

Who can enter teams in EVelocity?

Our regional support programme, including launch events, tutorial build camps and regional finals are offered in Auckland, Waikato, Wellington and Canterbury. Teams from outside of these regions are welcome to participate, but must travel to participate in the regional events.

What does it cost?

In 2018 there will be a cost per team to participate in EVelocity of \$500. This will cover the motor kits, plus the competition entry fee. We will support your efforts to find sponsorship.

How does it fit with NCEA?

EVelocity can fit as a club activity; in curriculum; or as a STEM subject. Within curriculum, there is a more natural fit to have it reside in Technology but there are sustainability standards and a Physics level 3 project standard that could be applied.

Having an interesting, relevant learning programme designed with a strong set of outcomes is vital. Fitting an assessment plan to this is not difficult with the above standards plus ASs from the Technology/Digital Technologies matrix available. Les Black offers Professional Development workshops on curriculum integration. [See our Case Studies.](#)

Do you have any Implementation Models / Exemplars?

Yes, [See our Case Studies.](#) An impressive case in terms of STEM is where year 13 students set up a team in Technology and delegated responsibilities for the design and build. One worked on the steering and chassis, one the drive train, and another the body design. They had a gap in making the controller and decided to pull in a student from Physics.

Amongst others, this team completed the generic Planning and Prototype standards each assessed in their own disciplines. The requirements were fleshed out and the students left to research and develop and build etc. EVelocity through its support programme provided resource people / mentors. The planning standard had special significance in coordinating activities as deadlines – in a natural and useful way.

The teacher was pleased with the student motivation, outcomes, connection to industry via mentors and found assessment manageable. Even though the Physics student wasn't doing Technology the work done in their spare time followed the development route the teacher had laid down and with good outcomes was awarded technology standards. In this way the EVelocity project has the ability to be a basis for STEM education. It presents an exciting, independent learning programme on a contemporary theme.

What gear is required?

Some basic gear is required. Avonside Girls High School in Christchurch started (in year 1) by adapting/building a bike. the gear is a bike kit so the construction workload for this design wasn't huge. A mentor helped with gear and was a sounding board for ideas / designs / solutions.

They have been involved for 4 years now and have 6 to 8 teams in years 11,12,13, They now have a welder, several vices, hacksaws, hammers, etc available. The gear is reasonably straight forward and not extensive.... yet and the girls are loving this type of work.

What are Build Days?

We run 3 of these throughout the year, each with a different focus, design, controller programming and building, innovation features and have also offered welding courses (and credits) through our Polytechnic links. Mentors attend these Build Days and partner with teams based on matching mentor skills with team needs.

How long does it usually take to build a vehicle?

This varies considerably, depending on the design each team decides to go with. Some of the teams enter 2 wheel vehicles, the fastest of which has been built in about a day. Other teams enter 3 or 4 wheel vehicles which may take considerably longer.

What do we do if we have a problem while building our vehicle?

Give us a call on 027 221 1365 and we will do our best to solve the problem.

Where can we get replacement parts from?

You can get them from Les Black at Electroflash in Christchurch – email les@electroflash.co.nz.

What is the best material to use for the bodywork?

Well, you can make your bodywork out of anything you want. Schools have experimented with corrugated plastic, aluminium, carbon fibre and papier mache. We encourage attention to aesthetics, as it is important to sponsors that the vehicles are presented in a favourable light to the public. It is beneficial to have someone with an outgoing personality on the team – someone who is able to approach local businesses for additional sponsorship.

What do the competitors need to wear when they are racing?

The competitors need to wear long sleeved tops and long pants; they can alternatively wear long sleeved overalls. They need to have a full faced helmet, or a helmet with chin protection, such as a trials bike helmet. Normal bicycle helmets are not allowed. If the competitors are wearing a motorbike helmet without a visor then they will need goggles. They will also need full fingered gloves.

How do we charge our batteries?

A charger is supplied with the kit. Simply connect it to the port in the vehicle and plug it into a wall socket as you would your mobile phone.

How do we enter events?

The first step is to register for 2018. Then, later in the year, you will be asked to complete an entry form to participate in the regional finals competition.

What is the usual format of the end of year event?

See the competition flyer for details.

How are the points awarded and the overall winner decided on?

Teams are ranked in most events. The ranking number is carried forward as their score. The team with the overall lowest score wins the grand prize. The scoring of other events is described in the School Electric Vehicle Competition brochure.

During the events are we allowed to change/charge up our batteries?

No, during the competition no battery changes or charging is permitted. We wish to create a level playing field where everyone is involved in all events and therefore faces similar battery demands. All events can be completed on one charge of the battery.

Will we get sent the results after the event?

Results will be posted during the day and final standings available at the prizegiving. You will be sent a list of the final results after the event so you can see how your team performed. Results will also be posted on this web site.

What are the closing dates for entering the 2018 competition?

Registration for 2018 must be completed by early March.

Is there an EVelocity risk management plan for the events?

Prior to Race Day a risk management plan and associated documentation will be made available to all teams that have entered.

What about health and safety?

EVelocity produces a Health and Safety plan for the regional and national finals events.