

# JPC x BOC STEM-Up Innovation and Technology Competition 2022

## Competition Guideline

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# JPC x BOC STEM-Up Innovation and Technology Competition 2022

## Competition Guideline

### (I) Brief Details of the Competition

#### Introduction

The Junior Police Call (JPC) has been committed to the provision of a wide range of activities and training for young people over the years. In 2021, a new strategy – IDEAS@JPC was introduced, where ‘I’ stands for Innovation, ‘D’ for Discipline, ‘E’ for Exposure, ‘A’ for Adventure and ‘S’ for Synergy. The JPC has also introduced the JPC Award Scheme to encourage young people to participate in various activities so as to nurture more young leaders to fight crime together.

To suit the needs of students and tie in with the development of STEAM education and promote the development of innovative thinking activities under the new strategy of the JPC, JPC has launched the ‘JPC x BOC STEM-Up Innovation and Technology Competition 2022’ (the ‘Competition’), which is divided into three phases: learning; competition; and award presentation and exhibition. Through an approach based on the concept of ‘Smart City’, primary and secondary school students participating in the Competition will give full play to their STEAM-related knowledge and skills by consolidating them in collaborative projects on enhancing the effectiveness of city management and safety and improving people’s quality of living.

#### Objective

The goal of the Competition is to provide an appropriate platform for student engagement in experiential learning on topics of mobility, living, environment and economy as a means of developing skills in problem solving and logical reasoning, as well as inspiring their creative thinking. In particular, students will put the concept of ‘Smart City’ into practice by proposing innovative and feasible solutions with the objective of building a city incorporating intelligence and safety so that citizens can live in one of the safest and most stable societies in the world.

#### Topics

- Smart Mobility
- Smart Environment
- Smart Living
- Smart Economy

#### Categories

- Junior Primary School Category (Primary One to Primary Three)
- Senior Primary School Category (Primary Four to Primary Six)
- Junior Secondary School Category (Secondary One to Secondary Three)
- Senior Secondary School Category (Secondary Four to Secondary Six)

#### Eligibility

- Hong Kong residents only
- Hong Kong primary and secondary school (daytime) students only
- No repeated applications from participants or repeated entries

#### Sponsoring Organization

- Bank of China (Hong Kong) Limited

## Supporting Organizations

- Education Bureau
- Innovation, Technology and Industry Bureau
- Office of the Government Chief Information Officer
- Hong Kong Productivity Council
- Hong Kong New Generation Cultural Association
- Hong Kong Extra-curricular Activities Masters' Association
- Hong Kong Computer Society
- Hong Kong Cyberport Management Company Limited
- Hong Kong Science & Technology Parks Corporation
- Hong Kong STEM Education Alliance

## (II) Awards

There are over 230 awards of the whole Competition, with a champion, a first runner-up and a second runner-up in each category. Prizes include scholarships, certificates of merit or trophies. Award winners who are JPC members from the secondary school categories may be invited to join the fully funded 'Science and Technology Study and Exchange Tours to the Greater Bay Area' alongside other activities. In addition, each participant will be given a certificate issued by the organizer.

Scholarships (By participating unit)				
	Junior Primary School Category	Senior Primary School Category	Junior Secondary School Category	Senior Secondary School Category
	(Individual Enrolment)	(Individual or Team Enrolment)		
	Creative Design Drawing (A3 Size)	Project Report with the Entry		
Champion	\$5,000	\$8,000	\$10,000	\$12,000
First runner-up	\$3,000	\$6,000	\$8,000	\$10,000
Second runner-up	\$1,500	\$4,000	\$6,000	\$8,000
Best Safe City Award (Crime Prevention)	-	\$2,000	\$3,000	\$4,000
Best Safe City Award (Road Safety)	-	\$2,000	\$3,000	\$4,000
Best Presentation Award	-	\$800 (10 individuals/ teams)	\$1,200 (10 individuals/ teams)	\$1,600 (10 individuals/ teams)
Commendation Award	\$300 (100 places)	\$400 (30 individuals/ teams)	\$600 (30 individuals/ teams)	\$800 (30 individuals/ teams)
^Most Active JPC School Club Participation Award (3 places)	Trophy	Trophy	Trophy	Trophy
Best Coaching Teacher Award (3 places)	Trophy and Certificate	Trophy and Certificate	Trophy and Certificate	Trophy and Certificate
Most Active District JPC Participation Award	Trophy	Trophy	Trophy	Trophy

**^The Most Active JPC School Club Participation Award is limited to the JPC School Clubs only. If you are interested in applying to become a JPC School Club, please refer to page 10 of this Guideline.**

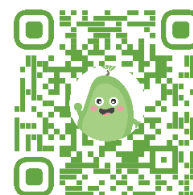
### (III) Notes

#### Schedule

Date	Key activity
1 September 2022	Opening of Application
13 January 2023 (12:00 noon)	Closing of Application
13 January 2023 (23:59 p.m.)	Deadline for Entry Submission (Entry Submission from the Senior Primary School Category, Junior Secondary School Category and Senior Secondary School Category will be notified separately)
February 2023	Adjudication and Announcement of Result
Late March 2023	Award Presentation Ceremony
Early April 2023	Exhibition

#### Learning Phase

To raise students' knowledge on STEAM disciplines and the concept of 'Smart City', JPC has produced a series of e-learning workshops, introducing the topics on 'Mobility', 'Living', 'Environment' and 'Economy' under the Competition theme of 'Smart City'. Professionals and professors were invited to share their knowledge on their professional areas during these workshops. Moreover, JPC will also organize various activities with innovation and technology elements for JPC members to participate in, including different courses and visits. Students and teaching staff can watch the video clips concerned and learn more about the activities through the competition website <https://www.jpc.org.hk/stemup> and the JPC App. Students can complete the simple registration process to be a JPC member through the JPC App.




JPC App

#### Competition Process

- 1. Read the Competition Guideline carefully** >
- 2. Submit the application form (an Entry Number will be given)** >
- 3. Attend STEM-Up E-learning Workshop, conduct research and participate in JPC creative thinking activities** >
- 4. Create and research** >
- 5. Submit the entry**

#### Application Details

Students can enrol for the Competition by the two following means:

- Online application (visit the website of 'JPC x BOC STEM-Up Innovation and Technology Competition 2022' at <https://www.jpc.org.hk/stemup>)
- Completing an application form (e-version of the application form can be download [here](#) or by scanning the QR code , which can be:

- Posted to JPC Section, 123 Gloucester Road, Wan Chai, Hong Kong (date of postmark no later than the deadline);
- Dropped off in person during office hours at JPC Section, 123 Gloucester Road, Wan Chai, Hong Kong;
- Dropped off in person at police stations in various districts (addressed to Police Community Relations Office); or
- Group Application and Submission (collected by and submitted via schools or organizations):
  - Participants can directly pass the completed application forms to the representative of the schools or organizations (if any), and no further online application is required. The forms could be picked up by JPC representatives at schools or organisations upon request by the representative.

‘JPC x BOC STEM-Up Innovation and Technology Competition 2022 - Application Form’ should be clearly marked on the envelope containing the completed form. The closing date for application is **13 January 2023 (12:00 noon)**. Participants who have successfully made an application will receive a confirmation email bearing their Entry Number (on or before February 2022).

#### (IV) Entries

##### Submission of Entries

The entries to be submitted in each category are set out as below:

- Junior Primary School Category	Creative Design Drawing (A3 Size) with the Brief Description Form (Annex A)
- Senior Primary School Category; Junior Secondary School Category; and Senior Secondary School Category	Project Report (Annex B), the Entry and Video


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#### **Junior Primary School Category – Creative Design Drawing (A3 Size) with the Brief Description Form (Annex A)**

Note: Participants can give free rein to their imagination by capturing on a drawing paper for what they envision as the things and scenes belonging to a smart city of the future. This is an opportunity for them to share their ideas and expectations with the public.

##### Rules of Enrolment:

1. Current daytime students from primary one to three in the territory only;
2. This category is open to individual participants only, i.e. no team enrolments. The Creative Design Drawing (A3 Size) (the Drawing), including both the conception and the drawing, should be completed by the participant on his/her own;
3. The Drawing should be done on a drawing paper of A3 size (42cm x 29.7 cm (+/-2 cm)) in landscape orientation;
4. Participants are free to adopt any form (e.g. oil painting, Chinese painting and crayon drawing are all acceptable), style and materials for the Drawing, as long as the entries are two-dimensional drawings. Other types of art or handicraft, including three-dimensional entries, will be rejected;
5. After completing the Drawing, participants should also complete the Brief Description Form (Annex A) (100-300 words); and
6. The Brief Description Form for presenting the underlying concept and explaining the research in detail can be either filled out with a ball pen or completed electronically in Chinese or English in a Microsoft Word file (in .doc or .docx format) and printed out afterwards. (electronic copy of the Brief Description Form could be download [here](#) or

by scanning the QR code (  )



Adjudication criteria:

Criterion	Description	Weighting
Innovativeness	Choice of topic, creativity and novelty	40%
Scientific quality	Scientific foundation and logical thinking	30%
Artistic quality	Layout, colouring and drawing skills	30%

The following kinds of entries will not be considered:

- Works that are i) plagiarized; ii) inconsistent with the size specified; iii) found to contain copyrighted images; iv) submitted without the Entry Number displayed on the item (except group submission); and v) in the form of a three-dimensional object will be disallowed.

Submission Guidelines:

For Creative Design Drawings (A3 Size) in the Junior Primary School Category, participants must submit the Creative Design Drawing (A3 Size) and the Brief Description Form together with clear and secure packaging before the deadline for entry submission. Submission can only be either one of the following means (No online submission will be accepted):

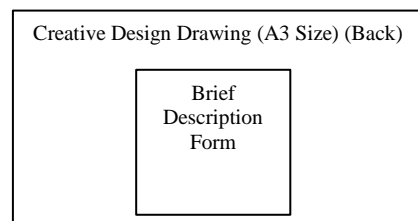
1. By post or drop-off in-person:
  - Post to JPC Section, 123 Gloucester Road, Wan Chai, Hong Kong (date of postmark no later than the deadline);
  - Drop-off in person during office hours at JPC Section, 123 Gloucester Road, Wan Chai, Hong Kong; or
  - Drop-off in person at police stations in various districts (addressed to Police Community Relations Office).
2. Group Application and Submission (collected by and submitted via schools or organizations)
  - Participants can fill out the application form together with the completed Creative Design Drawing (A3 Size) and the Brief Description Form (Entry Number and further online application is not required), and pass the entries to the representative of the schools or organizations. The entries could be picked up by JPC representatives at schools or organisations upon request by the representative.

Submission Notes:

- No further online application is required for participants who submit their entries via schools or organizations;
- If the Creative Design Drawing (A3 Size) is accompanied by packaging, it must be clearly marked 'JPC x BOC STEM-Up Innovation and Technology Competition 2022 - Junior Primary School Category's Competition Entry'; and
- The Brief Description Form showing the Entry Number (except group submission's participants), the name of the entry, and the name of the participant must be affixed properly to the centre of the back of the Drawing.

Illustration diagram:


The Brief Description Form should be attached to the back of the Creative Design Drawing (A3 Size) as shown in the image on the right



### **Senior Primary School Category, Junior Secondary School Category and Senior Secondary School Category – Project Report (Annex B), the Entry and Video**

Note: Participants are required to give full play to their STEAM-related knowledge and skills in conducting research on constructing a smart and safe city, e.g. deterring crime or reducing fatal or serious traffic accidents, which will culminate in the development of new products or technologies with practical applications, or the creation of functional scale models of such products or technologies. Reports on the process of research, experiments and investigation will be compiled to share with the public the discoveries made by the participants along the way.

Rules of Enrolment:

1. Current daytime students from primary four to secondary six in Hong Kong only;
2. These categories are open to individuals and teams (no more than five members each), where the entire process including research, creation and production of models should be completed by the participant (s) and teammates on their own;
3. The Project Report should be submitted with a video (the Video) to introduce the entry under the same Entry Number before the deadline for entry submission. The entry's submission method and the actual date will be announced in or before February 2023;
4. The entry should conform to the dimensions of 60 cm in length by 60 cm in width by 60 cm in height (+/- 2 cm). JPC staff should be informed if the entry exceeds the size specified;
5. The Video should be in mp4 or mov. format, no larger than 100MB in file size and no longer than 3 minutes in length, with Chinese or English commentary, for introducing the entry;
6. In writing up the Report, participants should complete the following sections: Entry Description in Part A (between 100 and 300 words) and Subject of Study in Part B (not more than 3,000 Chinese words / not more than 3,500 English words) in the Project Report (Annex B); additional information is not necessary;
7. The Report, which should give a brief description of the underlying concept and a detailed explanation about the entry, can be either filled out with a ball pen or completed electronically in Chinese or English in a Microsoft Word file (in .doc or .docx format) and printed out afterwards (the electronic copy of the Report can be downloaded [here](#) or by scanning the QR code  );
8. The entry should not violate the law or undermine the public interest; and
9. No specimen of living organisms, plants, liquid or soil should be submitted as part of the entry. Participants should consider alternative solutions if necessary.

Adjudication Criteria:

Criterion	Description	Weighting
Innovativeness	Difficulty of the topic chosen, novelty and sophistication of the research methodology	30%
Scientific quality (research)		30%

Usefulness (invention)	Rationality, accuracy and relevance of the scientific theories and research methodology, or the foreseeable social benefits, application and contribution of the research	
Formality	Citation of adequate data and scientific literature to back up the research, and the completeness of the research and invention project	20%
Conclusion and summary	Competence and performance in collating data, presenting arguments and drawing conclusions	20%

**Submission Method:**

For entries from the Senior Primary School, Junior Secondary School and Senior Secondary School Categories, the participants, with Entry Number obtained after application, should submit the Project Report (Annex B) and the Video before the deadline for entry submission through **ONE** of the following means:

1. Website of the Competition:

- Upload the Project Report (Annex B) (no larger than 20MB in file size) and the Video (in mp4 or mov. format; no larger than 100MB in file size) to the Competition's website (<https://www.jpc.org.hk/stemup>)

2. By post or in-person submission:



- Post to JPC Section, 123 Gloucester Road, Wan Chai, Hong Kong (date of postmark no later than the deadline);
- Drop-off in person during office hours at JPC Section, 123 Gloucester Road, Wan Chai, Hong Kong;
- Drop-off in person at police stations in various districts (addressed to Police Community Relations Office); or
- The USB drive or DVD containing the Project Report and the Video could be picked up by JPC representatives at schools or organisations upon request by the representative.

Note for submission by post or in-person:

- Participants who have submitted the Project Report and the Video online are not required to submit the report and the video again by post or in person;
- If the Project Report and the Video are submitted by post or in person, there must be **TWO** copies of the Project Report; and a USB drive or DVD containing the Video and the Project Report;
- The submitted USB drive or DVD will not be returned at the conclusion of the Competition;
- For participants (Senior Primary School Category, Junior Secondary School Category and Senior Secondary School Category) who receive notification for entry submission, their entries must be securely and properly packed in a suitable paper box, marked on the outside as an entry of 'JPC x BOC STEM-Up Innovation and Technology Competition 2022 Entry' with placement instructions clearly indicated on the box; and



- Each entry must be clearly indicated on the entry itself and its packaging with the Entry Number (except group submission, i.e. collected by and submitted via schools or organizations), the name of the entry, and the name of the participant(s). The Entry Number will be sent out by the JPC via confirmation email as shown below.

 <b>JPC x BOC STEM-Up</b> 	
<b>Innovation and Technology Competition 2022</b>	
Entry Number	:
Name of Entry	:
Name of Participant	:

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### (V) Points to Note

1. Participants will be contacted or notified by email (for providing information including invitations to competition events and entry's submission method), therefore, a regularly used email should be provided and checked by the participants;
2. Participants who submit their entries online will receive a confirmation email to acknowledge the receipt of the entry (in or before February 2023);
3. Participants who fail to submit their Project Report and the Video by the deadline (Entry Submission from Senior Primary School category, Junior Secondary School Category and Senior Secondary School Category will be notified separately) will be automatically disqualified from the Competition and not be entitled to a certificate of participation;
4. Entries should be based on the research that began in or after **January 2021**, i.e. within two years before the closing of application of the Competition;
5. Entries that had participated in the first 'STEM-Up HK Innovation and Technology Competition' held in 2021 and won the Champion/First Runner-up/Second Runner-up prize will not be accepted for re-entry, except those which had been significantly modified or optimized;
6. Each entry must be submitted with a unique Entry Number that specified in the confirmation email from the JPC (except group application and submission of entries, i.e. collected by and submitted via schools or organizations);
7. If there is inadequate space for writing in Annexes A and B, participants may continue to fill in their reports in additional A4 papers;
8. JPC shall not be responsible for any postal damage to the entry;
9. Participants should consider in-person submission of entries which are structurally complex or fragile at JPC Section, 123 Gloucester Road, Wan Chai, Hong Kong;
10. JPC will try its best to handle all entries with care and shall not be responsible for any damage or loss during the processing;
11. Subsequent to a review of the reports and videos uploaded, participants (Senior Primary School Category, Junior Secondary School Category and Senior Secondary School Category) may be invited to attend adjudication meetings with their entries, in which they will present their ideas to the judges. Participants should check the competition website and their email inbox regularly for updates;
12. Participants are advised to keep an electronic copy of the materials submitted, which will not be returned after the conclusion of the Competition;
13. Participants are required to provide complete and accurate personal details, including their JPC Membership No. if any. The JPC has the right to disqualify any participant for supplying false or erroneous information;

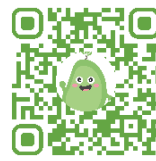
14. JPC owns the copyright of all entries, which may be used in part or in full on any occasion including but not limited to internal circulation, public display, publication and/or other purposes;
15. JPC has the right to reject or disqualify any entry that is irrelevant to the theme and objective of the Competition;
16. JPC reserves the right to amend the rules and other details of the Competition and will provide relevant updates on the dedicated website of the Competition and other JPC social media platforms from time to time;
17. Should there be any disputes, the JPC will have the final authority to interpret the rules and make the final decision on the outcome of the Competition;
18. JPC shall not be responsible for any disputes related to intellectual property rights arising from the entries submitted; and
19. All JPC members participating in the competition can get points of 'I' Innovation under the JPC Award Scheme as an encouragement. Participants in Junior Primary School Category will be awarded 50 points, while the Senior Primary School Category to Senior Secondary School Category will be awarded 150 points. Should there be any disputes, the JPC will have the final authority to make final decision.

## **(VI) Joining the JPC or Applying to become a JPC School Club**

1. If you are interested in joining the JPC, you can click [here](https://www.police.gov.hk/ppp_tc/16_jpc/index.html) to browse the JPC website ([https://www.police.gov.hk/ppp\\_tc/16\\_jpc/index.html](https://www.police.gov.hk/ppp_tc/16_jpc/index.html)) or apply through the JPC App.



**JPC Website**



**JPC App**

2. If you are interested in applying to become a JPC School Club, please contact us through the following contact information.

## **(VII) Enquiries**

For enquiries, please contact the staff at the JPC Section of Community Relations Division 1, Public Relations Wing, Hong Kong Police Force during office hours (09:00 a.m. to 17:00 p.m., Monday to Friday, except public holidays) by the following means:

Hotline for primary schools : 9877 4110  
Hotline for secondary schools: 9877 4690  
Email address : [stemup@jpc.org.hk](mailto:stemup@jpc.org.hk)

