

I wonder how to power a brighter future?



Wonder
Project

Power
Challenge

The Wonder Project is Engineering New Zealand's not-for-profit, free programme for schools, designed to inspire young Kiwis with science, technology, engineering and maths (STEM).

In Aotearoa, there's a huge skills shortfall in STEM. We simply don't have enough young people pursuing careers in these fields. STEM jobs pay well, are secure – and you don't always have to go to university. The Wonder Project aims to change this shortfall by showing young Kiwis they really can achieve anything.

The Wonder Project offers 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.



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Power Challenge

Power up! Ākonga design and build a wind turbine and work as a rōpū to light up a mini town using renewable energy.

Your child's school has signed up to take part in the Power Challenge this year. Over Term 3 they'll discover the amazing phenomenon of electricity and learn how it's generated, moved and used across Aotearoa.

What your child will learn

Your child may bring home some weird and wonderful new kupu and concepts – so it's good for you to be familiar with them too!

Energy basics

Forms of energy include:

- **Potential energy** – energy waiting to make things happen (eg gravitational potential energy makes things move downwards)
- **Kinetic energy** – energy that something has because of its motion (eg wind turbines harness the kinetic energy of moving air)

Energy transfer: when energy moves from one place to another, or from one object to another (eg heat energy moving from a light bulb onto your skin when you touch it)

Energy transformation: when energy changes form to do work (eg our bodies convert chemical energy in our food into mechanical energy for us to move)

Engineering design process

They'll learn how to think like an engineer, using the engineering design process:

1. Ask
2. Imagine
3. Plan
4. Create
5. Test
6. Improve

What you can do to help

- Ask about their wind turbine and renewable energy
- Talk about new kupu and concepts they're learning
- Ignite curiosity with some simple experiments at home
- Add another book to your reading list with *The Awesome A-Z Of How Stuff Works* – order from shop.wonderproject.nz

Ignite your wonder today at
wonderproject.nz

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