

Full STEAM ahead for hybrid tech

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Racing green: Year 9 students Jonathan Tan, Marcus Chin and Christie Oh with the prototype of a hybrid go-kart powered by solar and electric energy.

HELP International School successfully debuted their student-built electric go-kart and set the fastest sprint time of 6.94 seconds for a Malaysian student-built go-kart over 50 metres with a 2kw BLDC engine, 48v.

As part of the school's strategic plan in strengthening its holistic science, technology, engineering, arts and mathematics (STEAM) curriculum, this initiative is one of many that provided students the opportunity and exposure to gain hands-on electrical and mechanical engineering skills and experience the results of their work as they test drive the go-karts, and learn that electric vehicles and green technology can create a better world.

Congratulating the inaugural batch of electric go-kart young engineers, school principal Martin van Rijswijk said this is what authentic learning looks like. “We’re so proud to see the school’s vision of taking learning from the classroom into practical application,” said van Rijswijk in a press release dated July 7.

Malaysian professional race driver and Motorsports Services Aston Martin Racing Asia director Weiron Tan expressed his excitement at seeing such innovation and learning opportunities offered to 14- to 15-year-old students.

“It was simply amazing that students are capable of building a full electric-powered kart in just six months.” Tan, who was a guest at the event, took to the wheel and put a student-built go-kart to the test. He also provided feedback to the students based on a driver’s point of view on the construction of the go-kart such as the angle of the throttle.

Designed for students aged 13 to 15, the Hybrid Go-Kart Design & Build is an elective under the School Enrichment Programme, which allows students to explore the world beyond the classroom and discover hidden interests and talents.

The electric go-karts were assembled from scratch by 24 Year Nine students under the guidance of a teacher from the Design and Technology Department, within a span of six months.

The students had to do all the mathematical calculations, learn and apply basic mechanical and electrical engineering, and after many hours of getting their hands dirty, test drove the electric go-karts themselves.

They competed in a head-to-head slalom race, attempted to set the fastest time over 50 metres, and also showcased the prototype of a hybrid go-kart powered by solar and electric energy. Next year, the aim is to build fully operational solar go-karts.

Besides empowering young people, HELP International School hopes to set a record for the fastest solar go-kart built by secondary students in Malaysia, and eventually participate in the Bridgestone World Solar Challenge in Australia.