



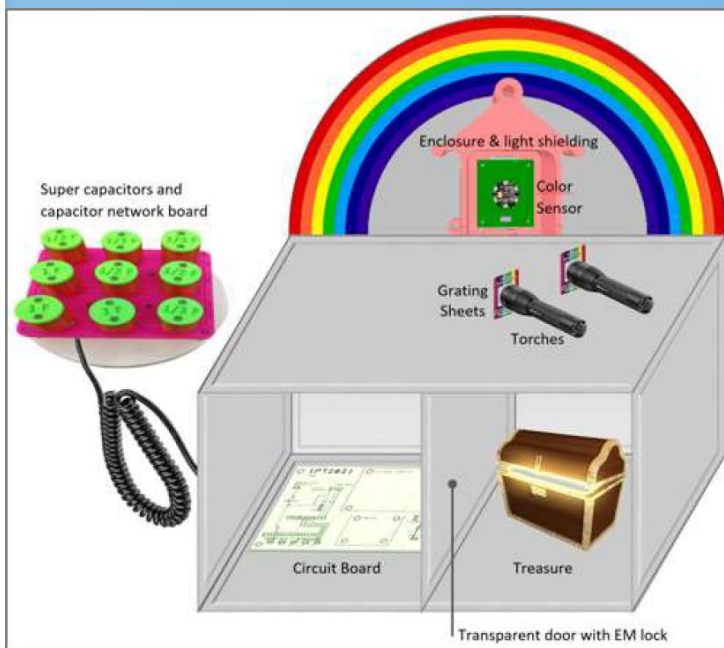
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 Academic Introductory Talk Series

The “Safe Cracking” International Physics Tournament 2024 – Hong Kong Regional Final: Briefing Session

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Intended Learning Outcomes

Upon completion of the programme, participants should be able to:

1. describe the purpose, format and requirement of the “Safe Cracking” International Physics Tournament (IPT) 2024 – Hong Kong (HK) Regional Final;
2. recognise different kinds of hardware and related skills that can be used to build a safe;
3. play with previous safes developed HKAGE teams;
4. suggest creative ideas of locking mechanisms for building a safe.



◆ Introduction

The “Safe Cracking” International Physics Tournament (IPT) 2024 – Hong Kong (HK) Regional Final is organised by the Hong Kong Academy for Gifted Education (HKAGE). The regional competition aims at providing a platform for STEAM students to showcase their talents. Outstanding students would be selected to represent the HKAGE to join the “Safe Cracking” IPT 2024 (<https://davidson.weizmann.ac.il/en/programs/cracking>) held by Weizmann Institute of Science, Israel.

The IPT encourages understanding of scientific principles (particularly in physics) and development of original ideas to implement these principles. In the tournament, high school students of each team need to design, build, and operate up to two locking mechanisms for a safe based on different principles of physics. These mechanisms must be sophisticated enough to keep the safe locked unless one deciphers the physics principles behind them. You may watch the [video of IPT 2023](#) for more details.

In this briefing session, we shall introduce the IPT-HK competition, including the purpose, format and requirement. We shall also discuss different kinds of hardware and related skills that can be used to build the safe (e.g., electro-mechanical locks, various sensors, microcontrollers, and Bluetooth/WiFi modules). Three safes developed by previous HKAGE teams (participated in IPT 2021 to 2023) will be showcased. Participants will also have a chance to take a closer look at the safes.

◆ Schedule

Session	Date	Time	Venue
1	13 Sep	5:00 p.m. – 7:00 p.m.	Room 105, HKAGE

◆ Target Participants

- Open to public: Physics school teachers, and S3 – S5 students in 2023/24 school year.
- Class size: 80
- * First-come, first-served.

◆ Medium of Instruction

Cantonese

◆ Certificate

E-Certificate will be awarded to participants who have attended the talk.

This talk is one of the items in the four domains of the Holistic Talk Series. The objective is to facilitate the all-round development of student’ gifted potential.



The Hong Kong Young Academy of Sciences (YASHK) talk series

Talks are about emerging technology to inspire students’ motivation in pursuing knowledge in specialized areas.



Celebrities Talk Series

Celebrities share their life-changing moments to enhance students’ aspirations for life.



Academic Introductory Talk Series

Introduce trendy topics to widen the students’ horizons.



Future Insight Talk Series

Professionals explain the latest trend in their industry to give students an insight to plan their future.