

Formation of the Digital Hub in IEM Malaysia

INFORMATION AND COMMUNICATIONS TECHNOLOGY SPECIAL INTEREST GROUP

reported by



Ir. Tan Seng Khoon

The Malaysian government is concerned that school students today are steering away from science subjects and choosing careers in arts instead. Studies show that only 20% of students choose to enroll in the science stream, with the result that science-related courses in local universities are not attracting the number of students needed. This trend, if not checked, will prove detrimental to the country's future technical development.

To address the problem, the Ministry of Education Malaysia (MOE) and Malaysia Digital Economic Corporation Sdn. Bhd. (MDEC) have jointly launched education initiatives called STEM (Science Technology Engineering Mathematics). IEM is in collaboration with MDEC to become the digital maker hub for Petaling Jaya.

IEM is at the forefront to promote the advancement of science and technology to cultivate quality STEM activities for school students, especially in physical computing, software development and engineering design.

To begin, ICT Special Interest Group organised a series of Junior Digital Classes for Primary School students to explore Microduino basics and to build up their familiarity with Microduino mCookie modules, sensors and trinkets. Microduino mCookie is Arduino-compatible open source electronic hardware for makers, designers, engineers, students

| NO | ACTIVITIES |
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| 1 | <p>ICTSIG Junior Digital Class (November, 2017) - STEM Fun Learning Introduction: Prototyping of Arduino application using Microduino #1 - Postponed from 17 Nov, 2017</p> <p>Date/Time: 24 November, 2017 (09:00 a.m. - 12:00 p.m.) Venue : YES Room, Bangunan Ingenieur Speaker : Ir. Amir Hussein CPD/PDP : N/A Remark : 16 Participants School Name:</p> <ul style="list-style-type: none"> • SMK Cyberjaya Persiaran Fauna 2, Zon Flagship 2, 63000 Cyberjaya • SMK Seksyen 4 Kota Damansara • SK Cyberjaya |
| 2 | <p>ICTSIG Junior Digital Class (November 2017) - STEM Fun Learning Introduction: Prototyping of Arduino application using Microduino #1</p> <p>Date/Time: 10 November, 2017 (09:00 a.m. - 12:00 p.m.) Venue : YES Room, Bangunan Ingenieur Speaker : Ir. Amir Hussein CPD/PDP : N/A Remark : 16 Participants School Name: Sekolah Kebangsaan Putrajaya Presint 18(1)</p> |
| 3 | <p>ICTSIG Junior Digital Class (November 2017) - STEM Fun Learning Introduction: Prototyping of Arduino application using Microduino #1</p> <p>Date/Time: 10 November, 2017 (02:00 p.m. - 05:00 p.m.) Venue : YES Room, Bangunan Ingenieur Speaker : Ir. Amir Hussein CPD/PDP : N/A Remark : 15 Participants School Name : Sekolah Kebangsaan Assunta 1</p> |
| 4 | <p>ICTSIG Junior Digital Class (November 2017) - STEM Fun Learning Introduction: Prototyping of Arduino application using Microduino #1</p> <p>Date/Time: 08 November 2017 (02:00 p.m. - 05:00 p.m.) Venue : YES Room, Bangunan Ingenieur Speaker : Ir. Amir Hussein CPD/PDP : N/A Remark : 15 Participants School Name: Sekolah Kebangsaan Assunta 1</p> |

and curious tinkerers of all ages. It is powerful, small, LEGO®- compatible and also magnetically stackable. Students learnt the basics of circuitry, electronic controller, power source, mechanical sensor (switch), light sensor, sound sensor (microphone) and colour LED trinket to construct energy efficient light prototypes. Students tried out different sensors and trinkets configurations and operation parameters to modify the energy efficient light prototype for different types of real world application. This project mover was Ir. Amir Hussein bin Jaafar.

SYLLABUS

1. An introduction to IEM and IEM's role in promoting the engineering profession.
2. Explanation on STEM education initiatives to school children and the digital hub formation in IEM.
3. To give an overview with lots of examples of STEM.
4. Prototyping of Arduino application using Microduino #1 –
5. Exploring Microduino basics, circuitry, power supply, electronic components and to build up familiarity with the Microduino modules.
6. Introducing various sensors, LED and trinkets and build energy efficient lighting control.
7. Introduction to software simple programming technique. ■



Helping the students



Group photo session