DIGITAL MAKER AT EDUTECH ASIA 2017 AND GLOBAL CHILDREN'S DESIGNATHON

The Digital Maker programme, launched by Info-comm Media Development Authority (IMDA) to schools and community in April this year, was featured at EduTECH Asia on 8 and 9 November 2017.

The day started with Mr Adrian Lim, Director of Digital Participation and Foresight (DPF) team, IMDA, giving a keynote address on "Digital Makers for a Digital Society". Many in the audience were inspired and heartened to learn about how young children and students were able to create useful inventions with technology, and how we should encourage curiosity, confidence and courage in our people to innovate as we move towards a digital society.

At the exhibition area, IMDA Digital Makerspace was set up with tools and workbenches where makers feel comfortable to work in. Eager participants at the Digital Maker introductory workshops were given an opportunity to make an auto-plant water kit with soil moisture sensor or a pendulum using a simple-to-use microcontroller called the micro:bit.

Students from 10 schools were there to showcase their Digital Maker projects which they have created.

Pei Hwa Secondary School presented their R&B game that uses three micro:bits and its accelerometer and input buttons to balance and react to the display of the LED panel.

Raffles Girls' Primary School demonstrated their improved traffic light system that can warn the blind, deaf and those engrossed on their mobile devices to the traffic lights.

We had the privilege of having Mr Zach Shelby, CEO of Micro:bit Foundation with us at the Digital Makerspace and closing the conference with his speech on "Technology education is getting physical". His speech resonated with the goal of the Digital Maker programme – to nurture a new generation of digital natives with a passion to create with technology.

Zach also visited Montfort Junior School, Institute of Technical Education (ITE) and Tanjong Pagar Community Club to understand and see how Digital Maker had made its way into schools and communities. Montfort Junior and ITE have both set up a maker space to encourage their students to explore the technologies and Tanjong Pagar CC has a Digital Garage, providing communities access to facilities to turn their ideas into prototypes.

Singapore Science Centre and IMDA also jointly organised the Global Children's Designathon. Held on 11 Nov at the Science Centre's Tinkering Studio, this year's Global Children's Designathon saw 16 teams of children developing their own ideas and building prototypes using various technologies to solve real-world problems affecting the environment and society.
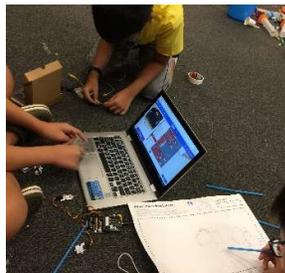
The theme for this year's Designathon was on water issues such as water shortage and water pollution. After an introduction to micro:bit and learning how to code and connect the micro:bit to a range of sensors, the children were excited to put their ideas into reality. They formed groups to develop ideas and solutions, design and build a digital prototype using recycled materials and maker kits. As the Designathon was happening on the same day at 18 cities, our students then had a video conference session with India to exchange ideas about their creations.

This is a 2-process filtration system which uses heat and a thin membrane layer, resulting in clean drinkable water available for everyone!

A rubbish collector that will suck up rubbish from the sea bed, so as to prevent animals from ingesting trash from the waters. It even has an artificial intelligence sensor to detect living things and release them back into the water.

A trash sensor to detect trash in oceans, lakes and ponds to guide people to collect trash.

While their children were busy coding and making with micro:bit, the parents also had a chance to learn and make a smart terrarium using the micro:bit. This allows the parents to experience what their children have learnt, so that they can continue to explore other projects to work together with their children.