

Gifted Education Fund: Off-school Advanced Learning Programmes

Programme No. 2022-03 (For primary students)

Title of Programme	Future Inventor Nurture Programme
Programme Provider	Hong Kong New Generation Cultural Association (Supporting organisation: The Hong Kong Academy for Gifted Education)
Theme	STEAM-related Mentorship Programme; Self-initiated Research Study
Maximum No. of Participants and Class Level in the 2022/23 School Year	40 students (Primary 4-5)
Pre-requisite	Applicants should demonstrate outstanding performance in Chinese/ English/ Mathematics/ General Studies at schools and possess basic knowledge and skills in MS Office.
Programme Delivery Period	From May 2023 to April 2024 (12 months) (tentative)
Medium of Instruction	Course Material: Chinese, supplemented with English Class teaching/ Discussion: Cantonese, supplemented with English
Objectives	<ul style="list-style-type: none">• To pave ways for gifted students at upper primary level to become future inventors by enhancing their knowledge in the latest development of science and technology with special reference to notable examples from Mainland China and Hong Kong;• To develop the skills in solving problems, and innovation and technology through hands-on and minds-on learning activities in lessons, and also mentorship research projects on topics such as artificial intelligence (AI), big data and space exploration, etc.;• To provide an opportunity for students to showcase their talents in innovation and technology to experts and practitioners in relevant fields; and• To nurture positive values and attitudes such as perseverance, diligence, respect for others, empathy, ethical use of technology, etc. and develop a sense of national identity among the students.
Programme Outline	This programme aims to prepare gifted students at upper primary level to become future inventors. It will help students acquire up-to-date knowledge and skills for innovation and technology. An authentic research/ invention environment will be created to engage students in mentorship research/ invention. Students will

showcase their talents in a sharing session by the end of the programme. Through the diverse and challenging learning and teaching activities, students will also develop positive values and attitudes essential for personal growth and development.

The programme consists of three phases.

Phase 1: Foundation knowledge lessons by guest speakers (total 60 hours in 7 months)

- This phase introduces a range of hot topics related to the essence for innovation and invention, great stories about inventors and inventions, AI, metaverse, Virtual Reality (VR), Augmented Reality (AR), Mixed Reality (MR), big data, cloud computing, 3D drawing and printing, Arduino programming, space flight and exploration, BeiDou navigation satellite system, etc. The lessons help to develop a broad and solid knowledge base among the students and equip them with necessary practical skills before they proceed to conduct independent research and/ or innovate/ invent under mentorship and support in Phase 2. Elements of values education are infused in the learning and teaching activities.

Phase 2: Mentorship research and invention (3 months)

- Mode and number of meetings to be worked out between a student and his/ her mentor (no less than 10 hours for each student)
- Students will propose their research topics and invention tasks at the beginning of this stage. During the research/ invention process, mentors with relevant expertise will be deployed to guide and support the students through regular meetings, to assure that the students can complete their self-initiated research/ invention tasks within the timeframe. Subject to the topics and nature of the research/ invention, the group size, mode and number of meetings between a student and his/ her mentor will be confirmed in due time.

Phase 3: Showcase of learning outcomes and preparation (2 months)

- The event to showcase students' learning outcomes will last for 3 hours (tentative). Extra time is reserved for preparation/ rehearsal before the event.
- Students will take part in a sharing session to showcase their inventions/ achievements to guest participants that may include academics/ experts in relevant fields, parents and teachers. They will need to answer questions from participants about their work after their presentation. The guests/ instructors/ mentors will provide evaluative and

	constructive feedback to help the students pursue their study and further develop their talents in future.
Admission Fee	Free of charge
Application Method	<p>Application form can be downloaded from the following webpage:</p> <p>https://www.edb.gov.hk/en/curriculum-development/curriculum-area/gifted/ge_fund/gef/programme/current.html</p>  <p>Please complete the application form and send the scanned copy by email (gefund@newgen.org.hk), AND then the original copy by post <u>on or before 21 April 2023</u> to the following address:</p> <p>Hong Kong New Generation Cultural Association 13/F Professional Building 19-23 Tung Lo Wan Road Causeway Bay, Hong Kong</p> <p>Please specify on the envelope: Application for the Future Inventor Nurture Programme</p>
Documents to be Submitted along with the Application	<ul style="list-style-type: none"> • Evidence of Other Learning Experiences (if any)
Enquiry	<p>Ms Jessie CHU (Hong Kong New Generation Cultural Association)</p> <p>Tel No.: 2792 3639 Email: gefund@newgen.org.hk</p>
Date of Announcement of Result	By May 2023 (tentative)