

Robotics at Tawhai

Kia ora koutou! We've received a fantastic new addition that's going to open up a whole new universe of learning and fun: brand new VexIQ robotics equipment.

What is VexIQ?

VexIQ is a robotics platform specifically designed for primary school students. It's a fantastic system that allows us to build robots using snap-together components, learn about engineering principles, and ultimately bring our creations to life. It's all about hands-on learning, problem-solving, and teamwork - skills that are incredibly valuable in our increasingly tech-driven world.

Our First Robot Takes Shape!

You should have seen the excitement when those VexIQ boxes arrived! We wasted no time getting stuck in. Our first challenge was to assemble our very first robot. It was a brilliant experience, working together, following instructions, and figuring out how all the different gears, wheels, and sensors fit together. It's like LEGO, but with way more moving parts and a brain!



Bringing it to Life: Learning to Drive!

Once our first robot was built, the real magic began: making it move! We started with the easiest and most fun part: using the **VexIQ controller**!

By simply plugging in the controller, we learned how to map the joysticks to the motors and drive our robot around the floor. It was incredible to see our creation respond instantly

to our commands—driving forwards, backwards, and spinning. This was a fantastic way to quickly understand how the robot moves, how **gear ratios** affect speed, and how **friction and weight** influence turning. There have been a few unexpected spins and tumbles, but seeing immediate success has been a massive confidence booster!

Our next step will be moving onto coding. Once we master driving with the controller, we'll start programming autonomous movements, learning the logic to make the robot move *by itself* without human input.

The Road Ahead: More Robots, More Challenges, and Competitions!

This is just the beginning! We would like to have the year 5/6 classrooms get the opportunity to have a turn with these, so that all students will get the chance to design, build, and program their own incredible robots. Our ultimate goal? To prepare for and enter some exciting robotics competitions!

VexIQ competitions are a fantastic opportunity to test our skills against other schools. Teams collaborate to design a robot that can complete specific tasks on a playing field, often using a mix of controller driving and autonomous coding. It's a true test of engineering, programming, and strategic thinking under pressure.

Stay tuned for more updates on our robotics journey! We'll be sharing our progress, showcasing our robot designs, and hopefully, bringing you news from future competitions.

Nga mihi nui,

The ICT Team at Tawhai

