EVOLOCITY

A QUICK GUIDE

To the EV programme changing futures.

DESIGN. BUILD. RACE.

Electric vehicles are fast.
They are fun. They are the future.

EVolocity is the EV programme inspiring young Kiwis into sustainable engineering while fast forwarding New Zealand's clean tech future.

At the start of the school year, high school and intermediate age teams are given electric motor kits, some guidelines to follow, a bunch of inspiration, and free creative rein. Alongside their teachers and mentors, teams plan, engineer and manufacture electric karts or bikes – all with sustainability (and race day) in mind.

Regional Final events happen at the end of the year where vehicles take part in drag races, slalom, endurance and efficiency competitions.

Teams can enter as a school, club or organisation. The programme can be run as an extra-curricular project or integrated into the school curriculum, with students earning credits and completing their project during school hours.

The programme is currently available in Auckland, Waikato, Bay of Plenty, Taranaki, Manawatu & Wellington, Christchurch & Nelson.

EVOLOCITY

WHAT YOU'LL NEED:

- **A leader** – this is usually a teacher or parent who can guide you through the build process. They need to have practical skills.
- **A team** – ideally you will have 4 to a team, but individuals can also enter and have even won competitions!
- **Time** – this is a big project that requires commitment throughout the year, and it can be challenging. Make sure you have the hours to set aside to keep your build moving forward. The programme can be run as part of the school curriculum – with students earning credits and completing projects during school hours.
- **Funding** – vehicle materials must be sourced by teams themselves, and you need to consider the cost of your electrics. These do not need to be expensive, and are often gifted to teams as donations or sponsorships. Many of our teams have upcycled materials such as bike parts and storage drums.
- **A support network** - EVolocity has an awesome tech team and mentor network available to teams for advice and practical help. However, it also helps to have connections for when the going gets tough, and to source materials cheaply and efficiently.

EVENTS & AWARDS

Workshops

Throughout the year, EVolocity run a series of workshops to provide hands-on support, expert knowledge and practical skills for students. Events include Build Days, Arduino / CAD workshops and welding workshops.

Regional Finals

At the end of the year, teams go head-to-head in a series of races and competitions at Regional Finals. As well as performance events, awards are given to celebrate innovation, sustainability, presentation, and documentation. Panels of expert judges evaluate each challenge. Regional results are then compiled for a National Leaderboard – awarding success of our absolute top performing teams on a national level.

Event	Description
Drag Race	Race head-to-head in a 50m drag for the fastest time
Gymkhana (agility)	Compete against the clock in a 3-lap time-trial through a slalom
Economy Run	Race against others using the full track in a test of vehicle efficiency
Engineering Design Presentation	Show off your build to a panel of judges
Report	Document your successes with a written report

CAD Award

'Make Your Marque' Competition	Demonstrate your creative and technical skills by producing a 3D printable part for your vehicle

Competition Classes

Vehicle Class	Power Limit	Wheel Layout	Notes
Standard	350W	2+ wheels	Uses an unaltered EVolocity standard motor kit. This class is most common for teams in their first three years of competing
Open	< 1kW	2+ wheels	Teams bring their own motor and batteries.
Competition	< 3kW	4 wheels	Teams bring their own motor and batteries, and must have competed previously

CONNECT

To register your interest or register a team, visit **Evolocity.co.nz**
For other enquiries, contact sarah@evolocity.co.nz

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