I wonder how to grow food sustainably?

Wonder Project

WHERE SCIENCE TECHNOLOGY ENGINEERING AND MATHS COME ALIVE.

With the support of their teacher and a volunteer STEM professional, students will reimagine how to grow food in more sustainable ways. Our budding scientists will work together to trial, innovate and design their own microgreen farm of the future in the classroom!

From farms in space to greenhouses in carparks, STEM innovators are taking sustainable food growth to the next level. Throughout the challenge, students will harness their STEM skills to grow plants year-round using a mini production system that they will design, monitor and test. Teams will need to use their creativity and problem-solving skills to ensure their microgreens thrive, whether they're in the soil or amongst the stars.

Through a combination of hands-on activities and digital media, our online Learning Hub scaffolds STEM knowledge, encouraging students to collaborate and learn together about how plants respond to environmental changes. Students have fun and get inspired whilst building confidence in important skills such as teamwork, resilience, creativity and problem solving.

The challenge runs for 6–8 weeks in Term 4, takes just 1–2 hours per week and aligns to Level 4 of the New Zealand Curriculum with a focus on the living world.

Geared up

We provide schools with everything they need, including:

- Plant kit (1 per class)
- Wonder Project Ambassador
- Access to the online learning hub
- Activities for students to complete in class
- Module guides for teachers and ambassadors

Module overview

Module 1

Get ready for the Plant Challenge, meet your Wonder Project Ambassador, and find out what it takes to grow your sustainable farm of the future.

Module 2

Observe and explore the environmental conditions plants need to thrive. Plant the first of two microgreen trials.

Module 3

Problem solve and improve microgreen harvests through building a grow house and adding nutrients.

Module 4

Analyse trial data to develop a successful production system through iteration.

Module 5

Follow an engineering design process to design and create an innovative farm of the future.

Module 6

Explore sustainable food production practices and celebrate and share your Plant Challenge journey.

Achievement objectives

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

Achievement objectives	Students will	Curriculum level	Year level
Science: Nature of Science	Ask questions, explore simple models, and carry out appropriate investigations to develop simple explanations around how food can be grown sustainably.	4	7–9
Science: Living World	Think critically about the life processes of microgreens and how they respond to both natural and human-induced environmental changes.	4	7–9
Technology: Nature of Technology	Explore how innovations in technology have improved the way we grow food – now and in the future.	4	7–9
Mathematics and Statistics: Numbers and algebra	Use mathematical thinking to explore different ways of solving problems during the production of microgreens.	4	7–9

Become a wonder school today and register at wonderproject.nz

engineering new zealand te ao rangahau

POWERED BY CallaghanInnovation New Zealand's Innovation Agency