

Education Bureau Circular Memorandum No. 243/2024

From : Secretary for Education

To : Supervisors / Heads of all
primary schools offering
local primary curriculum

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Date : 26 November 2024

Professional Training for Primary Science Teachers (2024/25 School Year)

Summary

The purpose of this circular memorandum (CM) is to inform schools of the details about the arrangements for professional training for primary science teachers in the 2024/25 school year, and invite school heads to nominate aspiring primary science teachers to enrol in the relevant courses.

Background

2. In line with the introduction of Primary Science in the 2025/26 school year, the Education Bureau (EDB) has set up the “Training Base for Primary Science Teachers” in the last school year (2023/24 school year) and launched a series of related professional training for in-service primary teachers, including the “**Certificate in Professional Training for Primary Science Teachers**” Programme (30 hours) and “**Certificate in Professional Training on Primary Science Curriculum Leadership**” Programme (15 hours), to facilitate teachers’ understanding of the content of the Primary Science curriculum as well as mastery of related learning and teaching strategies and diversified assessment strategies, so as to better plan for the implementation of Primary Science.

Details

3. In this school year (2024/25 school year), the “**Training Base for Primary Science Teachers**” is located at Canton Road Government Primary School (Address: 178 Canton Road, Tsim Sha Tsui, Kowloon) and will continue to provide the above certificate courses. The EDB

will continue to optimise the training courses to provide teachers with diversified and comprehensive professional training.

4. Regarding the “Certificate in Professional Training for Primary Science Teachers” Programme (30 hours), in addition to the existing “**Professional Teacher Training Series for Introduction of Primary Science**” series of elective courses, we will launch two new series of elective courses, namely the “**Professional Teacher Training Series for Primary Science Outdoor Learning**” and the “**Knowledge Enrichment Series for Primary Science Teachers**”, allowing teachers to take different training courses according to their personal professional development needs.

“Professional Teacher Training Series for Introduction of Primary Science”

5. In the 2024/25 school year, we will roll out a new round of training courses under the “**Professional Teacher Training Series for Introduction of Primary Science**”. In addition to the original three themes “**The Use of Scientific Models in Primary Science Lessons**”, “**Discovering Knowledge through Scientific Inquiry**” and “**Engineering Practice and Innovation**”, two new themes “**Diversified Assessment for Primary Science**” and “**Effective Questioning and Scientific Reasoning**” will be added. The training for each theme is a six-hour seminar-cum-workshop, enabling participating teachers to master engaging and lively teaching methods and diversified assessment strategies, as well as implement the scientific inquiry activities recommended in the Primary Science curriculum in a classroom setting.

6. Courses on the first three themes mentioned above will be held from December 2024 to May 2025. Relevant information has been uploaded to the Training Calendar System (TCS) of EDB. Please refer to **Annex 1** for details. Training courses on the other themes will be launched subsequently.

“Professional Teacher Training Series for Primary Science Outdoor Learning”

7. In the 2024/25 school year, EDB organises the new “**Professional Teacher Training Series for Primary Science Outdoor Learning**” courses in collaboration with relevant government departments and organisations, including Hong Kong Space Museum, Hong Kong Science Museum, Ho Koon Nature Education cum Astronomical Centre (Sponsored by Sik Sik Yuen), Kadoorie Farm and Botanic Garden, Hong Kong Wetland Park, and Fung Yuen Nature and Culture Education Centre. The courses aim to strengthen the

professional capabilities of primary science teachers in organising science field trips and educational visits for students, and introduce to teachers some outdoor learning and visit locations relevant to the Primary Science curriculum.

8. The outdoor learning courses will be held from November 2024 to June 2025. Relevant information of the first five courses has been uploaded to the TCS of EDB. Please refer to **Annex 2** for details. Other outdoor learning courses will be launched subsequently.

“Knowledge Enrichment Series for Primary Science Teachers”

9. In order to help teachers better master the scientific knowledge relevant to the curriculum, EDB will work with post-secondary institutions to launch a new series of online courses, namely **“Knowledge Enrichment Series for Primary Science Teachers”**, to explain the scientific concepts and common misconceptions relevant to the four themes “Life and Environment”, “Matter, Energy and Changes”, “Earth and Space” and “Science, Technology, Engineering and Society”. The online courses are expected to be launched in the first quarter of 2025. Please refer to the TCS of EDB for the details.

10. We invite schools to encourage aspiring primary science teachers to participate actively in the above training courses. Interested teachers may apply for the courses via the TCS (<https://tcs.edb.gov.hk>). EDB will also continue to upload and update information related to the professional training for primary science teachers on the “Primary Science” webpage (<https://edb.gov.hk/ps>). Please visit the above webpage for the latest information.

Enquiry

11. For enquiries, please contact Dr Jenny KWAN (Tel: 3698 4479) of the Science Education Section, Curriculum Support Division, EDB.

Dr William LAM
for Secretary for Education

c.c. Heads of Sections – for information

Professional Teacher Training Series for Introduction of Primary Science

The “Professional Teacher Training Series for Introduction of Primary Science” programme aims to integrate teaching theories and practice, enabling participating teachers to master engaging and lively science teaching methods and diversified assessment strategies, and implement the scientific inquiry activities recommended in the Primary Science curriculum in a classroom setting. Courses on the first three themes include: “The Use of Scientific Models in Primary Science Lessons” (6 hours), “Discovering Knowledge through Scientific Inquiry” (6 hours) and “Engineering Practice and Innovation” (6 hours). Courses on the other themes will be launched subsequently.

Course Title	Content	Event
The Use of Scientific Models in Primary Science Lessons (6 hours)	<p>Seminar (3 hours):</p> <ul style="list-style-type: none"> - Introducing thinking tools and scientific models as an effective way to illustrate and organise scientific concepts - Exploring learning and teaching strategies for guiding students to adopt thinking tools and models in science learning process <p>Workshop (3 hours):</p> <ul style="list-style-type: none"> - Providing hands-on experience in adopting thinking tools and models in science learning process in a classroom setting <p>Examples of related scientific inquiry activities:</p> <ul style="list-style-type: none"> - Study or construct physical models of the related human body systems (or mammals) (Primary 5) - Simulate a simple food chain to illustrate the predator-prey relationship (Primary 4) - Connect circuit components such as batteries, switches, wires and light bulbs, to explore the necessary conditions for a closed circuit (Primary 4) - Use models to explain the phases of the Moon on different days within a month (Primary 3) - Simulate the processes of water cycle using tools such as hot water, cups and lids (Primary 3) - Create models using modelling clay in three different colours to simulate the layered structure of the Earth’s interior (Primary 4) 	<p>CSD020250248 (Re-run)</p> <p>AA-2025/01/09 AB-2025/01/10 AC-2025/01/13 AD-2025/02/10 AE-2025/02/11 AF-2025/02/17</p>

Course Title	Content	Event
Discovering Knowledge through Scientific Inquiry (6 hours)	<p>Seminar (3 hours):</p> <ul style="list-style-type: none"> - Introducing scientific inquiry as an effective way to discover and construct scientific knowledge - Exploring learning and teaching strategies for guiding students to conduct scientific inquiry <p>Workshop (3 hours):</p> <ul style="list-style-type: none"> - Providing hands-on experience in conducting scientific inquiry activities in a classroom setting <p>Examples of related scientific inquiry activities:</p> <ul style="list-style-type: none"> - Perform tests on how to speed up the dissolution of substances in water (Primary 2) - Use a flashlight to shine on the palm to create different shadow puppets, and observe the changes in the size of the shadow when the hand is moved closer to or farther from the light source (Primary 1) - Observe the changes in shadow length and position under sunlight at different times (Primary 4) - Make bread using yeast, and compare the difference between bread made with yeast and without yeast (Primary 5) - Perform tests on the factors affecting the magnitude of friction (e.g. pull an object on different materials and measure the required pulling force using a spring balance) (Primary 4) - Perform tests on the functions of simple machines such as rollers, inclined planes and pulleys (fixed pulleys) (Primary 3) 	<p>CSD020250249 (Re-run)</p> <p>AA-2025/04/10 AB-2025/04/11 AC-2025/04/14 AD-2025/04/15 AE-2025/04/29 AF-2025/05/02</p>
Engineering Practice and Innovation (6 hours)	<p>Seminar (3 hours):</p> <ul style="list-style-type: none"> - Introducing engineering design process as an effective way to design and make new products - Exploring learning and teaching strategies for guiding students to adopt engineering design process <p>Workshop (3 hours):</p> <ul style="list-style-type: none"> - Providing hands-on experience in conducting design-and-make activities in a classroom setting <p>Examples of related scientific inquiry activities:</p> <ul style="list-style-type: none"> - Design and construct a soundproof device, improve its soundproofing effectiveness through design cycle (Primary 5) - Construct simple instruments (e.g. wind vane, rain gauge) to measure weather data (Primary 5) - Construct a periscope (Primary 6) 	<p>CSD020250250 (Re-run)</p> <p>AA-2024/12/12 AB-2024/12/13 AC-2025/05/06 AD-2025/05/08 AE-2025/05/12 AF-2025/05/15</p>

Course Title	Content	Event
<p>(cont'd) Engineering Practice and Innovation (6 hours)</p>	<ul style="list-style-type: none"> - Watch “Shadow Play” and pay attention to the changes in light and shadow (Primary 1) - Design and construct different mechanical devices (e.g. Chinese scales) using the principle of leverage (Primary 6) - Design and make some simple physical models (e.g. a weight-bearing paper bridge) based on the scenarios created by the teacher (Primary 4) 	

Professional Teacher Training Series for Primary Science Outdoor Learning

“Professional Teacher Training Series for Primary Science Outdoor Learning” aims to strengthen primary science teachers’ capability to organise science field trips and educational visits for students, and introduce to teachers some outdoor learning and visit locations relevant to the Primary Science curriculum. The outdoor learning courses will be held from November 2024 to June 2025, and relevant information of the first five courses has been uploaded to the Training Calendar System of the EDB. Other outdoor learning courses (marked with *) will be launched subsequently.

	Course Title	Organisation	Period	Duration	Quota
1	CSD020250259 Visit to Fung Yuen Nature and Culture Education Centre & Fung Yuen Butterfly Reserve (New)	Fung Yuen Nature and Culture Education Centre	Feb – May 2025	3 hrs	120
2	CSD020250260* Visit to Hong Kong Wetland Park (New)	Hong Kong Wetland Park	Feb – Jun 2025	3 hrs	180
3	CSD020250261* Visit to Kadoorie Farm and Botanic Garden (New)	Kadoorie Farm and Botanic Garden	Jan – May 2025	3 hrs	120
4	CSD020250262 Astronomy Workshop (New)	Ho Koon Nature Education cum Astronomical Centre (Sponsored by Sik Sik Yuen)	Jan – Feb 2025	6 hrs	120
5	CSD020250263 Visit to Astropark (New)	Ho Koon Nature Education cum Astronomical Centre (Sponsored by Sik Sik Yuen) / Astropark	Jan – Feb 2025	4 hrs	50
6	CSD020250264* Hong Kong Space Museum School Planetarium Show cum Exhibition Halls Visit (New)	Hong Kong Space Museum	May – Jun 2025	2.5 hrs	200

	Course Title	Organisation	Period	Duration	Quota
7	CSD020250265 & CSD020240683 Hong Kong Science Museum Science Workshop (1) Physical Science cum Exhibition Halls Visit (New)	Hong Kong Science Museum	Jan – May 2025	2.5 hrs	180
8	CSD020250266 & CSD020240684 Hong Kong Science Museum Science Workshop (2) Earth Science cum Exhibition Halls Visit (New)	Hong Kong Science Museum	Nov 2024 – May 2025	3 hrs	120