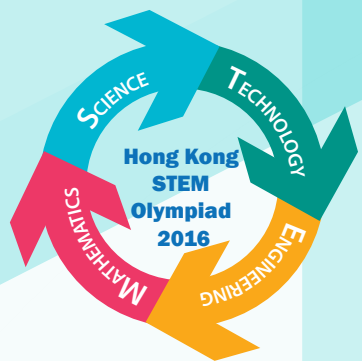




Hong Kong STEM Olympiad 2016

Come and join us for

CHALLENGES IN STEM "KNOWLEDGE AND PRACTICE"!

08 July 2016



Organizers:



For more detail, please visit



Co-organizers:



Major Supporters:



Hong Kong STEM Olympiad 2016

OBJECTIVES:

- To provide senior secondary school students with informal learning opportunities to deepen their understanding of STEM, and to enhance their interest in pursuing further study in STEM subjects and career; and
- To create an atmosphere conducive to the teaching and learning of STEM in secondary schools, and to heighten teachers' and students' awareness of the importance of STEM education.

FEATURES:

- The STEM Olympiad consists of two parts:
 - Part I: "STEM-related Knowledge Challenge (知識大檢閱)" – Students will participate on both individual and team basis to demonstrate their knowledge in relation to STEM subjects.
 - Part II: "Innovations in Practice (創新實踐大挑戰)" – Students will work in teams to solve a set of problems and create an innovative design, artefact or solution that requires integration and application of STEM related knowledge and skills.
- **NO prior training or preparation is required. Students will come for an enjoyable event to**
 - Acquire new knowledge, skills and insights into STEM education through participating in the competition;
 - Reflect on their future orientation with respect to STEM education and career; and
 - Be rewarded with medals, trophies, prizes (coupons and/or mobile devices) and certificates of High Distinction, Distinction, or Credit

DATE: 8th July, 2016 (Friday, whole day)

VENUE:

The Education University of Hong Kong (Tai Po Campus)

ELIGIBILITY FOR APPLICATION:

- S.5 & S.6 students could form teams of four to participate in the event. Each team could comprise four S.5 and/or S.6 students in any combination.
- Each team should comprise students taking the subjects of Physics, Chemistry, Biology and ICT so that the team should be able to solve problems related to all these four areas. All members are expected to have studied core mathematics.
- All schools are invited to nominate one to four teams.
- Priority will be given to schools that nominate teams comprising S.6 students.

RUNDOWN OF THE COMPETITION:

Rounds	Items	Type of question
Morning Session Part I: Knowledge Challenge	Part I (a): Individual Knowledge Challenge <i>Members of each team</i> to answer a set of questions in one of the four areas (Physics, Chemistry, Biology, or ICT)# respectively	MC questions*
	Part I (b): Team Knowledge Challenge <i>Each team</i> to answer <i>mathematics problems</i> related to all the four areas (Physics, Chemistry, Biology, and ICT)	MC questions*
Afternoon Session Part II: Innovations in Practice	Part II: Innovations in Practice <i>Each team</i> to solve a selected problem and create an innovative design, artifact or solution by integrating and applying STEM knowledge and skills	Hands-on problem solving and design

*Questions both in English and Chinese will be provided.

Under special circumstances, a team may give up one subject area, and have two members choosing the same subject in another area.

MAJOR PRIZES AND AWARDS (TENTATIVE):

- Individual awards (gold, silver and bronze medals) for three students with the highest ranking in each subject (Physics/ Chemistry/ Biology/ ICT) in Part I(a)
- Team awards (champion trophies for schools plus gold, silver and bronze medals for individuals) for Parts I(b) and II
- Grand prizes (coupons and/or mobile devices) for team members of the overall champion in Part II
- Certificates of High Distinction, Distinction, or Credit for all individuals achieving the standards required

IMPORTANT DATES:

Date	Item
20 May 2016	Briefing on Hong Kong STEM Olympiad 2016
09 May - 08 June 2016	On-line Application
08 July 2016	Hong Kong STEM Olympiad 2016

ENQUIRY:

Website: <http://www.eduhk.hk/stemo/>

Email: stemo@ied.edu.hk

Remark: The organisers reserve the rights to make necessary alteration of the rules and detailed arrangement.

Time	Programme Rundown			
09:00-09:15	Registration Venue: Outside C-LP-11			
09:15-09:45	Opening Ceremony + Briefing Venue: C-LP-11			
10:00-10:50	STEM Olympiad Activity (Students)	STEM Education Workshop (Teachers)		
	Part 1a: Individual Knowledge Challenge (Physics/Chemistry/Biology/ICT) Venue: Sport Hall & Conference Hall @ Block E	10:05-10:50 WS1: Forum on Ways to Implement STEM Education in HK WS2: Implementing scientific investigation at field with mobile device and IT resources		
10:50-11:05	Break			
11:05-11:55	Part 1b: Team Knowledge Challenge (Mathematics integrated with Physics/Chemistry/Biology/ICT) Venue: Sport Hall & Conference Hall @ Block E	11:05-11:50 WS3: HK STEM projects experience sharing		
		WS4: Application of Arduino system in Science Teaching and Learning (for teachers)		
		WS5: Scientific Investigation at Junior Secondary Student – A “Hands-on” Experience’		
11:55-12:55	Lunch			
12:55-13:30	Mass Lecture Venue: C-LP-11		Exhibition	
13:30-13:40	Announcement of teams to enter the Part 2 competition		STEM Education Exhibition Time: 13:00 pm – 17:00 pm Venue: Near Learning Common Area @ C-LP	
13:45-16:00	Part 2: Innovations in Practice - Hands-on problem solving Venue: Sport Hall@ Block E	STEM Education Activity (Students and Teachers) 13:45-14:30		
		WS6: STEM Education & Robotics Competition		TR1: Eco-Garden Tour
		WS7: Application of Arduino system in Science Teaching and Learning (for students)		
		WS8: Post lecture Q&A and sharing of personal experiences in STEM careers		
		Adjudicators assembly (14:30-15:00)		
		STEM Education Activity (Students and Teachers) 14:45-15:30		
16:00-16:30	Adjudication Venue: Sport Hall @Block E	Survey and Collection of Certificates Venue: C-LP-11		
		Break, Survey and Collection of Certificates Venue: C-LP-11		
		Closing Ceremony + Prize Presentation Venue: C-LP-11		
After 17:30	Media Conference			

STEM Education Workshop and Mass Lecture Details

Time	Code	Topic	Speaker	Target	Venue
10:05-10:50	WS 1	Forum on Ways to Implement STEM Education in HK	Mr. LAU, Kwok Leung Gyver Chair, Hong Kong Association for Science and Mathematics Education Ir. Norman CHENG Honorary Secretary– Environmental Division, The Hong Kong Institution of Engineers Prof. YEUNG, Yau Yuen Professor, Department of Science and Environmental Studies, EdUHK	Teachers	D4-LP-02 (Multimedia Lab) <i>Capacity: Max.70</i>
	WS 2	Implementing scientific investigation at field with mobile device and IT resources	Ms. Lydia PANG Senior Education Officer, WWF-Hong Kong	Teachers	D3-LP-06 (Physics Lab) <i>Capacity: Max.40</i>
11:05-11:50	WS 3	HK STEM projects experience sharing	Mr. Jack WU Business Director, Discovery Technologies Limited (DTSL)	Teachers	D4-LP-02 (Multimedia Lab) <i>Capacity: Max.70</i>
	WS 4	Application of Arduino system in Science Teaching and Learning (for teachers)	Mr. WONG, Shek Nin Aberdeen Technical School	Teachers	D3-LP-06 (Physics Lab) <i>Capacity: Max.40</i>
	WS 5	Scientific Investigation at Junior Secondary Student - A “Hands-on” Experience’	Dr. CHENG, Nga Yee Irene & Mr. NGAN, Kin Lun Alan Centre for Education in Environmental Sustainability, EdUHK	Teachers	D3-G-05 (IS Lab) <i>Capacity: Max.40</i>
12:55-13:30	Mass Lecture Ir. Henry CHAU, KM Assistant Director, Drainage Services Department			Teachers & Students	C-LP-11 (for students only) & D1-LP-03 (for teachers) <i>Capacity: Max.750</i>
13:45-14:30	WS 6	STEM Education & Robotics Competition	Mr. Paul YEUNG CCC Rotary Secondary School	Teachers & Students	D4-LP-02 (Multimedia Lab) <i>Capacity: Max.70</i>
	WS 7	Application of Arduino system in Science Teaching and Learning (for students)	Mr. WONG, Shek Nin Aberdeen Technical School	Students	D3-LP-06 (Physics Lab) <i>Capacity: Max.40</i>
	WS 8	Post lecture Q&A and sharing of personal experiences in STEM careers	Ir. Henry CHAU, KM Assistant Director, Sewage Services, Drainage Services Department	Teachers & Students	C-LP-11 <i>Capacity: Max.600</i>
	TR 1	Eco-Garden Tour	Student Ambassadors, EdUHK	Teachers & Students	Meetup point: Outside C-LP-11 <i>Capacity: Max.118</i>
14:45-15:30	WS 9	Are you STEM-ready?	Dr. LAI, Yiu Chi Associate Professor, Department of Mathematics and Information Technology, EdUHK	ICT teachers	D4-LP-02 (Multimedia Lab) <i>Capacity: Max.70</i>
	WS 10	Benefits of using Aquaponics in STEM education - Implementation of experimental-, game-, enquiry- and group-based learning methods	Mr. Dick CHAN Founder and technical support of SuperFarm (Hong Kong) Limited	Teachers & Students	D3-LP-06 (Physics Lab) <i>Capacity: Max.40</i>
	WS 11	Realizing STEM Education with the Makeblock STEM Educational Platform	Ms. Sandra CHAN Director of Everbest 2.0, Founder of Hong Kong Junior Robot Engineer Program	Teachers & Students	D3-LP-01 <i>Capacity: Max.80</i>
	TR 2	Eco-Garden Tour	Student Ambassadors, EdUHK	Teachers & Students	Meetup point: Outside C-LP-11 <i>Capacity: Max.100</i>

General Information

Transportation: STEM0 Free Shuttle Bus service

Direction	Pick-up point	Drop-off point	Departure Time
To EdUHK	Tsuen Wan / KLN Tong Station	EdUHK Block C	08:00am
To EdUHK	University Station	EdUHK Block C	08:30am
From EdUHK	EdUHK Block B4	University Station	14:00pm-18:05pm
From EdUHK	EdUHK Block B4	KLN Tong Station	15:45pm- 18:00pm

Transportation: EdUHK Free Shuttle Bus service

Direction	Pick-up point	Drop-off point	Departure Time
To EdUHK	University Station	EdUHK Block B1	Around 10-15 minutes Interval
From EdUHK	EdUHK Block B1	University Station	Around 10-15 minutes Interval

Meals and Lunch Venues

- One set lunch per **registered student participant** is provided by our sponsor. Those lunch box coupons for students and drink coupons (two per person) for teachers and students are given in the folder of a leading teacher who is asked to distribute those coupons to every participating student.
- Each student will receive one set lunch in exchange for lunch box coupon at:
Venue: Counters of “素滋味” and “環球美食” @ Canteen, C-LP
- Students should enjoy their lunch boxes in the following places:
 - Canteen @ C-P,
 - Outside Learning Common Area @ C-LP or
 - Conference Hall @ E-P
- Teachers and students may enjoy their self-paid lunch in the following places:
 - Canteen @ C-P
 - U Deli Cafe @ B4-G
 - Chinese Restaurant @ C-P
 - Western Restaurant @ C-P
 - Pacific Coffee @ C-LP

Final Remarks

1. All students must attend the mass lecture and arrive at the lecture theatre C-LP-11 by 12:55 pm. Once the lecture starts, no late-comers will be allowed to enter the theatre.
2. Around 40-50 teams will be selected to participate in the afternoon team competition for “Innovations in Practice”. The information will be released by 13:30 pm in the lecture theatre C-LP-11 immediately after the mass lecture.

Campus Map

Level		
Ground Floor (G)	Shuttle	EduHK Free Shuttle Bus
		STEMO Free Shuttle Bus
	Lunch Venue	U Deli Cafe
Podium (P)	STEMO Activity	Conference Hall
	Lunch Venue	Canteen (C-P) "素滋味" & "環球美食"
		Chinese Restaurant
		Western Restaurant
Lower Podium (LP)	STEMO Activity	Registration
		Opening & Closing Ceremony
		Sport Hall
	Lunch Venue	Mass Lecture
	Exhibition	Pacific Coffee
		Learning Common Area



