

## 1+1 Science Tip-top Talent Scheme 2019/20

### Information Sheet

#### Objectives

To encourage enthusiasm for science among talented youth, the **1+1 Science Tip-top Talent Scheme**, organized by The Hong Kong Federation of Youth Groups and sponsored by the Innovation and Technology Commission and Hong Kong Science and Technology Parks Corporation, aims to encourage gifted students who are the scientists of tomorrow.

Inquiry-based training for the acquisition of research skills and comprehensive, in-depth, hands-on experience in scientific and technological research are central to the programme. Funding will be available to enable innovative research and inventive work to be actualized.

#### Part 1 Contents of the Scheme

The Scheme will take place from July 2019 to July 2020 and consists of the following programmes:

##### i. Mentorship Programme

Selected teams will model their projects on those of successful scientists and will be guided by mentors with relevant expertise who can offer advice on proposed research topics and invention ideas for inquiry-based training. They also have to attend regular sharing meetings to report their research progress, so as to collect professional advice from different fields of mentors.

##### ii. Research Funds

Each selected team will receive funding of up to HK\$12,000\* to actualize their project. Subject to the research needs and arrangements with mentors, selected teams may have the opportunity to use facilities and equipment in local universities. Travel expenses# of up to HK\$2,000 will also be offered to each team during the period of research.

Remarks:

\*: (1) This funding is for consumable items only.

(2) Original receipts for verification and reimbursement must be submitted every month. All receipts must clearly indicate the name, address and phone number of retail outlets. Invoices are not accepted.

#: (1) Claim forms must be completed and submitted every month.

(2) A maximum of \$40 can be claimed for each journey.

Funding and allowances are given on a reimbursement basis for expenses incurred between July 2019 to July 2020.

##### iii. Exposure Programme

Selected teams will participate in science workshops, lab visits, community and promotional activities, e.g. press interviews and educational activities for students and the public arranged by the Organizer, so as to gain exposure, share their research experience and promote science and technology among the public.

## Programme Schedule

	Date	Event
2019	15 Mar	• Briefing Session
	3 May	• Deadline for Application
	15 May	• Call for selected teams to interviews
	24 & 25 May	• Selection interviews
	Early Jun	• Announcement of results • Matching of selected teams with mentors
	Jul	• 1 <sup>st</sup> Meetings with mentors
	6 Jul	• Selected Teams' Briefing Session cum Experimental Design Workshop
	Jul – Aug	• Science workshops
2019-20	Jul 19 – Jul 20	• Start of research period • Attend sharing meetings (5/10, 18/1 & 25/4) • Submission of research action plans with time frame and revised proposal • Submission of progress report • Attend other exposure programmes
2020	20 Jun	• Submission of final research report and reflection
	11 Jul	• Final research presentation

## Part 2 Application

### i. Eligibility

The Scheme is open to Hong Kong full-time secondary students who meet the following criteria:

- Secondary 3 to Secondary 4 students aged 15 or over (born on or before 1 July 2004)
- has passion in science, innovation and technology
- able to demonstrate commitment and responsibility
- has not been awarded by the same Scheme before

Teams comprising 1 to 2 students must be nominated by schools. Each school may nominate up to 3 teams.

### ii. Materials to be submitted in the Application

#### 1. Research Proposal

- Each team should design a research topic to demonstrate their understanding of science and application of scientific knowledge, and should be different from any other submitted by nominated teams from the same school.
- Such research concepts should be for original, innovative projects that are practical, supported by scientific theories and applicable to real problems or can potentially improve lives (It is not necessarily to conduct the in-depth research unless they are being selected).

- The research topic **must be** in **Biology and Chemistry** stream: e.g. physical chemistry, organic chemistry, inorganic chemistry, materials chemistry, chemical engineering, environmental science, ecology, life science, biotechnology, food science, health science and medicine may be included.
- A project proposal used for another competition or exhibition in a previous school year is acceptable **provided that the project will have another stages or new directions**. Entries submitted to other competitions or exhibitions in the 2018/19 school year are also acceptable.
- Can be written in either English (400+ words) or Chinese (500+ characters), double-spaced in 12 point Times New Roman font or 新細明體 (respectively).
- The type of research proposal should be submitted in either of the following formats:
  - **Invention:** imaginative, original, scientific invention.  
Invention proposals should include: (1) Introduction; (2) Objective; (3) Design of invention; (4) Materials/ Equipment Required and Methods; (5) Application/ Market Needs; (6) References; OR
  - **Investigation:** research on scientific phenomena or the application of a scientific theory.  
Investigation proposals should include: (1) Introduction; (2) Objective; (3) Hypothesis; (4) Materials/ Equipment Required and Methods; (5) Importance/ Impact of Research; (6) References

## 2. Self-recommendation Letter

- Each member of a team should submit a self-recommendation letter to demonstrate their passion in science, innovation and technology, how they expect to gain through the Scheme and their commitment towards the Scheme.
- Can be written in either English (100+ words) or Chinese (200+ characters) double-spaced in 12 point Times New Roman font or 新細明體 (respectively), with the same language as the research proposal.

## Remarks:

- Please state clearly the team members' names, school name, research topic and type (invention/investigation) on the cover of both research proposal and self-recommendation letter.
- Application form and proposal guideline can be downloaded from <http://ccst.hkfyg.org.hk>.
- Separate PDF soft copies of application form, research proposal (the proposal or report submitted to other competitions or exhibitions in the previous year should be provided for reference if there is any) and self-recommendation letter should be submitted to the HKFYG Centre for Creative Science and Technology through email ([ccst@hkfyg.org.hk](mailto:ccst@hkfyg.org.hk)) **on or before 3 May 2019 (Fri), 11:59pm**. If the file sizes are larger than 10mb, teams should use online storage such as sendspace, dropbox and uhub etc. to upload files, and send back the download links to [ccst@hkfyg.org.hk](mailto:ccst@hkfyg.org.hk) by the application deadline. A confirmation email will be sent out within 4 days after receiving the application materials.

### Part 3 Selection Procedures

#### i. Initial Screening

All proposals will be screened according to the following factors, and teams who demonstrate innovative ability and scientific knowledge in the proposal will be invited to attend a selection interview in late May:

Invention Proposal	Investigation Proposal	Percentage
A. Originality <ul style="list-style-type: none"><li>• A new and original invention</li></ul>	A. Originality <ul style="list-style-type: none"><li>• Innovativeness</li></ul>	20%
B. Design of Invention <ul style="list-style-type: none"><li>• Objective of the invention</li><li>• Efficacy of invention</li></ul>	B. Definition of Problem and Analysis <ul style="list-style-type: none"><li>• Objective of the investigation</li><li>• Hypothesis</li><li>• Logic of Analysis</li></ul>	30%
C. Methodology <ul style="list-style-type: none"><li>• Literature Review</li><li>• Feasibility of experimental methods to actualize the invention</li><li>• Scientific theory/ data to support the method</li><li>• Cost Effectiveness</li></ul>	C. Methodology <ul style="list-style-type: none"><li>• Literature Review</li><li>• Feasibility of investigation method</li><li>• Scientific theory/ data to support the method</li></ul>	40%
D. Presentation Skills <ul style="list-style-type: none"><li>• Organization of proposal</li><li>• Fluency of language</li></ul>	D. Presentation Skills <ul style="list-style-type: none"><li>• Organization of proposal</li><li>• Fluency of language</li></ul>	10%

#### ii. Selection Interview

- Potential teams will be interviewed by a judging panel made up of well-qualified scientists. They will make their selection according to the following criteria:
  - proposal content
  - scientific sense
  - commitment, responsibility and dedication
  - passion for science
- 5 successful teams will be notified after the selection interviews.

### Part 4 Engagement in the Scheme

Selected teams will be required to:

- Submit an action plan and time frame for the research after first meeting with mentors; plans can be revised during the research period according to results of experiments, but explanations or analysis should be provided if results contradict a plan or hypothesis.
- Participate in promotional events, press interviews and other related science activities arranged by the Organizer.
- Meet mentors approximately every 3 weeks for guidance and to report progress or difficulties.
- Submit a research progress report (approximately 300 words in English, 400 characters in Chinese; language must be the same as that of the proposal) and

attend a meeting every 3 months to share their progress with other selected teams.

- Submit a final report (approximately 1000 words) with reflection (approximately 500 words) to share what was learned and experienced as a result of taking part in the Scheme.

### **Part 5 Terms and Conditions for Acceptance of the Scheme**

Submission of application forms represents that teams agree the following terms and conditions:

- Teams confirm to abide by any conditions laid down by the Organizer.
- The programme may be terminated at any time if and when team members' performance is considered unsatisfactory or when team members for any reason cease to be full-time Hong Kong secondary students.
- The copyright of the research are deemed the properties of the organizers, selected teams and mentors jointly. The organizer has the right to edit, delete, duplicate, file, transfer, issue, display or publish the research for educational or other non-commercial purposes.
- Unless justifications can be provided, full/pro-rata refund of the research fund by the selected team will be necessary if team ceases the research period by any personal reasons, cannot fulfill the conditions stated by the Scheme or fail to complete all programmes.
- In all aspects, the Organizer shall be the final arbiter. They have complete discretion in relation to all matters concerning the selection and the Scheme.
- The proposal and report submitted must be original work by the selected teams which should not infringe on the copyright of any third parties. All sources of information quoted in proposal and report must be explicitly acknowledged. The organizer accepts no legal responsibility whatsoever in respect of any copyright issues.
- The Organizer reserves the ultimate rights to amend and interpret all the terms and conditions.

### **Part 6 Briefing Session of the Scheme**

A Briefing Session will be held on **15 March 2019, Friday** from 4:30pm to 5:45pm at the Lecture Theatre of Hong Kong Science Museum. Registration must be done online at <http://ccst.hkfyg.org.hk>. The application deadline for the Briefing session is **11 March 2019, Monday**.

### **Part 7 Handling of Information and Personal Data**

The information and personal data provided in the application form will be used and/or disclosed by the Organizer to relevant parties in order to process applications/nominations, to conduct selection interviews, or to monitor progress.

#### **Enquiries**

HKFYG Centre for Creative Science and Technology

Tel: 2561 6149

Fax: 2565 8345

Email: [ccst@hkfyg.org.hk](mailto:ccst@hkfyg.org.hk)

Address: Unit 211, 2/F, Lakeside Two, East Wing, Phase Two, Hong Kong Science Park, Pak Shek Kok, New Territories, Hong Kong