

# Fun Science Competition 2021

## Through the Channel, Down the Generals II

Jointly organised by

The Hong Kong Science Museum, Leisure and Cultural Services Department, the Society of Hong Kong Scholars, Hong Kong Association for Science and Mathematics Education and Hong Kong Federation of Education Workers

Sponsored by

Tin Ka Ping Foundation

### Details of the Competition

#### I. Objectives

To design and produce an operating device that passes through a channel and then topples some cylindrical object(s) in the target zone.

#### II. Competition Rules

1. The initial length and width of the device shall not exceed 20cm.
2. The device can be made of any material, except for finished products purchased from the market.
3. The device shall pass the following challenge:
  - a. The device shall begin from the starting point (zone A) on the test bench, pass through a channel (zone B with inner dimensions of length of 30cm, width of 30cm and height of 20cm) and enter the target zone (1.5m x 1m).
  - b. The device shall topple 10 cylindrical objects (1.5V AA battery: with approx. diameter of 1.4cm, height of 5cm and weight of 23-24g) at fixed positions in the target zone.
  - c. After toppling the cylindrical objects, the device shall cease movement on the test bench.
  - d. The process of moving from the starting point to ceasing movement on the target zone shall be completed within one minute, otherwise, the challenge is considered to have failed.
  - e. No remote controls are allowed to operate the device.
  - f. The device that topples the most cylindrical objects before it ceases movement wins. If multiple entries topple the same number of cylindrical objects, the lightest one wins.

4. Competitors shall submit design drawings with a brief introduction (within 1 page of A4 sheet) on the competition day to explain the design principle. Failing to submit the design drawing may result in disqualification.
5. The competition involves a Junior Division (Form 1 - Form 3) and Senior Division (Form 4 - Form 6), and both are further divided into a “Motorised” category (of electricity-powered devices) and a “Non-motorised” category (of non-electricity-powered devices).
6. The specifications of the test bench is as follows (dimensions may contain error of  $\pm 5$ mm owing to being hand-made):

### III. Prizes

A maximum of 12 prizes are awarded to each group:

4 First Class Awards, with cash prize of HKD 2000

4 Second Class Awards, with cash prize of HKD 1500

4 Third Class Awards, with cash prize of HKD 500

For each group, there is additionally one Best Design Award and one Best Craftsmanship Award with cash prize of HKD 1000 each, and one Best Layout Award with cash prize of HKD 500.

The number of awards distributed depends on the results of the competition.

### IV. Competition Schedule and Venue

Date: 23.1.2021 (Saturday)

Venue: Lecture Hall, Hong Kong Science Museum

Junior Division Competition Time: 9:00am – 1:00pm

Senior Division Competition Time: 2:00pm – 6:00pm

(The competition schedule will be adjusted according to the number of participating teams.)

The result of each category will be announced online by the end of January, and cash prizes and certificates will be mailed to the schools after the competition.

### V. Enrolment Method

Applicants shall submit their completed application form in person or via mail before 5:00pm, 5.1.2021 (Tuesday) to:

**Hong Kong Association for Science & Mathematics Education**

Room 114, 1/F., Po On Court, 1 Po On Road, Sham Shui Po, Kowloon

Contact number:

2333 0096 or 2333 7602

Contact email address:

[enquiry@hkasme.org](mailto:enquiry@hkasme.org)

Where an application is submitted by mail, the applicant shall be liable for any delay or error of the mailing.

Applications shall be submitted with the school as a unit of participation, and the school shall nominate at most two teams to the Junior and Senior Division each, and each participant may only apply for one team.

**[Download the application form](#)**

VI. Judging

The organising committee will invite scholars, scientists and members of the public to adjudicate at the competition. The decisions of the judges are final and subject to no objection or appeal from competitors.

VII. Briefing Session (on-site and online)

We cordially invite you to attend the briefing session to be held by the organising committee, which informs participants about the rules and arrangement, as well as display the test bench used in the competition.

The briefing session is detailed as follows:

Date: 28.11.2020 (Saturday)

Time: 9:30am – 11:00am

Venue: Lecture Hall, Hong Kong Science Museum

Language: Cantonese

Fee: Free

The briefing is free-of-charge, and participants may choose to join the on-site or online session.

**On-site Briefing Session**

Enrolment method: Click [here](#) to enroll

Limited seats available on a first come, first served basis.

**Online Briefing Session**

The briefing session shall be hosted via the online video conferencing platform Cisco Webex.

Web meeting link: Click [here](#) to join

Meeting ID: 176 059 8580

Password: Fsc2021

Participants may join the web meeting using the link above 15 minutes before the briefing session begins (from 9:15am, 28.11.2020).

Notes:

1. Participants may join the meeting free-of-charge using the web conferencing platform Cisco Webex. No recording of any nature may be taken without the approval of the organising committee.
2. Please download the relevant software and check the system requirements (including the operating system and browsers) for PC / tablet / smartphone at: <https://help.webex.com/en-us/nrbgeodb/Join-a-Webex-Meeting>
3. The number of participants is limited to 1000. If the limit is reached, latecomers will need to wait until someone leaves the online meeting room to join the meeting.
4. To ensure a smooth reception, please make sure that your device is connected to WiFi or has sufficient mobile data with a stable connection.

**For details and latest information regarding the briefing session and competition, please refer to announcements made on this website, or the Facebook Page or Instagram page of the Hong Kong Science Museum**

Enquiries: 2732 3223 (Mon to Fri: 9:00am – 1:00pm, 2:00pm – 5:00pm, except public holidays)

#### VIII. Reservation of Test Bench for Trial Runs

The Hong Kong Science Museum will open the test bench for trial runs before the competition. Participating teams may contact the staff of Hong Kong Science Museum from 9:00am, 7.1.2021 (Thursday) to reserve a timeslot.

Note: Reservations are made with schools as a unit of participation, and each school may only reserve 1 timeslot of 20 minutes for the Junior and Senior Division each.

Reservation Timetable: Please click [here](#)

Trial venue: Activity Room, 1/F, Hong Kong Science Museum

Reservation number: 2732 3223 (Mon to Fri: 9:00am – 1:00pm, 2:00pm – 5:00pm, except public holidays)