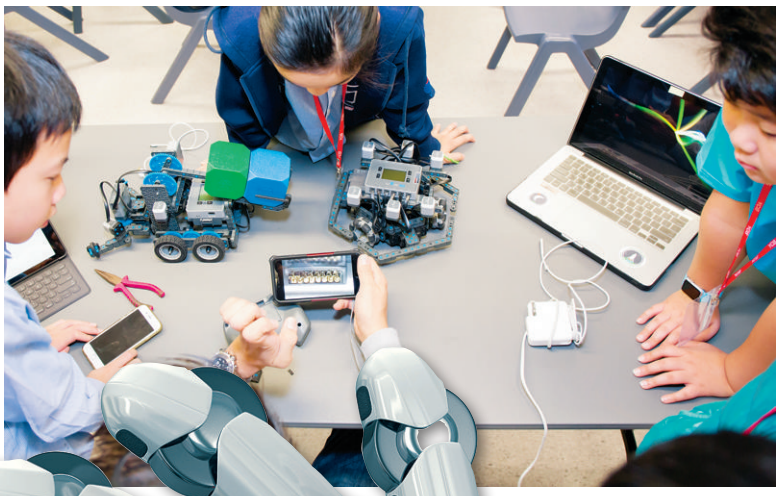
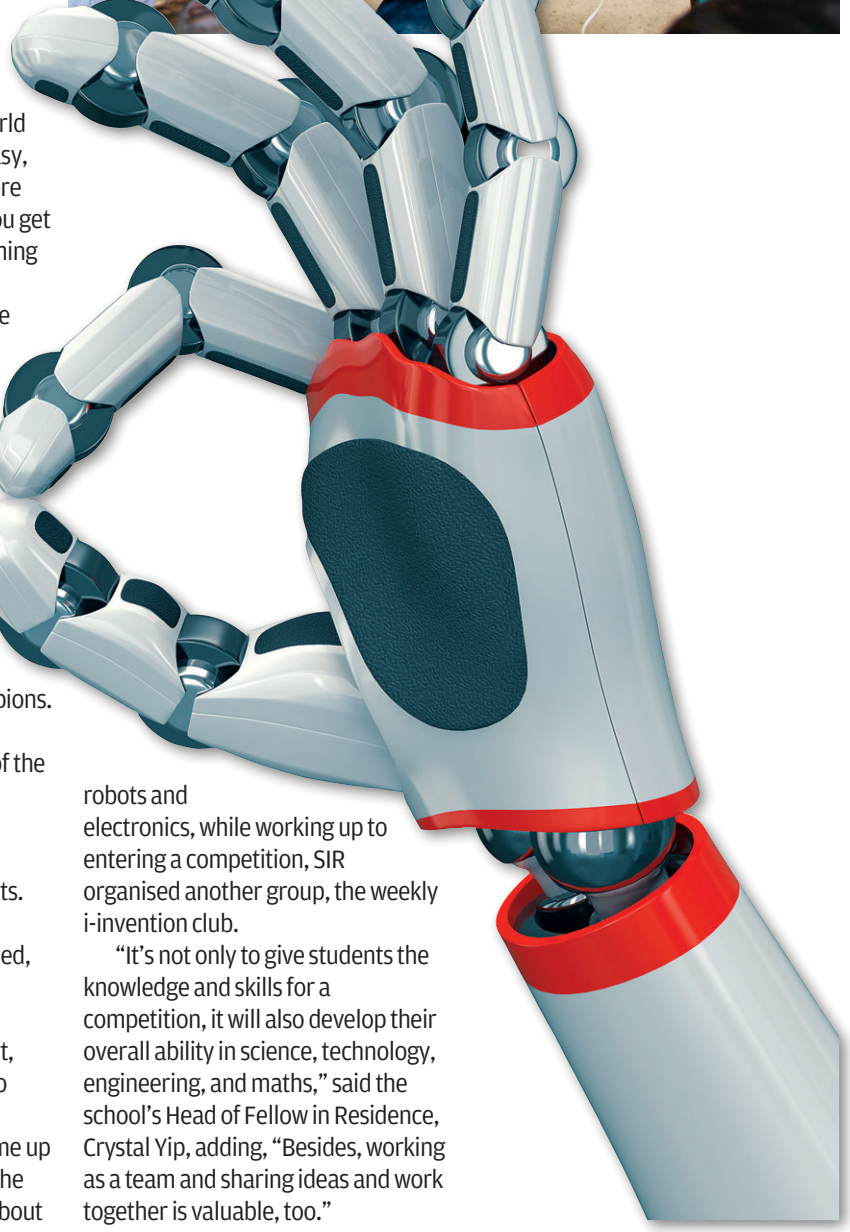
campus life

Students learn from expert Paul, whose robotics team has won several robotics competitions in Asia and the US. Photos: YCIS AV team





Robots of the future are bleeping brilliant

Yew Chung International School students learned about some exciting technology, writes **Lauren James**

Clever scientists from Yew Chung International School helped pave the way for a future under the rule of evil authoritarian robots when they took part in an interactive Vex IQ Robotics Workshop in November. But seriously, students from years four to eight boosted their science skills when visiting robo expert Paul Roland Maiquez showed them how to build a "Clawbot" (which does sound quite menacing, to be fair). During an afternoon of clanging, ratcheting, and head-scratching, the teams assembled a kit containing nuts, gears, screws, bearings, wheels and a motor into a functional machine that could grab things in its large, pincer-like claw.

As well as being a day of building, it was also a chance for students interested in science and technology to apply their minds to a technical challenge, and work together to produce the finished result. Students followed the simple design to learn more about robotics in general, while practising team skills, like communicating their thoughts, collaborating with others, revising their strategy, testing their creation, and evaluating the results.

"Building the Clawbot helped teach students the process of designing, planning, building, and programming," said Maiquez, who started the Vex IQ robotics programme at an international

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school in Korea. "Besides learning a new skill, robotics is also a valuable way for students to learn how to work together and to share ideas," he continued, praising the young scientists' talent and dedication.

The workshop was part of the school's Scientist-in-Residence (SIR) programme, which challenges students with hands-on scientific investigations that have real-world application. "Programming is easy, but you can develop this into more complicated programming as you get better at building and programming robots," says Maiquez.

The YCIS students aren't quite ready to enter any international competitions, but their day with Maiquez laid down the skills and knowledge they'll now build upon. And they'll have Maiquez's Korean school to look up to: the teams there enter competitions all over the world, including one recently in Japan where one of the four school teams emerged as champions.

"Competitive robotics is very engaging for students because of the 'game quality' of the robotics challenges," Maiquez says.

"Students spend a lot of time planning and building their robots. They want their robots to win in competitions. If they don't succeed, they go back to their design and make improvements."

The Clawbot was just the start, though: if the YCIS team wants to have an edge in robotics competitions, they'll need to come up with more complex designs. So the students can carry on learning about robots and electronics, while working up to entering a competition, SIR organised another group, the weekly i-invention club.

"It's not only to give students the knowledge and skills for a competition, it will also develop their overall ability in science, technology, engineering, and maths," said the school's Head of Fellow in Residence, Crystal Yip, adding, "Besides, working as a team and sharing ideas and work together is valuable, too."