

EDUCATION BUREAU CIRCULAR MEMORANDUM NO. 190/2023

From : Secretary for Education

To : Heads of Government, Aided (including special schools), Caput and Direct Subsidy Scheme Primary and Secondary Schools

Ref. : (1) in EDB/CSD/SC/821/17

Date : 27 October 2023

Professional Development Programmes on Innovation and Technology for STEAM Co-ordinators of Schools and the “Student Mentorship Programme on Innovation and Technology” (2023/24)

Summary

This is to invite primary and secondary schools to participate in the Professional Development Programmes on Innovation and Technology for STEAM Co-ordinators of Schools and the “Student Mentorship Programme on Innovation and Technology” (2023/24) co-organised by the Education Bureau (EDB) and Cyberport.

Background

2. With a view to stepping up the promotion of STEAM education and popularising innovation and technology (I&T) learning, EDB has been collaborating with different I&T institutes, tertiary institutions and professional bodies to offer STEAM co-ordinators professional development programmes on I&T, so as to keep them abreast of the latest developments in science and technology for enhancing STEAM-related learning and teaching. In the 2022/23 school year, EDB and Cyberport co-organised the first round of Professional Development Programmes on Innovation and Technology for STEAM Co-ordinators of Schools and STEAM co-ordinators from around 500 primary and secondary schools have completed the training. Meanwhile, we will also continue to organise quality STEAM / I&T student activities of reasonable scale. Schools are encouraged to arrange their students to participate in these activities to enhance their interest in I&T learning, broaden their horizons, and unleash their potential in science and I&T.

Details

3. EDB and Cyberport collaborate again to organise a new series of Professional

Development Programmes on Innovation and Technology for STEAM Co-ordinators of Schools and a new activity – the “Student Mentorship Programme on Innovation and Technology” (2023/24) in the current school year.

Professional Development Programmes on Innovation and Technology for STEAM Co-ordinators of Schools

4. The above teacher professional development programmes will be conducted from November this year to April next year. The training aims to facilitate the co-ordinators’ understanding of the latest development in I&T as well as their mastery of its application and strategies for learning and teaching, and to assist them in infusing I&T learning elements and making good use of digital technology when planning both inside and outside classroom STEAM learning activities for the promotion of STEAM / I&T education in their schools.

5. The training courses cover a variety of I&T topics (e.g. Green Technology, Energy Technology, Smart Living Technology, Generative AI, Big Data, Machine Learning) and suggestions on related classroom activities. In addition, they are infused with learning elements of entrepreneurship and issues on technology-related ethics and sustainable development of the environment. STEAM co-ordinators and teachers can select and apply for the course(s) based on their teaching and school’s development needs. The modes of the training activities include talks and demonstrations, hands-on activities, visits to start-up companies, group discussions, etc. For details of the courses, please refer to **Appendix 1**. Schools are invited to nominate their STEAM co-ordinators to participate in the training. Teachers can apply for the training courses through the Training Calendar System (TCS) of EDB (<https://tcs.edb.gov.hk>).

The “Student Mentorship Programme on Innovation and Technology” (2023/24)

6. The “Student Mentorship Programme on Innovation and Technology” (2023/24) is a student project activity cum exhibition on the theme “Innovative Technologies and Ideas for Better Living”. The entrepreneurs of the Cyberport start-ups will serve as the mentors for students. The programme aims to provide opportunities for students to integrate and apply the knowledge and skills of STEAM-related disciplines to design and formulate innovative solutions or inventions for the improvement of our living.

7. The programme comprises categories of Primary (P4 – P6), Junior Secondary (S1 – S3) and Senior Secondary (S4 – S6). Students will need to submit their STEAM / I&T related projects¹, which can be in the form of end product, prototype or software programmes, on a team

¹ Each team consists of up to 6 members. Students are allowed to submit projects that were entries for other STEAM-related competitions. However, the projects must be the participating students’ original works.

basis. The selected teams of students will receive face-to-face guidance from the Cyberport start-up entrepreneurs and they will formulate enhancement plans for their projects together. The enhanced deliverables of the projects will then be showcased in a public exhibition to be conducted at the end of this school year. Each participating school can nominate at most two student teams. For details, please refer to **Appendix 2**.

8. EDB will conduct an online briefing session on **9 November 2023 (Thursday)** to provide schools with more details of the “Student Mentorship Programme on Innovation and Technology” (2023/24). Schools may apply to attend the briefing session via the TCS (Website: <https://tcs.edb.gov.hk>; Course ID: CSD020230548). The application deadline of the online briefing session is **7 November 2023 (Tuesday)**.



9. Interested schools should complete and return the enclosed application form (**Annex 1** of Appendix 2) and an information sheet introducing the STEAM project (**Annex 2** of Appendix 2) to the Science Education Section, EDB by email (cpssc@edb.gov.hk) on or before **27 November 2023 (Monday)**.

Contact Person

10. For enquiries, please contact Ms Phoenix CHAN (Tel: 3698 3439) or Mr Leo LO (Tel: 3698 3443) of the Science Education Section, Curriculum Support Division, EDB.

Dr William WL LAM
for Secretary for Education

c.c. Heads of Sections – for information

**Professional Development Programmes on Innovation and Technology
for STEAM Co-ordinators of Schools (2023/24)**

Teachers of primary and secondary schools can apply for the following courses through the Training Calendar System (TCS)²:

Course ID	Target Participants	Course Contents	Date
CSD020240063	STEAM co-ordinators and teachers of <u>secondary schools</u>	<ul style="list-style-type: none"> • Sustainable technologies • Green farming • Renewable energy 	Nov 2023
CSD020240064	STEAM co-ordinators and teachers of <u>secondary schools</u>	<ul style="list-style-type: none"> • I&T and sustainable development • Infusing elements of entrepreneurship in STEAM lessons 	Dec 2023
CSD020240065	STEAM co-ordinators and teachers of <u>primary schools</u>	<ul style="list-style-type: none"> • Smart living technologies: Edtech and Health Tech 	Feb 2024
CSD020240066	STEAM co-ordinators and teachers of <u>primary schools</u>	<ul style="list-style-type: none"> • Infusing elements of entrepreneurship in STEAM lessons • STEAM activity in classes: Techathon 	Mar 2024
CSD020240067	STEAM co-ordinators and teachers of <u>secondary schools</u>	<ul style="list-style-type: none"> • Generative AI • Big data • Machine learning 	Mar 2024
CSD020240068	STEAM co-ordinators and teachers of <u>secondary schools</u>	<ul style="list-style-type: none"> • Emerging technologies and their related issues on ethics, laws and the environment 	Mar 2024
CSD020240069	STEAM co-ordinators and teachers of <u>primary and secondary schools</u>	<ul style="list-style-type: none"> • Smart living technologies: Art Tech and Lifestyle Tech 	Apr 2024
CSD020240070	STEAM co-ordinators and teachers of <u>primary and secondary schools</u>	<ul style="list-style-type: none"> • Infusing elements of entrepreneurship in STEAM lessons • STEAM activity in classes: Techathon 	Apr 2024

² The courses to be organised in Nov and Dec 2023 have been released on the TCS of EDB for application. The other courses will be posted on the TCS in due course.

The “Student Mentorship Programme on Innovation and Technology” (2023/24) Details of the Programme

Introduction

The Education Bureau (EDB) invites all primary and secondary schools to join the “Student Mentorship Programme on Innovation and Technology” (2023/24) co-organised by this Bureau and Cyberport, and to submit students’ projects related to STEAM / Innovation and Technology (I&T).

The above activity is a student project activity cum exhibition on the theme “Innovative Technologies and Ideas for Better Living”. The entrepreneurs of the Cyberport start-ups will serve as the mentors for students. Their enhanced STEAM / I&T projects will then be showcased in the exhibition.

Objectives

The programme aims to facilitate students:

- to integrate and apply the knowledge and skills of STEAM-related disciplines and to design and formulate solutions for solving problems in daily living, environment, health, safety, transport, etc.;
- to enhance knowledge of design thinking and its application on STEAM learning;
- to enrich understanding of emerging science, technology and I&T solutions;
- to develop entrepreneurial spirit; and
- to enhance understanding of the I&T development of Hong Kong and the nation.

Categories

- There are three categories: Primary (P4 – P6), Junior Secondary (S1 – S3) and Senior Secondary (S4 – S6).
- Each participating school can nominate at most TWO student teams (Each student team shall consist of 3 to 6 members) for the entry submission.

Main Theme of the Project

The students’ projects to be submitted for the programme should be on the theme “Innovative Technologies and Ideas for Better Living” with the following objectives:

- to solve problems in daily living, environment, health, safety, transport, etc.;
- to enhance people’s quality of living and make people’s daily living more convenient, comfortable and safer; and / or
- to address the needs of specific community groups.

The STEAM projects to be submitted can be in the form of end product, prototype or software programmes, etc.

Selection Arrangement

A. First-round Selection

- Interested schools need to return the completed application form (**Annex 1**) and an information sheet introducing the STEAM project³ for each team with elaboration on how the project applies concepts of I&T for solving problems in daily living, environment, health, safety, transport, etc. (**Annex 2**) on or before 27 November 2023 (Monday).
- Schools will be informed of the selection results on or before 11 December 2023 (Monday).
- Selected teams will be invited to join a sharing session by local I&T start-up companies to be held in late December 2023.

B. Second-round Selection

- Shortlisted teams from the first-round selection will be required to submit in January 2024 a proposal on how to further enhance their own submitted STEAM project with a view to making it more practical, more user-friendly, more affordable, and/or better in performance and functionality.
- All teams that can submit their proposals on time will be awarded a “Certificate of Appreciation”.
- A total of 15 proposals from the three categories will be chosen, and the corresponding teams will join the Student Mentorship Programme during the period from March to May 2024.

Student Mentorship Programme and “Innovative Technologies and Ideas for Better Living” Student Project Exhibition

- Cyberport I&T start-up entrepreneurs will be assigned to the selected teams as their mentors, who will collaborate with the students to enhance the students’ STEAM projects in terms of cost, practicability, performance and functionality, and provide advice on how to commercialise their projects, if applicable.
- The mentoring period shall be from late March to May 2024. The expected contact hours of each student team shall not be less than twenty (20) hours.
- The student teams will join the “Innovative Technologies and Ideas for Better Living” Student Project Exhibition scheduled for early July 2024 (the exact date to be confirmed) to showcase their enhanced projects on STEAM / I&T and share what they have learned from the mentorship programme. The exhibition will be open to all students, teachers and parents, and the public.

Rules and Regulations of the “Student Mentorship Programme on Innovation and Technology” (2023/24)

- Each participating school can nominate **at most TWO teams** of students to participate in the programme. Each student team shall consist of 3 to 6 members.
- Participating schools will be responsible for the production costs of the project and the costs incurred from the Student Mentorship Programme (e.g. transportation costs).

³ Students are allowed to submit projects that were entries for other STEAM-related competitions. However, the projects must be the participating students’ original works.

- The information sheet of the STEAM project for the first-round selection and the proposal for the second-round selection can be written either in Chinese or English.
- The submitted projects and the corresponding information sheets must be original and should not infringe the copyright of any third parties. All sources of information quoted in writing must be explicitly acknowledged. EDB accepts no legal responsibility whatsoever in respect of any copyright issues.
- Late submission will NOT be entertained.
- The Adjudication Panel has complete discretion in relation to all matters concerning results in the first-round and the second-round selection of projects. In all aspects, the Panel shall be the final arbiter.

Application Deadline

- 27 November 2023 (Monday)

Schedule

Date	Important event
27 November 2023	Application deadline
By 11 December 2023	Announcement of results of the first-round selection
Late December 2023	Sharing session by start-up companies
By 26 January 2024	Deadline for submission of proposals
Late February 2024	Adjudication
Early March 2024	Announcement of the results of the second-round selection
Late March – May 2024	Student mentorship programme
Early July 2024 (Tentative)	“Innovative Technologies and Ideas for Better Living” Student Project Exhibition

Attn: Science Education Section, Education Bureau Email: cpsec@edb.gov.hk	(Official use only)
Application deadline: 27 November 2023 (Monday)	P / JS / SS

**The “Student Mentorship Programme on Innovation and Technology” (2023/24)
Application Form**

School Information

Name of School: _____

School Address: _____

Responsible Teachers

No.	Name (English)	Name (Chinese)	Tel. No.	E-mail
1				
2				
3				
4				

Annex 1 (cont'd)

My school would like to nominate the following team(s) of students to participate in the programme. [Remark: Each team should consist of 3 to 6 students]

Team A

*Categories: Primary (P4 – P6) Secondary (S1 – S3) Secondary (S4 – S6)

No.	Names of Students	
	English	Chinese
1		
2		
3		
4		
5		
6		

* Please tick in the appropriate box

Team B

*Categories: Primary (P4 – P6) Secondary (S1 – S3) Secondary (S4 – S6)

No.	Names of Students	
	English	Chinese
1		
2		
3		
4		
5		
6		

* Please tick in the appropriate box

Signature of School Head: _____

Name of School Head: _____

Date: _____

School Chop

The “Student Mentorship Programme on Innovation and Technology” (2023/24)

Information Sheet for STEAM Project

Name of School:	
Category:	Primary (P4 – P6) / Secondary (S1 – S3) / Secondary (S4 – S6) *
Team:	A / B *
Names of Students:	

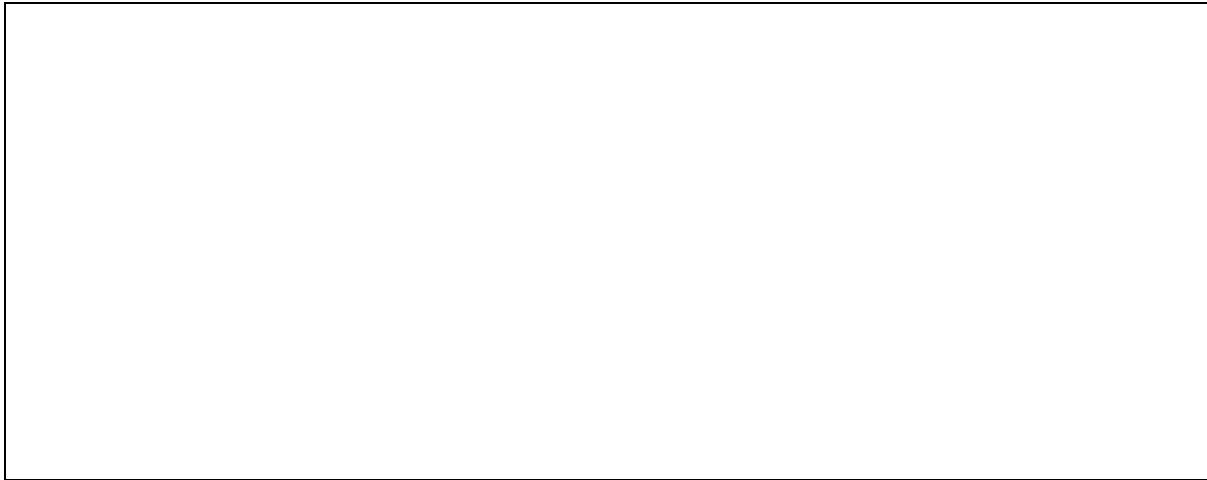
* Please delete as appropriate

Note:

1. Students are allowed to submit projects that were entries for other STEAM-related competitions. However, the projects must be the participating students’ original works.
2. Each team should submit one information sheet introducing their STEAM project. Please duplicate Annex 2 if your school has more than one team.
3. The information sheet submitted should not be more than 1 two-sided A4 sheet.

Signature of School Head: _____	<div style="border: 1px solid black; width: 100%; height: 100%;"></div> <p>School Chop</p>
Name of School Head: _____	
Date: _____	

The theme and title of the STEAM project:



A brief introduction of the STEAM project with elaboration on how it applies concepts of innovation and technology for solving problems in daily living, environment, health, safety, transport, etc.

