Education Bureau Circular Memorandum No. 31/2025

From: Secretary for Education Ref : 1125-2015-8075-9030-00009-001 Date : 13 February 2025 To: Heads of all Secondary Schools

Hong Kong Secondary Student Space Station Popular Science Payload and Science Experiment Design Challenge

Summary

This circular memorandum aims to invite secondary schools to participate in the captioned aerospace science competition and attend the "Kick-off Ceremony cum Experiment Proposal Design Briefing Session", as well as related payload design training activities.

Background

2. To align with the national strategy of invigorating the country through science and education, and in support of Hong Kong's development into an international innovation and technology (I&T) hub, the Education Bureau, the Hong Kong Special Administrative Region Government (EDB, HKSARG) has been stepping up the promotion of STEAM education in schools. Through various support measures, we aim to enhance students' interest and capabilities in learning science and I&T. We continue to collaborate with various I&T organisations and tertiary institutions to provide students with diverse learning opportunities both inside and beyond the classroom, strengthening their scientific literacy and innovative spirit; thereby nurturing talents for the nation and Hong Kong.

3. Aerospace education is an imperative component of science education in schools. To enhance students' knowledge of aerospace and its applications, and deepen their understanding and appreciation of the nation's breakthroughs and achievements in science and technology, the EDB, HKSARG, in collaboration with national aerospace agencies, local tertiary institutions, and relevant organisations, will launch the "Hong Kong Secondary Student Space Station Popular Science Payload and Science Experiment Design Challenge" (the Challenge) in February this year.

Details

4. We will invite a national space agency to serve as an adviser for the Challenge. The Challenge is co-organised by the EDB, HKSARG, the Technology and Engineering Center for

Space Utilization, Chinese Academy of Sciences (CAS-TECSU), and the Hong Kong University of Science and Technology (HKUST), in support of the Department of Educational, Scientific and Technological Affairs, the Liaison Office of the Central People's Government in the Hong Kong Special Administrative Region, along with partner organisations including the Beijing-Hong Kong Academic Exchange Centre, the Hong Kong Federation of Education Workers, and the Education Convergence.

5. The Challenge aims to promote aerospace education, providing students with invaluable opportunities to participate in national aerospace projects. It seeks to ignite students' passion for exploring the vast universe, and cultivate their awareness of scientific innovation and a sense of national pride and belonging through scientific practice and challenging tasks.

6. We invite secondary schools to participate in the Challenge on a team basis. Each school may register three teams at most, with each team consisting of three to five students. Students may also form teams across schools. If schools send students to participate across schools, each cross-school team will be counted as one team. Each participating team is required to submit a scientific experiment design proposal that is suitable for conducting in space environment or under microgravity conditions.

7. An expert panel will evaluate the experiment design proposals submitted by school teams. The award-winning and selected proposals will undergo a final review by the CAS-TECSU. The proposals that pass the final review will be recommended for space mission(s) such as satellite or space station and refined according to the payload requirements. Further to the receipt of the final approval for the proposals, the respective student teams will be guided by a team of aerospace experts from the HKUST to implement the proposals and produce the final products. Upon successful testing, the products would be recommended to the space station space mission, "Space Station Hong Kong Popular Science Satellite" Project, to commence in 2026.

Kick-off Ceremony cum Experiment Proposal Design Briefing Session

8. To inform schools about the arrangements for the Challenge and provide students with insights into the latest developments in national aerospace, we will organise the Kick-off Ceremony cum Experiment Proposal Design Briefing Session for the Challenge. We will have Professor YU Hongyu of the HKUST, who has been the project leader of the "Space Station Popular Science for Hong Kong" Project, as well as Professor WANG Yi, who serves as the Associate Director of the Space Science and Technology Institute (SSTI) of the HKUST, as the keynote speakers. Professor YU and Professor WANG will present on the theme "Exploring the Universe, Igniting Dreams — Building Aerospace Aspirations with Hong Kong Secondary Students." During the event, the EDB, HKSARG and the aerospace experts team led by

Professor YU and Professor WANG will also introduce information about the competition regulations, rules, and scoring criteria. The event details are as follows:

Date:	25 February 2025	
Time:	2:30 p.m. – 5:00 p.m. (registration starts at 2 pm)	
Venue:	Lecture Theatre, 4th Floor, West Block,	
	Education Bureau Kowloon Tong Education Services Centre	

9. We welcome secondary school principals, teachers, and students to attend the Kick-off Ceremony cum Experiment Design Proposal Briefing Session. Interested schools may apply for the briefing session via the Training Calendar System (Course ID: <u>CSD020250319</u>) <u>on or before</u> <u>21 February 2025 (Friday)</u>.

Payload Design Training Activities and Evaluation Schedule

10. The organising bodies will provide a series of training activities for participating teams, including payload design creation sessions led by aerospace experts. Online consultations, as well as reviews and suggestions for improvement on payload designs, will also be offered to participating teams.

11. Participating teams are required to upload their design files and demonstration videos to the competition website by 5 May 2025. After the evaluation by aerospace experts, an "Award Ceremony and Achievement Exhibition" will be held at the end of June. The schedule of the event which includes a series of key dates and major activities, is outlined in the table below:

Date	Event Details / Arrangements
25 Feb	• Kick-off Ceremony cum Experiment Design Proposal Briefing Session
	• Launch of online platform (including registration platform)
26 Feb to 8 Mar	Aerospace experts offer online lectures for students interested in the competition to further understand the content related to the competition
8 Mar (by 11:59 p.m.)	Deadline for competition registration
9 Mar to Apr	Aerospace experts provide training and guidance on payload design creation for the confirmed registered teams
5 May (by 11:59 p.m.)	Deadline for uploading design files and demonstration videos to the competition website
5 May to mid-May	Expert evaluation

Date	Event Details / Arrangements
After mid-May	Selected teams refine their proposals under expert guidance
End of Jun (exact date to be confirmed)	Award Ceremony and Achievement Exhibition
After Jun	Selected teams receive guidance from aerospace experts, implement the proposals, and produce the final products

12. Student teams interested in participating are required to register on the competition website (website: <u>https://spacepayload.hkust.edu.hk</u>) with nomination from their respective school(s) by 8 March 2025. For details regarding the competition arrangements and team training, please refer to the Annex and visit the competition website.

Enquiries

13. For enquiries, please contact LO Kam-hung (Tel: 3698 3443) or Ms TAM Tsz-ling (Tel: 3698 3449) of the Science Education Section, Curriculum Support Division, Education Bureau.

Dr William LAM for Secretary for Education

c.c. Heads of Sections - for information

Hong Kong Secondary Student Space Station Popular Science Payload and Science Experiment Design Challenge <u>Competition details</u>

Competition Theme:

The competition does not have a specific theme. The theme could be physics, chemistry, biological science, material science, etc.. Students are encouraged to utilise their prior scientific knowledge and unleash innovation to design payload science experiment proposals. We encourage teachers and students to attend the "Kick-off Ceremony cum Experiment Proposal Design Briefing Session" on 25 February 2025 to learn more about the competition.

Year Levels for Participation:

All full-time Secondary 1 to Secondary 6 students in Hong Kong are eligible to participate. Students from different schools may form cross-school teams for participation.

Entry Requirements:

Entries that have previously participated in other science competitions are still eligible for this competition, on the condition that participants declare this upon submission and clearly indicate the additional value and elements introduced specifically for this competition.

Registration Fees:

This competition is free of charge. Nonetheless, schools are responsible for covering the expenses associated with students' design proposals or prototypes for participation.

Student Training:

Participating teams are required to attend the relevant training as specified. If a proposal is selected and awarded, the respective students must commit to receiving further training, and the schools must provide support to facilitate the training.

Schools of Participating Team Members:

Participants must have the nomination of their respective schools, and each school must appoint a responsible teacher to supervise the participating team(s). For cross-school teams, all members must receive nomination from their respective schools, and every school involved must also appoint a responsible teacher to supervise the participating team(s).

Project Evaluation:

All experiment design proposals submitted before the deadline will be evaluated by a panel of experts composed of the organising institutions, including the EDB, HKSARG and the SSTI, HKUST. The competition will award First Prize, Second Prize, and Third Prize. Each participating team will receive a certificate of participation as an encouragement.

Recommendation of Project Approval:

We anticipate selecting at least two First-Prize-Winning proposals for mission evaluation by CAS-TECSU. The proposals that pass the final evaluation would be recommended for space mission(s) such as satellite or space station.

Competition Information:

Relevant competition information will be announced and updated regularly on the official competition website. All the participating teams must comply with the competition rules.

Website:	https://spacepayload.hkust.edu.hk
QR Code:	

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