



2024 STLP participants and team at Waiōhewa Marae in Rotorua with mātauranga Māori experts, Riki Bennett and Rikki Solomon

For schools wanting to make an impact on student engagement and achievement in science, an opportunity exists to support a teacher to become a science leader through the MBIE-funded Science Teaching Leadership Programme (STLP) offered by Royal Society Te Āparangi. **NZASE Science Communicator Heather Goodey** looks into the STLP and shares some recent participants' experiences and how students benefit from this programme.

The Science Teaching Leadership Programme (STLP) offers the opportunity for a teacher of Y1-10 to become a leader of Science within their school. The programme is unique in that it develops both the teachers professional learning but also requires a whole school commitment to developing their Science programme over two years.

There are two intakes each year into the fully funded programme. Applications for term 3 2025 are now open ([Click here](#)). Interested schools and teachers should begin thinking about this early as it requires the support of the school and school board.

**Phase One**

In phase 1, the teacher has two terms out of the classroom funded and supported by STLP. The teacher has a placement in a scientific organisation, and attends workshops and experiences to expand their understanding of the nature of science, curriculum development and leadership.

*Organisation Placement*

Each participant is given an opportunity to explore a range of possible placements with information on

the areas of science and contexts. It is then a matter of finding the right fit.

Amber Aratema from Te Atatū Intermediate, Auckland, has just completed phase one. She was motivated to join the programme for her students' sake as future citizens, problem solvers and scientists. Amber expresses the importance of equipping them with the scientific knowledge and skills to develop their scientific literacy.

She considers herself fortunate to have been placed with Ecologist Dion Pou (Ngāpuhi) from Te Atatū Marae Whānau Committee and the RiverCare

Group (Te Wai O Pareira). Her school is located a short walk away from Orangihina (Harbourview), an ecologically significant wetland. Amber learnt about the ecological research and monitoring happening at Orangihina and how mātauranga Māori can inform the application

of science. She was involved with a range of science research projects and citizen science projects within a place-based context. Amber says, "My placement highlighted the importance of our students learning about their local environment, developing a critical awareness of the natural world around them, and

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empowering them to make informed decisions about the appropriate action to take as kaitiaki to protect it.”



*Vicki on placement at Manaaki Whenua Landcare Research.  
Courtesy: Grace Prior (Royal Society Te Apārangi)*

Vicki Moffat from Titirangi Primary, Auckland, was frustrated with the small amount of science that students were experiencing in class and knew that science was a great way to engage learners in other areas of the curriculum. In particular, she was hoping that science would provide the hook to improve writing for certain groups of students. She has enjoyed the experience of working as a mycologist at Manaaki Whenua Landcare Research, investigating the microbiology of probiotics. She takes great delight in her new knowledge about fungi and the practical science skills she has acquired.

Since returning to the classroom, she notes that the students are hungry to do science and are now becoming better equipped with science skills and are becoming more scientifically literate.

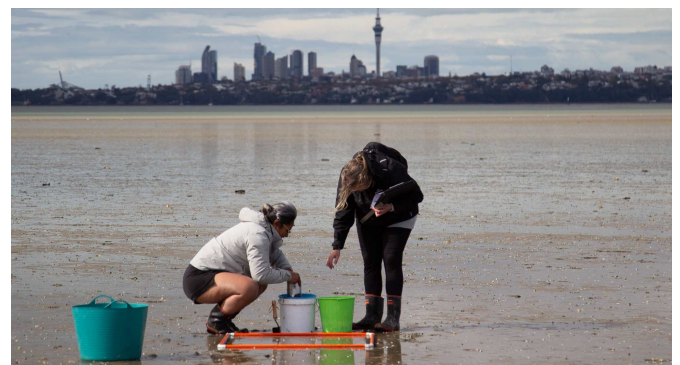
Jane Thomas from Favona School, Auckland, had recently become the science lead at her school when she stumbled upon the programme in TKI and realised it was exactly what she was looking for. She had two shorter placements, the first of which was working with scientists who were developing alternative proteins to feed future populations. She came to understand how science can ask big questions like how do we feed a growing population sustainably with the challenges of climate change. She witnessed experts in their fields grappling with really high-level problems but focussing on their specific contribution that may or may not be a small part of the puzzle. A true example that science is a collaborative endeavor. One scientist's work may be carried on in the future by another or spark a

question for future investigation. For the second part of her placement Jane joined Dion Pou at Orangihina increasing her knowledge of mātauranga Māori and ecology. She remarked on how both experiences differed greatly but reflected many different facets of what science is - it's not just one way of looking at the world, she notes.

Erin Edmonds from Silverstream School, Upper Hutt, was driven by a desire to raise the profile of science in her kura and make science 'everyday' and 'everywhere'. She was encouraged to apply to the programme by her principal. For her, learning about mātauranga Māori & Te Tiriti through authentic, place-based experiences were enriching and humbling. Erin says, "I really came into the programme knowing very little about the Māori worldview as it relates to science. The STLP has given me such valuable insight and love for learning more about our indigenous peoples and pūtaiao."

### *Professional Development*

As part of phase one, all participants are also given opportunities to develop their understanding of the science capabilities, mātauranga Māori and Te Tiriti and leadership in science.



*Amber and Jane collecting samples at Orangihina*

For these educators, this included professional development workshops in Wellington with the Royal Society's STLP facilitators Brigitte Glasson and Dr Dayle Anderson. Amber comments on how these opportunities increased her understanding of the Nature of Science strand and the Science Capabilities and improved her knowledge of good practice in science teaching and learning.

They attended a week-long intensive leadership course at Otago University, where they undertook a

Masters level programme to help them lead the development of science in their schools. Jane was surprised by how much she learnt about herself as a leader, the skills she already possesses and her values. "It gave me a lot of confidence. It also helped me see what areas I will need to focus on." she says.

A highlight was the noho at Waiōhewa Marae in Rotorua, with experts in carving, te taiao, astronomy, forest, and education experts. Teachers were encouraged to think of what science they can learn in their own area and explore different knowledge systems, Te Ao Māori, tikanga, grow their knowledge of mātauranga Māori and learn how pūrākau can be used in Science Teaching and learning. For Erin this was a precious gift giving her the space to explore her sense of self and grounding in Māori culture.

**Phase Two**

All the teachers from this cohort are now entering phase two of the programme, which is 12-18 months in duration. Phase two begins with undertaking a Science review of their kura involving the community, staff, and tamariki. The review is multifaceted and looks at perceptions, misconceptions, language, achievement, resourcing, opportunities, curriculum, practical observations, planning for Science, community needs, and expertise. The outcomes of the review should highlight the top three priorities for each of the stakeholder groups.

Participants have already put their learnings to work. All the educators are incorporating the teaching of more science in class. Erin has partnered with GNS Science on a programme called Drive it Down which aims to reduce carbon emissions by finding greener ways to get to school, while Vicki is establishing a shared walkway through the bush at her school to help the entire school community engage with science in their backyard.

**Personal growth and opportunity**

Probably one of the biggest and most rewarding

aspects in terms of the programme's success, has been the professional connections made with all parties involved in the programme.

Erin says, "Alongside our cohort were our pūkenga, facilitators, scientists from our hosts, funders, Otago University people, and support staff from different organisations. Everyone was there to ensure we had the best chance of success, and therefore our children had the best chance of success. It was a very humbling experience and the best professional development I've had across my career in teaching."

**Acknowledgements from the participants**

All the kura and kaiako involved expressed their gratitude and would like to acknowledge MBIE for the funding, Royal Society Te Apārangi, Kuratapirangi Higgins, all the organisations and individuals who made the programme a success and to their Principals and school boards for their support.



*STLP 2024 participants at Royal Society Te Apārangi*

**Final thoughts**

Erin summarised the success of the programme for kaiako, kura, tamariki and society. She says the programme has opened her eyes to what is possible for our tamariki in terms of learning science.

"Science is a leveller for our children in that

everyone can experience success. Science in the primary years is all about noticing the world around you, wondering and thinking about how all of our systems work together, and the connections and the sensitive balance that humans have influenced significantly in modern times. Every child can achieve that, drawing on their unique experiences of the world and their place in it."

*Many thanks to the participants and Kuratapirangi Higgins for sharing their experiences and helping to improve this article.*

For more information on the programme, [click on the link here](#).