

# I wonder how to power a brighter future?



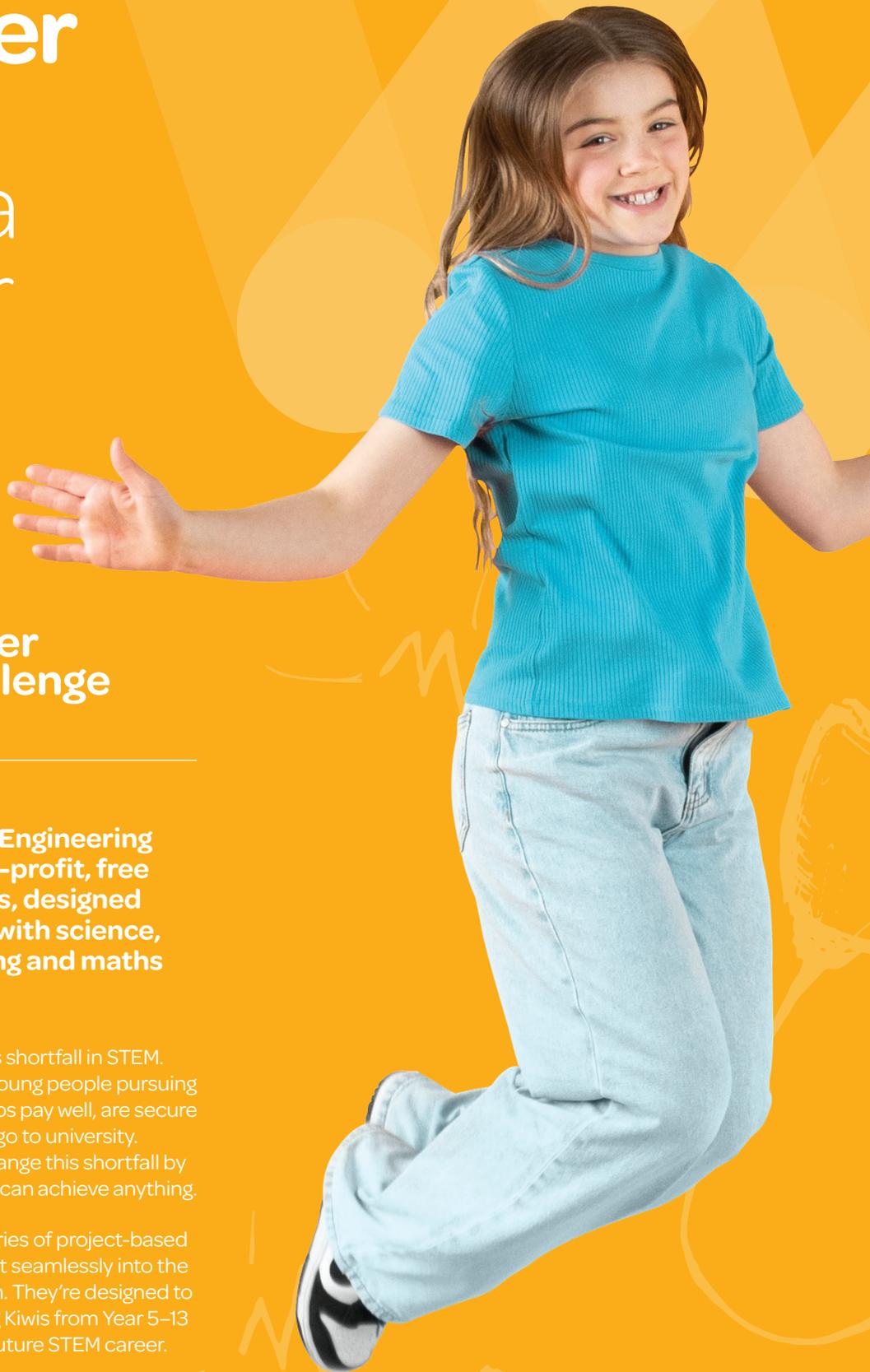
Wonder  
Project

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.



**Engineering  
New Zealand**  
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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 2 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 that's stored, waiting to make things happen (eg something held above the ground has gravitational potential energy because it would fall if dropped)
- **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 from one form, to another form (eg turbines transform wind energy into electrical energy)

### 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](http://shop.wonderproject.nz)

Ignite your wonder today at [wonderproject.nz](http://wonderproject.nz)

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