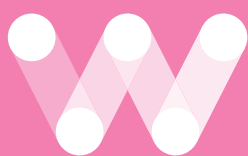


I wonder what makes ice cream yum?



**Wonder
Project**

Ice Cream Challenge

The Wonder Project is the industry-led, free programme for schools, designed to inspire young Kiwis with science, technology, engineering and maths (STEM).

The Wonder Project is a series of project-based hands-on programmes that knit seamlessly into the New Zealand school curriculum. They're designed to spark wonder and awe in young Kiwis from Year 5–13 and get them excited about a future STEM career.

Ice Cream Challenge

**Level 3 | Phase 2, Year 5–6
Term 3**

Let's chill! Ākonga experiment with flavour, texture, and techniques, using dairy or alternative ingredients to create their own sweet treat. In rōpū, they'll explore states of matter, food composition and performance properties and discover the science behind ice cream innovation.


**Engineering
New Zealand**
Te Ao Rangahau

NOURISHED BY

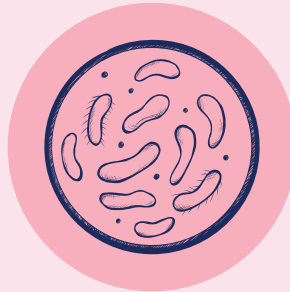


Ice Cream Challenge

Starting any time in Term 3 each year, the Ice Cream Challenge provides scaffolded learning aligned to Level 3 or Phase 2 of the New Zealand school curriculum. The challenge takes around 12–16 hours to complete across 6–8 weeks, or longer if required. It's also possible to complete the challenge in a more condensed timeframe.



States of matter



Microbiology



Food composition



Sensory analysis



Scientific inquiry process

What we offer schools

- Online training on core STEM principles
- Ākonga learning material and activities
- Detailed challenge guide with lesson sequences and support notes
- Where possible, support from a volunteer STEM professional (online support available)
- Free ice cream kit with all the gear
- Online hapori of kaiako and ambassadors
- Resources to assess ākonga on their challenge learning

Our impact

Here's what participants said about 2025 challenges:

- 96% of kaiako increased their confidence teaching STEM
- 96% of kaiako and 70% of ākonga said they would do it again
- 46% of ākonga were more interested in STEM jobs after their challenge
- 93% of kaiako said ākonga were engaged with the programme

Become a wonder school today at
wonderproject.nz

   @WonderProjectNZ



Ice Cream Challenge modules

Module 1

Get ready for the Ice Cream Challenge, learn the challenge goals and explore the scientific inquiry process, what's in ice cream, and food microbiology.

Module 2

Explore the first ice cream goal "creamy ice cream" and how it's impacted by changes of matter, ice crystals and fat. Test this with ice cream in a bag.

Module 3

Explore the second goal "scoopable ice cream" and how it's impacted by sugar and air. Test this with ice cream on a cold plate.

Module 4

Explore the third goal "flavourful ice cream" and how it's impacted by the 5 senses. Test this with a flavour identification sensory experiment.

Module 5

Discover ingredient swaps and the properties of condensed milk. Then explore flavour combinations before planning the ultimate ice cream.

Module 6

Create an ice cream that meets the three challenge goals. Then, rate the ice cream and answer the challenge pātai.

Achievement objectives

Kaiaako can also make wider curriculum links to other achievement objectives depending on ākonga level and individual learning programmes.

Strand	Ākonga will	Curriculum level/phase	Year level
Science: Investigating in Science	Ask questions and carry out fair tests to investigate how ingredients and processes affect the properties of ice cream.	Level 3	5–6
Science: Material World	Explore how the properties of ingredients change when mixed and cooled.	Level 3	5–6
Technology: Technological Products	Understand how the performance properties of ice cream ingredients affect the final product.	Level 3	5–6
Technology: Outcome Development and Evaluation	Test, evaluate and improve ice cream recipes and processes to create an ice cream that meets their challenge goals.	Level 3	5–6
Mathematics and Statistics: Measurement	Measure ingredients, quantities, and variables using appropriate units and measuring tools.	Phase 2	5–6
Mathematics and Statistics: Statistics	Explain their results by collecting, displaying, and analysing data.	Phase 2	5–6

I wonder how we get rangatahi excited about STEM?

Engage your ākonga in the wonders of STEM by registering for one of our hands-on, project-based challenges.



Rocket Challenge

Level 3 | Phase 2, Year 5–6 – Term 2

Houston, we have lift off! Ākonga blast off into STEM by designing, building and launching a water rocket. They'll learn about Newton's laws, the engineering design process, and working as a rōpū.



Power Challenge

Level 4 | Phase 3, Year 7–8 – Term 2

Power up! Ākonga design and build a wind turbine and work as a rōpū to light up their own mini town. Along the way they'll discover the amazing phenomenon of electricity and renewable energy.



Ice Cream Challenge

Level 3 | Phase 2, Year 5–6 – Term 3

Let's chill! Ākonga experiment with flavour, texture, and techniques, using dairy or alternative ingredients to create their own sweet treat. They'll explore states of matter, food composition and performance properties and discover the science behind ice cream innovation.



Water Challenge

Level 4 | Phase 3, Year 7–8 – Term 3

Ready, set, flow! Ākonga construct and test a mini model of Aotearoa New Zealand's wai network. They'll explore the journey of wai and how STEM is used to collect, clean, connect and care for one of Earth's most precious taonga.

Showcase the immense possibilities of a future in STEM.



STEM Careers

Year 7–13 – Year round

The future is bright! Ākonga are inspired to keep taking STEM subjects, and given a taste of the real world with industry visits and motivating career talks from STEM professionals.

Become a wonder school today at [**wonderproject.nz**](https://wonderproject.nz)

   @WonderProjectNZ