Space

#### Agency in the Anthropocene: PISA 2025 and implications for science education

*Associate Professor Chris Eames,  
Te Whare Wānanga o Waikato University of Waikato  
Associate Professor Peta White, Deakin University*

#### Shifting purposes and practices of science education

*Professor Russell Tytler, Deakin University*

#### Curiosity is key

*Sarah Johns,  
Prime Minister's Science Teacher 2017  
Dianne Christenson,  
Prime Minister's Science Teacher 2016*

#### Taiao Aronui

*Dr Hiria McRae, Te Herenga Waka Victoria  
University of Wellington  
Renee Gillies, Te Rangihakahaka Centre for  
Science and Technology*

#### Wahine Māori in science and education

*Simone Marsters, Te Whare Wānanga o Waikato  
University of Waikato  
Milly Grant-Mackie, Manaaki Whenua Landcare Research  
Yvonne Taura, Manaaki Whenua Landcare Research*

#### Round-table discussion summary

*see overleaf*

We need multiple ways of thinking, knowledge systems, and approaches to understand and respond to complex challenges, including climate change, food insecurity and biosecurity.  
*Sarah Johns*

Mokopuna Taiao instils confidence within our tamariki mokopuna to both recognise and realise unlimited potential to embrace the opportunities the world has to offer.  
*Renee Gillies*

We talked about students saying I have to leave my culture at the door. I have to leave who I am at the door and I'm thinking, why? Like, let's not do that!  
*Milly Grant-Mackie*

We're looking to create citizens who can understand science, use science and actually create a better world for us. Being hopeful, informed decision makers is a really important thing.  
*Chris Eames*

Our system is not equitable and it's something that, as a community of educators, we need to change.  
*Dianne Christenson*

I could see how my science training supported the aspirations for our hapū, but more importantly how mātauranga gave this work so much more value and understanding to our whānau.  
*Yvonne Taura*

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ROYAL  
SOCIETY  
TE APĀRANGI

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## Summary of discussions

### The curriculum needs to:

- *Reimagine science education for a time of socio-scientific and socio-ecological challenges*
- *Remove barriers to access*
- *Build understanding of science as a knowledge system*
- *Develop critical thinking and action competencies alongside knowledge*
- *Support enriching, accessible learning experiences*
- *Reflect international frameworks like PISA 2025*
- *Be agentic and hopeful*

### The system needs to:

- *Value and support science in primary schools*
- *Ensure teachers of science feel inspired and supported by investing in high quality teacher resources and PLD*
- *Identify and build on existing good practice*
- *Introduce and support curriculum and assessment*

**Science education is engaging, equitable and life-worthy, enabling all students to use science for informed decision-making and inspiring and preparing some students for STEM-related careers.**

**Science learning has personal, participatory, planetary and pathways value. Enabling ākonga to draw on science and other knowledge systems to make informed, responsible decisions.**

