

# WESTEM SHOWCASE

## 2025 PROJECTS



Ministry for  
**Pacific Peoples**  
Te Manatū mō ngā Iwi ā te Moana-nui-ā-Kiwa



TE HONONGA  
**AKORANGA**  
COMET



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# INTRODUCTION

*Mālō e lelei! We invite you to join us in celebrating the inspiring STEM journeys Auckland's young people embarked on through WeSTEM in 2025.*

When young people explore meaningful questions, they deepen their learning and begin to recognise the value of education.

They become scientists, engineers, storytellers, problem solvers and leaders, driven by curiosity and a deep connection to their communities. This is what makes WeSTEM so powerful.

Thanks to the **Ministry for Pacific Peoples'** ongoing support, these projects connect identity, culture and science, helping Pacific learners see themselves in STEM and imagine thriving futures.

In a world shaped by technology, the ability to question, analyse and solve complex problems is essential.

Inquiry learning is demanding; it calls for teamwork, creativity and resilience. It requires literacy to share ideas, numeracy to test them and critical thinking to refine them. In that challenge lies its value in a young person's education.

As Matipo School teacher Sarah-lee Jacobs says, her student-led garden project (p 10) served as *"an anchor for rich, purposeful learning [and] a natural entry point for exploring scientific thinking, sustainability, measurement, persuasive writing and community engagement."*

The stories in this showcase are more than case studies. They are proof that when learning is relevant, hands-on and community-connected, it transforms lives. This is education at its most impactful and its most inspiring!

**KATHEREN LEITNER**  
Chief Executive, Te Hononga Akoranga COMET

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# PROJECT CRITERIA

## PARTICIPATORY STEM PROJECTS MUST BE:

**EDUCATIONALLY VALUABLE**

Offer enduring educational value and two-way learning opportunities for those involved



**SCIENTIFICALLY ROBUST**

Tackle a research problem in partnership with STEM experts to generate new scientific and/or technological outputs



**LOCALLY RELEVANT**

Involve community members in research that is engaging, locally relevant and community driven



# KEY GOALS



Building students' confidence and curiosity in STEM



Embedding indigenous knowledge and local histories into inquiry



Making STEM learning more relevant and accessible



Strengthening teaching practices to boost STEM engagement



Connecting STEM to real-world community challenges



Enhancing partnerships between schools and STEM educators



Growing students' understanding of STEM careers and pathways



Supporting literacy, numeracy and critical thinking via STEM inquiry



# PROJECT DATA (2025)



PROJECTS  
FUNDED



\$68,935

DISTRIBUTED



SCHOOLS  
INVOLVED



ORGANISATIONS  
INVOLVED



YOUNG PEOPLE ENGAGED

52% OF WHOM  
IDENTIFY AS PASIFIKA

25%	SAMOAN
7%	COOK IS. MĀORI
7%	TONGAN
6%	FIJIAN
6%	OTHER PACIFIC
1%	NIUEAN



CASE  
STUDIES





## TE AWA WHAKAPAPA

MATUKU LINK + BIRDWOOD SCHOOL

*How have humans shaped our streams and wetlands, and what can we do about it today?*

### PROJECT SNAPSHOT

- » **Participants:** 120 students (Years 4–8), 20 adults
- » **STEM focus areas:** Biodiversity, ecology, environmental monitoring, local history
- » **Project partners:** Matuku Link, Te Kawerau ā Maki

### KEY GOALS SUPPORTED



Building students' confidence and curiosity in STEM



Connecting STEM to real-world community challenges



Embedding indigenous knowledge and local histories into inquiry



Enhancing partnerships between schools and STEM educators

### WHAT WORKED

- » Pre-visit sessions helped build foundational knowledge, curiosity and excitement.
- » Hands-on fieldwork made learning active and social.
- » Local, place-based inquiry increased relevance and connection.
- » Strong teacher support and cross-curricular integration helped sustain engagement back in the classroom.

### PROJECT SUMMARY

*At Birdwood School in Rānui, a neglected stream has sparked a years-long journey of curiosity and kaitiakitanga. As students and teachers worked to restore the local awa, bigger questions emerged: "How did our stream get this way?" and "What would a healthy waterway look like?"*

Students began in the classroom, learning about the ecological role and cultural significance of streams and wetlands. With support from Te Kawerau ā Maki and Matuku Link, they learnt about local histories, how human settlement has altered landscapes and what these changes mean for biodiversity today. Concepts like *taupuhpuhi* (interconnectedness) and *mauri* (life force) helped ground their understanding of why environmental restoration matters.

Matuku Link educators ignited students' curiosity through fun, practical activities and presentations. They were able to pilot new educational resources, using student feedback to refine their delivery and tailor future site visits to the students' interests.

*"The pre-visit learning was key," reflects Birdwood School Deputy Principal Kevin Meikle. "It built enthusiasm and knowledge ... which students were excited to apply in the real environmental setting."*

Fieldwork brought classroom learning to life. Students went on a guided walk around the Matuku Reserve

wetlands near Te Henga (Bethells Beach) and were delighted to spot a pair of pāteke (brown teal duck), which they knew from their research were very rare and usually nocturnal!

Students also compared water samples from their local stream and the wetlands. Through this sampling and accompanying macroinvertebrate surveys, the students saw first-hand how water quality influences biodiversity.

*"Students working alongside each other in a social learning space out in the environment was so engaging," Kevin says. "They don't get many opportunities to do that."*

Surveyed students agreed, with the three aspects they enjoyed most being:

- **working with classmates: 59%**
- **learning new things: 48%**
- **hands-on activities: 39%**

Back at school, teachers supported the students to deepen their understanding of the project through science, literacy, maths and design thinking, using real-world data as the foundation for new learning.

For many students, this project built their awareness of science and strengthened their identity as *kaitiaki* (guardians) of their environment.



**" Students are starting to see how much STEM is in everything they do. Science isn't something that happens elsewhere; it's something they can do.**

KEVIN MEIKLE

Deputy Principal, Birdwood School







## NATURALLY NATIVE

LINCOLN HEIGHTS SCHOOL

*How can we propagate native seedlings to regenerate the biodiversity of our local stream and parks?*

### PROJECT SNAPSHOT

- » **Participants:** 43 students (Years 4–6), 4 adults
- » **STEM focus areas:** Plant biology, ecology, biodiversity
- » **Project partners:** Community Waitākere, Kāhui Māra Kai, Sustainable Schools

### KEY GOALS SUPPORTED



Building students' confidence and curiosity in STEM



Connecting STEM to real-world community challenges



Strengthening teaching practices to boost STEM engagement



Growing students' understanding of STEM careers and pathways

### WHAT WORKED

- » Varied and connected experiences (e.g. planting, seed collection, stream visits and bird surveys) provided multiple entry points to engage different students.
- » Local, place-based inquiry increased relevance and connection.
- » Hands-on activities and experimentation helped deepen the students' knowledge and curiosity.

### PROJECT SUMMARY

*With a long-standing link to nearby Huruhuru Stream, the Lincoln Heights School enviro club know the value of planting native trees. They also know the challenges. Since native plants are expensive, the club wondered if they could grow their own native seedlings instead. What started as a practical question quickly became a rich STEM inquiry into native ecology, seed systems and sustainability.*

In this project, the students initially set out to build a plant nursery, but they soon discovered there was much more to native plants than they realised. With the help of a conservation expert from Community Waitākere, students explored the science behind different plant types and their pollination, germination and seed dispersal requirements.

The students also carried out biodiversity surveys around their school and began to draw connections between native plants, birds and insects. These observations sparked conversations around the interdependency between plants and animals, and how planting choices can influence birdlife and stream health.

Enviro teacher Jen Harris reports that the tamariki began with a simplistic view of what plants need (sun, soil and water). By the end of the project, they had a much deeper understanding that different plants need different conditions to grow.

This shift in thinking was one of the project's most valuable outcomes. The students moved from observers to curious problem solvers, able to understand native plant cultivation in the context of their local ecosystems.

For example, the tamariki learnt to compare the use of shade houses vs tunnel houses, trialling different techniques to make seeds germinate faster.

Through their many discussions and experiments, Jen says that the students developed "a more curious

*mentality [and] are more keen to have a go and figure things out."*

The learning outcomes are clear, with surveyed participants reporting that they:

- **feel more confident in science: 97%**
- **see science as more relevant to them: 94%**
- **are now more interested in STEM: 85%**

One project highlight was a field trip to Arataki Nursery in the Waitākere Ranges, where students got to see a large-scale nursery in operation. They were able to compare what they'd been learning at school with the professional setup at Arataki, reinforcing their understanding of propagation systems and the practical challenges of growing native plants at scale.

The school's native nursery is now the cornerstone of an exciting new outdoor classroom space. Teachers are already exploring how other classes can use it to embed environmental science more widely into the curriculum and are planning to host more environmental experts in the future to broaden their students' understanding of possible STEM careers.

In the meantime, the enviro club students are busy growing vegetable seedlings for the school's *māra kai* (traditional food garden) and nurturing native seedlings from locally collected seeds. Their goal is to provide a reliable, home-grown supply of native plants for school and community planting days, bringing the restoration efforts full circle.

**"The students were surprised that nature is science! Processes like trialling new systems are science in action."**

JEN HARRIS

Teacher, Lincoln Heights School







## EXPLORING THE SCIENCE OF HÜGELKULTUR

OKE CHARITY + MATIPO SCHOOL

*How do different gardening methods affect plant growth and yields?*

### PROJECT SNAPSHOT

- » Participants: 42 students (Years 2–3), 15 adults
- » STEM focus areas: Hügelkultur, soil science, agriculture, Pasifika knowledge
- » Project partners: Oke Charity, Soilsafe Aotearoa

### KEY GOALS SUPPORTED



Connecting STEM to real-world community challenges



Growing students' understanding of STEM careers and pathways



Embedding indigenous knowledge and local histories into inquiry



Supporting literacy, numeracy and critical thinking via STEM inquiry

### WHAT WORKED

- » Inquiry-based learning gave students ownership of the research process.
- » Hands-on construction and gardening activities made STEM accessible and engaging.
- » Opportunities to share outcomes (e.g. selling produce) reinforced student pride and purpose.

### PROJECT SUMMARY

*At Matipo School, students explored what makes a garden thrive via science experiments, cultural knowledge and family connections. Their project compared different gardening methods, including hügelkultur and traditional Pasifika techniques, to understand how soil composition, structure and care affect plant health and food production.*

After Oke staff and volunteers set up the site with an initial working bee, the students engaged deeply with the project, adapting their research as new insights emerged. They designed experiments and constructed raised garden beds using both hügelkultur and traditional Pasifika methods, documenting each stage of the build.

For Oke, success is when the outdoor classroom becomes embedded in the way the school learns, plays and connects. To this end, Oke staff provided ongoing guidance, ensuring the students and teachers felt confident in their research activities.

Teachers embraced the chance to step beyond the traditional classroom and dive into hands-on learning alongside their students.

One standout moment came when lead teacher Sarah-lee Jacobs incorporated her own cultural heritage, bringing in her father Sione via video call

to explore the Pacific knowledge systems he employs on his farm in Tonga.

This blend of STEM and culture created a powerful level of engagement, reminding everyone that these spaces can be as much about identity as they are about education.

The project helped demystify STEM. Instead of being abstract, STEM became something students could see, touch and take part in. The outdoor classroom turned engineering and problem solving into something tangible, while a soil science workshop brought environmental science to life.

These experiences sparked conversations about career pathways in areas like landscape design, environment, horticulture, construction and digital technology, which enabled the students to see possibilities beyond the lab coat stereotype.

The students also gained real-world skills through selling their produce at the school gate, raising more than \$100 so far to reinvest in their garden. Community members expressed amazement that everything had come from the school garden, leaving the students and their teachers feeling proud of what they had achieved.



**[This project's] blend of STEM and culture created a new level of engagement. It reminded us that these spaces can be as much about identity as they are about education.**

PAUL DICKSON

Good EGG & Founder, Oke Charity







## ACCESSIBLE ACTIVE ĀKONGA

GLEN EDEN INTERMEDIATE SCHOOL

*How can we build durable, accessible gym equipment to support active lifestyles in our community?*

### PROJECT SNAPSHOT

- » **Participants:** 18 students (Years 7–8), 2 adults
- » **STEM focus areas:** Sport science, design thinking, technology, literacy, numeracy
- » **Project partners:** Auckland Council Parks & Communities Facilities, AUT, VAKA

### KEY GOALS SUPPORTED



Building students' confidence and curiosity in STEM



Making STEM learning more relevant and accessible



Connecting STEM to real-world community challenges



Supporting literacy, numeracy and critical thinking via STEM inquiry

### WHAT WORKED

- » Practical, hands-on activities provided opportunities for students to question, experiment, create and collaborate.
- » Local inquiry rooted in a community-identified problem ensured high relevance and connection for students.
- » Strong collaboration and engagement with partners boosted student confidence and provided real-world context and expertise.

### PROJECT SUMMARY

*At Glen Eden Intermediate, students set out to tackle a local challenge: the cost and accessibility of sport. Building on insights from a prior Youth Voices project, they identified limited access to equipment and facilities as a barrier to physical activity, especially for Māori and Pasifika whānau. Their solution? A STEM inquiry into how public spaces could better support community fitness, combining science, design and social awareness.*

Using the school's inquiry learning framework, the students began investigating how exercise equipment at local parks was being used.

They tested a range of equipment to determine which activities most effectively raised heart rates and delivered health benefits.

Alongside this, they surveyed nearly 40 park users to understand current challenges and preferences, with many respondents expressing strong interest in parks designed to support fitness.

Armed with this data, the students moved into the design phase. They began with collaborative Lego models, then translated their ideas into detailed 2D and 3D layouts using digital tools like TinkerCad.

Their designs considered safety, accessibility and spatial planning, with many students finding the digital modelling surprisingly intuitive.

Budgeting added another layer of complexity, requiring them to calculate material, labour and equipment costs — a real-world maths challenge that brought measurement and area calculations to life.

Throughout the project, students developed stronger collaboration skills, gained confidence in 3D modelling and deepened their understanding of what makes a playground both effective and inviting.



This research highlighted the importance of balancing fitness with fun and how features like shelter can greatly enhance usability. They also learnt to navigate real-world constraints, like estimating costs without supplier data, turning these hurdles into opportunities for creative problem-solving.

A standout moment came during a 3D workshop with VAKA, where students saw their designs take shape in tangible form. The pride they felt reflected not just the skills they'd gained, but also their ability to turn ideas into realistic, community-focused solutions.

Students reported that this project helped them:

- **feel more confident in maths: 63%**
- **feel like STEM is more relevant to them: 75%**
- **see how STEM helps solve local problems: 75%**

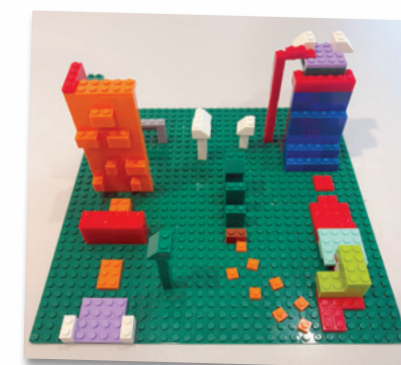
This project built mindsets as well as models, with students moving from identifying a problem to designing practical solutions, using STEM as a tool for equity and empowerment.

Their work is now informing conversations about how Glen Eden's public spaces can better serve the community, and teachers are exploring ways to embed this kind of inquiry-based learning more widely across the school.

**"I learnt to think creatively and use survey data to create a good outcome."**

YEAR 8 STUDENT

Glen Eden Intermediate



Read the Youth Voices stories that inspired this project!







## LESS WASTE MORE TASTE

FAIR FOOD + KELSTON & RANGEVIEW INTERMEDIATE SCHOOLS

*How can we grow kai sovereignty and support access to healthy, affordable food for whānau?*

### PROJECT SNAPSHOT

- » **Participants:** 12 students (Years 7–8), 9 adults
- » **STEM focus areas:** Food sovereignty, food science, nutrition, budgeting
- » **Project partners:** Fair Food, Park Hyatt Auckland, Woolworths, Etū Rākau Charitable Trust

### KEY GOALS SUPPORTED



Connecting STEM to real-world community challenges



Growing students' understanding of STEM careers and pathways



Enhancing partnerships between schools and STEM educators



Supporting literacy, numeracy and critical thinking via STEM inquiry

### WHAT WORKED

- » Provided community relevance to food insecurity and the cost of living.
- » Practical, hands-on activities engaged students, fostered collaboration and increased confidence and pride in their cooking abilities.
- » Experienced and passionate STEM partners ensured students received invaluable experiences with real-world context.

### PROJECT SUMMARY

*Students from Kelston and Rangeview Intermediate Schools previously identified the cost of living, food insecurity and food wastage as serious issues through their previous Youth Voices work. To build on this, they teamed up with Fair Food to explore how to increase kai sovereignty in their communities by improving access to nutritious, affordable food.*

The project began in Fair Food's "Conscious Kitchen", where students learnt to repurpose surplus food into healthy meals and explored the science, technology and logistics of various food preservation, preparation and distribution methods.

From there, they investigated their local food systems, the impacts of food waste and opportunities to promote healthier eating. Hands-on activities included fermenting, up-cycling and preserving surplus ingredients.

The students developed practical kitchen skills from handling knives safely to preparing wraps, sushi, fried rice and chicken stock.

They compared the cost and nutritional value of homemade versus store-bought meals, and they explored food styling and marketing, discussing how these could be applied both at school and at home.

A standout moment was a tour of the 5-star Park Hyatt Auckland hotel, where the students observed luxury hospitality in action, met professional chefs and sampled gourmet treats like Basque cheesecake and matcha raspberry muffins.



*Read the Youth Voices stories that inspired this project!*



Back at school, the students applied their learning to real-world solutions, such as upgrading the Rangeview tuck shop and creating recipe books for local families.

The project culminated with the students preparing and serving lunch (including nachos, salsa and chocolate-dipped fruit) for their teachers as a fitting showcase of their new skills and mindset.

Post-project survey results show the project had a strong impact on the students, many of whom:

- **are now more interested in STEM: 75%**
- **can see how STEM can address local issues: 75%**

Through this project, the rangatahi gained a deeper understanding of food systems, nutrition and sustainability. By combining hands-on learning with real-world challenges, they developed practical skills, explored potential STEM career pathways and created solutions tailored to their own communities.

Their work with Fair Food has sparked ongoing conversations about food sovereignty, and both schools are now exploring how to embed this kaupapa more widely across the curriculum.

**" Our tamariki [shared] their learning ... with our kaiako, akōmanga and the Kelston community. The whole experience was amazing ... authentic learning at its best. "**

KIRI LAING

Deputy Principal, Kelston Intermediate







## HIDDEN PATTERNS ALL AROUND US

MANUREWA INTERMEDIATE SCHOOL

*How can patterns help us understand the world?*

### PROJECT SNAPSHOT

- » **Participants:** 71 students (Years 7–8), 4 adults
- » **STEM focus areas:** Science, geometry, digital technologies
- » **Project partners:** Marcus "The Sand Man" Winter, Ray Singh

### KEY GOALS SUPPORTED



Building students' confidence and curiosity in STEM



Making STEM learning more relevant and accessible



Strengthening teaching practices to boost STEM engagement

### WHAT WORKED

- » The connection between indigenous pattern-making and scientific concepts helped make abstract science more meaningful and tangible.
- » Digital storytelling enabled students to express their understanding in an engaging and creative format.
- » A strong emphasis on collaboration and cross-curricular learning helped to build school-wide support for project continuation.

### PROJECT SUMMARY

*Patterns are everywhere: in nature, culture, maths and the digital world. They help us tell stories, convey complex information and make sense of the systems that shape our lives. At Manurewa Intermediate, students began to uncover this for themselves through a multi-faceted project integrating science, technology and creative expression.*

The students began by exploring scientific concepts such as convection, density and energy transfer, and how these shape natural systems like weather patterns and tectonic activity. To reinforce this learning, they created visual representations of convection currents using traditional Māori patterns.

The students also used digital technologies to document their learning, including a podcast studio set up with guidance from digital learning specialist Ray Singh.

Through artwork, photographs and short videos, the students have reinterpreted their STEM learning through personal and cultural lenses.

The students engaged strongly with this project, especially during the creative arts and storytelling activities. These experiences helped reinforce their learning and sparked greater interest in STEM, with those surveyed reporting increased confidence in:

- science: **80%**
- maths: **76%**
- digital technology: **68%**

As Deputy Principal Callum Baird explains, connecting scientific concepts with indigenous patterns "opened up new ways of thinking about the world and how knowledge can be expressed and shared."

The project's impact extended beyond its participants. Other teachers have seen the interdisciplinary potential of pairing science with arts, culture and digital storytelling. This visual and oral storytelling gives teachers new ways to assess learning outcomes (beyond written assessments).

Meanwhile, the school is sharing the student-led content on its social media to highlight STEM learning to the wider community. Callum believes "this multi-modal approach to assessment and communication was one of the project's most successful features."

Plans are underway to expand the project across the entire science programme in Term 3, supported by a demonstration by sand artist Marcus Winter, whose work combines science, mātauranga Māori and visual storytelling.



**17** *[The project] provided a different way of presenting science to students, one that was both engaging and memorable.*

CALLUM BAIRD

Deputy Principal, Manurewa Intermediate







## WAYFINDERS OF THE PACIFIC

CRAFFT + TAPASĀ + WAITĀKERE COLLEGE

*How did our Pacific ancestors use stars to navigate the oceans and what can we learn from them today?*

### PROJECT SNAPSHOT

- » **Participants:** 30 students (Years 9–13), 10 adults
- » **STEM focus areas:** Pacific navigation, astronomy, electrical engineering, digital technology
- » **Project partners:** Crafft, Tapasā – Navigating the Future, Little Engineers, Banana Boat Org

### KEY GOALS SUPPORTED



Embedding indigenous knowledge and local histories into inquiry



Building students' confidence and curiosity in STEM



Making STEM learning more relevant and accessible



Growing students' understanding of STEM careers and pathways

### WHAT WORKED

- » Practical activities provided many opportunities for students to question, experiment, create and collaborate.
- » Varied and connected experiences (including lashing, map-reading, astronomy and digital island-building) provided multiple entry points for engagement.
- » Enthusiastic role models helped to guide and encourage students and exposed them to a wide range of possible careers.

### PROJECT SUMMARY

*In this project, students at Waitākere College explored traditional Pasifika navigation. Expert navigators, engineers and Minecraft educators challenged them to connect ancestral knowledge with modern STEM tools, translating the talents of their tūpuna into practical skills for the future.*

Over seven workshops, students deepened their understanding of wayfinding, including the vital role of stars in navigation. In many ways, their learning journey mirrored the voyages of their ancestors.

Beginning with a simulated journey from Hawaiki, students used Matariki and other constellations to navigate to Aotearoa NZ. They also built LED constellation models, constructed waka and wired electrical circuits.

These activities reinforced decision making, goal setting and cultural knowledge. They also helped students connect the history of Pacific navigation and astronomy with scientific concepts such as physics, materials science and electrical engineering.

For Waitākere College Deputy Principal Jacqui Passi, the hands-on nature of the activities is what's most important. She says *"the students keep asking me when we are having the next [project] session."*

Students reported that they:

- enjoyed doing hands-on activities: **90%**
- were more likely to choose or continue taking STEM subjects in the future: **73%**

A standout moment came when the students brought their learning to life by designing and building virtual home islands in Minecraft.

This digital challenge helped both to consolidate their understanding and introduce them to creative uses of technology. It also sparked interest in future careers across engineering, game design and digital innovation.

Beyond the technical skills, the project drew on traditional stories and techniques that encouraged resourcefulness, collaboration and the confidence to navigate new challenges.

By weaving indigenous knowledge into modern STEM learning, students gained practical abilities, strengthened their teamwork and developed a deeper pride in their cultural heritage.

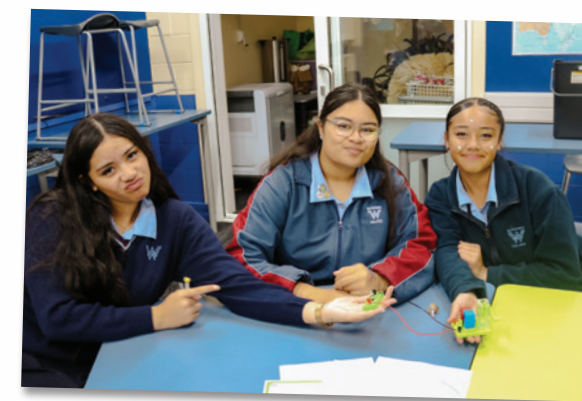
Overall, the experience showed how the wisdom of the past can actively shape the future.



**" [It's important to] share ideas and listen to others because their ideas can help improve our own.**

STUDENT

Waitākere College





# 2025 WeSTEM CONFERENCE



In July, students from the seven 2025 WeSTEM projects came together at Unitec's Mt Albert campus to share their research with peers, teachers and guests. These annual conferences give students the chance to be a "scientist for a day", where they can present their findings to their peers in a professional setting and celebrating the impact of STEM inquiry-based learning in their communities.

This year's conference welcomed over 90 attendees, including 55 students, 12 teachers and a range of whānau and community members. Among the audience were three representatives from the **Ministry for Pacific Peoples**, whose support makes WeSTEM possible.

Over the course of two hours, participants from six of the projects took the stage to present their research. Although the *Exploring the Science of Hügeltkultur* (p 10) students couldn't attend in person, their energy and excitement came through clearly in their pre-recorded presentation.

Following the presentations, the teachers joined a lively Q&A session, sharing insights into how STEM inquiry-based learning has transformed engagement and achievement in their classrooms.

As the conversation wrapped up, the *Less Waste More Taste* (p 14) students presented a delicious lunch, showing off their culinary skills while also promoting food waste reduction.

For many students, the conference was their first time being in a tertiary environment. Speaking in front of a live audience helps build confidence and strengthens communication skills, while seeing the work of peers can broaden perspectives and spark new ideas.

Experiences like this enable young people to imagine themselves in STEM pathways and see that their voices, questions and solutions matter.

Special thanks go to the **Ministry for Pacific Peoples** for their financial support; **Unitec** for providing the lecture theatre and technical assistance; and **Fair Food** for providing the catering.

The 2025 WeSTEM Conference gave young people a platform to share their ideas in a professional setting. For many, it was a first step into a world of possibility. Events like this build confidence, connect communities and show the real-world value of STEM inquiry.



See the conference in action in this highlights reel!





# OUTCOMES SPOTLIGHT

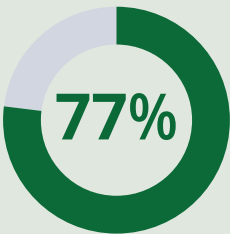
## EMPOWERING FUTURE INNOVATORS

WeSTEM is designed to spark curiosity at a pivotal age by helping students explore, question and create through STEM inquiry. By connecting learning to real-world challenges, it encourages young people to see the value of education and imagine themselves as future **scientists, innovators, problem solvers** and **leaders**.

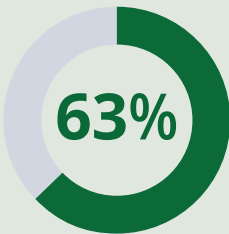
A key strength of WeSTEM inquiry projects is their ability to build students' essential STEM skills while also demonstrating how these skills can benefit their communities, enabling them to see a place for themselves in future STEM pathways.

## CHANGING MINDS

Survey responses show a clear shift in the participating students' attitudes toward STEM:



can now see how **STEM careers help solve problems** in their communities



are now more interested to **study a STEM subject or pursue a STEM career**

Nearly half of students (**48%**) reported increased interest in STEM after participating in a WeSTEM project, with:



of previously uninterested students **gaining an interest in STEM**



of already interested students **increasing their interest in STEM**

## FOSTERING ESSENTIAL SKILLS FOR A COMPLEX WORLD

The seven 2025 WeSTEM projects show how linking STEM to real-world challenges boosts students' confidence and curiosity. Many of the projects also strengthened foundational **literacy, numeracy** and **digital technology** skills, preparing students for success in a rapidly evolving, tech-driven world.

### CORE COMPETENCIES IN ACTION

#### LITERACY

Five projects explicitly focused on developing literacy skills, including:

- » *Te Awa Whakapapa* (p 6) integrated literacy into science, maths and design thinking. The Birdwood School students used real-world data from their stream restoration work to generate new insights, making the inquiry process more active, social and relevant to them.
- » *Exploring the Science of Hūgekultur* (p 10) supported literacy through practical STEM inquiry. The Matipo School students used descriptive language to explain their observations and communicate their findings clearly. They also created labels, signs and ads for their produce sales.

#### NUMERACY

Five projects focused on strengthening numeracy skills, including:

- » *Accessible Active Ākonga* (p 12) provided the Glen Eden Intermediate students with real-world maths challenges through budgeting, measurement and area calculations. Afterwards, **63%** reported feeling more confident in maths.
- » The *Less Waste More Taste* (p 14) facilitators observed a noticeable improvement in one Rangeview Intermediate student's spatial reasoning and maths confidence. His teacher also reported a significant positive shift in both his understanding of maths and his attitude toward learning in general.

#### DIGITAL TECHNOLOGY

Three projects incorporated digital technology as a core component, including:

- » *Hidden Patterns All Around Us* (p 16) saw Manurewa Intermediate students explore a variety of digital tools, including podcasting. Afterwards, **68%** reported feeling more confident using such tools.
- » *Wayfinders of the Pacific* (p 18) introduced Waitākere College students to various creative applications of technology, like using Minecraft to create virtual home islands, along with potential STEM careers.

These projects show that **when learning is hands-on, relevant and connected, it transforms education.**



**" I liked seeing traditional patterns used to explain the world around us. It definitely helped me remember.**

YEAR 7 STUDENT  
Manurewa Intermediate

**" I learnt about 3D printing and online design, skills I can use in other projects and future learning.**

YEAR 8 STUDENT  
Glen Eden Intermediate

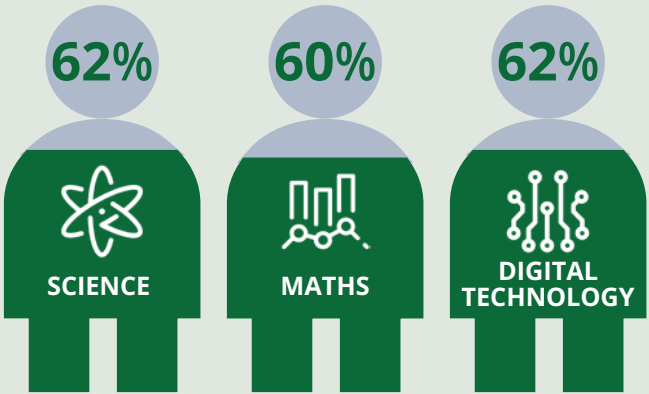
### CONFIDENCE THROUGH INQUIRY

The success of the 2025 WeSTEM projects is reflected in direct feedback from student participants. Post-project surveys show meaningful shifts in students' confidence, the perceived relevance of STEM and interest in STEM pathways.




The consistently high rates of agreement in science and digital technology, alongside students' recognition of STEM's real-world relevance, highlight the programme's transformative impact.

### KEY FINDINGS

The post-project surveys revealed strong gains in student confidence across STEM subjects:



These outcomes align closely with the following key WeSTEM goals:

-  Building students' confidence and curiosity in STEM
-  Making STEM learning more relevant and accessible
-  Growing students' understanding of STEM careers and pathways

## A TRANSFORMATIVE EDUCATIONAL EXPERIENCE

Ultimately, WeSTEM empowers young people to become **scientists, engineers, storytellers, problem solvers** and **leaders**, driven by curiosity and connection to their communities.

The students' sustained engagement and enthusiasm, as evidenced by their desire to participate in future projects, underscore WeSTEM's lasting impact in nurturing Aotearoa NZ's next generation of STEM-literate citizens.



# STEM ALLIANCE AOTEAROA

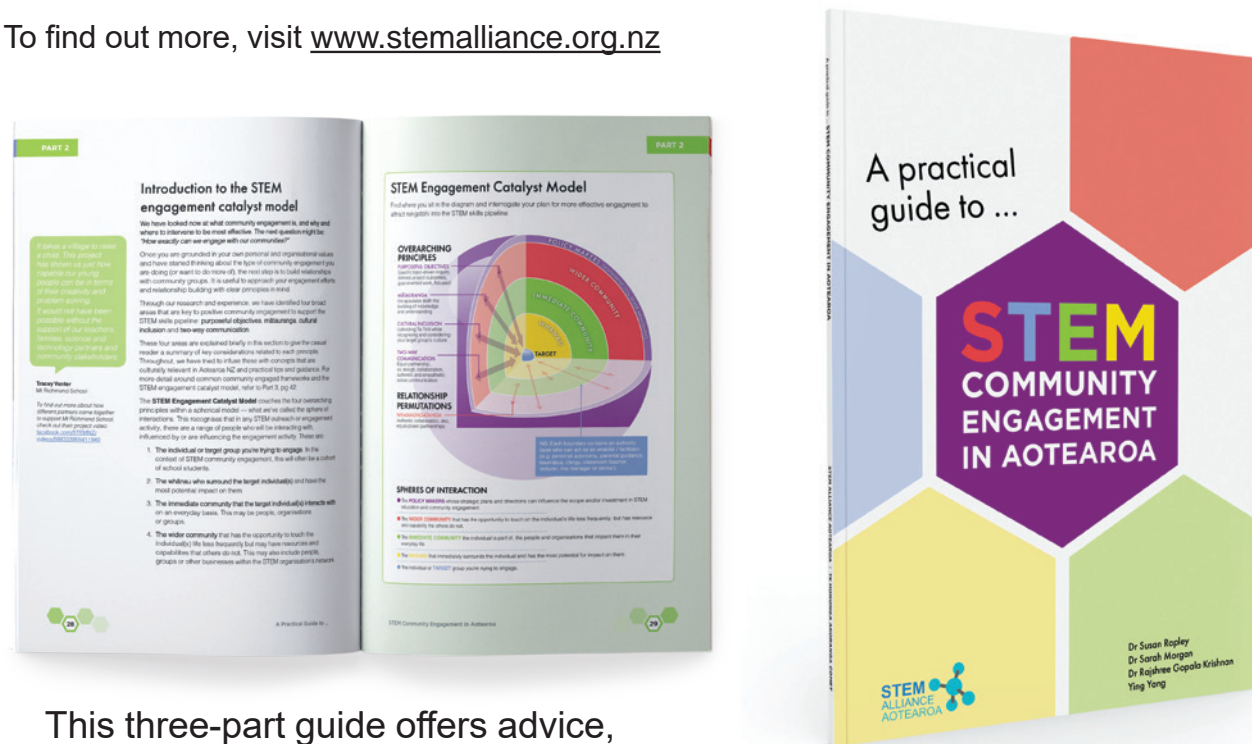
The WeSTEM participatory science platform has consistently shown the value of community and science partnerships for creating engaging opportunities for students to explore science, technology, engineering, maths and mātauranga in real-world contexts.

Successful project collaborations rely on a wide range of stakeholders coming together — students, educators, community members, businesses, academics and families.

The STEM Alliance Aotearoa network, an initiative of Te Hononga Akoranga COMET, was created to strengthen these connections across the STEM sector. We provide resources, connections and advice to support businesses, educators and community facilitators to improve outreach and engagement across the STEM education system. Our vision is for a diverse and equitable STEM-literate Aotearoa NZ.

We know that it takes effort to make community outreach and engagement initiatives work. *A Practical Guide to STEM Community Engagement in Aotearoa* is an easy-to-use, research-based response to this challenge.

To find out more, visit [www.stemalliance.org.nz](http://www.stemalliance.org.nz)



This three-part guide offers advice, tools and guidance to help educators, community facilitators and STEM professionals collaborate to show young people the value of science and technology.

Get your copy here:





# WESTEM

Te Hononga Akoranga COMET is an independent charitable trust championing better and fairer education, skills and lifelong learning for all Aucklanders. We provide high quality and effective research, project development and leadership for cross-sector initiatives and action.

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Ministry for  
**Pacific Peoples**  
Te Manatū mō ngā Iwi o te Moana-nui-ā-Kiwa



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AKORANGA**  
**COMET**