

Hong Kong Student Science Project Competition 2020 Information Sheet

Theme

Incubate Scientific Ideas • Bring Talent Together

Sub-theme

Energy, Engineering and Environment

Division

The Competition consists of **3** Divisions. Age limit of each Division is as following:

1. **Junior Division:** Students from F.1 to F.3 aged 17 or below (born on or after 26 February 2003)
2. **Senior Division:** Students from F.4 to F.6 aged 19 or below (born on or after 26 February 2001)
3. **Scientific Wallchart Division:** Students from F.1 to F.6 aged 19 or below (born on or after 26 February 2001)

Competition Details

Junior Division and Senior Division

Students are expected to demonstrate their understanding of science and an application of scientific knowledge in their investigation or invention. Such projects should be original and innovative while also being both practical and applicable in real-life. A project may be in the form of the following.

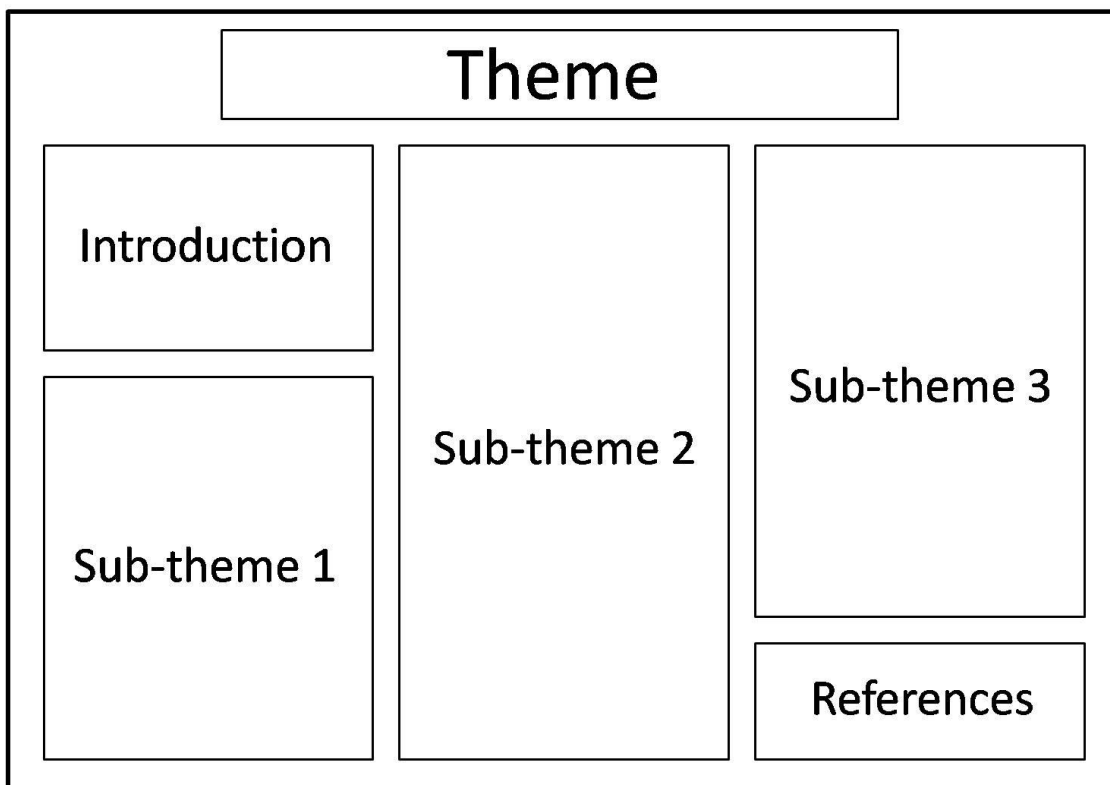
- (i) **An invention (Type A project):** A new and original invention created by students with scientific knowledge and imagination. Students are required to demonstrate to the judges how their invention works and its application on the day of Initial Judging cum Project Exhibition.
- (ii) **An investigation (Type B project):** This should be a research on scientific phenomena or the application of scientific theories. The project has to be submitted in the form of a report supported by experimental data and results. Students are required to present their projects to the judges on the day of Initial Judging cum Project Exhibition.

Entries can be in either the “Physics and Engineering” stream OR the “Biology and Chemistry” stream. For the “Physics and Engineering” stream, astronomy, meteorology, material science, earth science, environmental science, electronics, mechanics, communication, information technology, computer science and energy may be included. For the “Biology and Chemistry” stream, chemistry, chemical engineering, ecology, life science, biotechnology, food science, health science and medicine may be included. Teams can choose if their projects are related to the sub-theme “Energy, Engineering and Environment” and their choices will not affect the judging. However, only projects related to the sub-theme are eligible to compete for the “Energy, Engineering and Environment Award”. Teams comprising 2 to 5 students **MUST** be nominated by schools. Each school can nominate a maximum of 8 teams and each team can only submit one project.

Scientific Wallchart Division

Students are expected to search information and apply their scientific knowledge to study a science topic, as well as produce an A1 size (Width: 841mm, Height: 594mm) poster to explain that science topic. The topic of this year is **“Energy, Engineering or Environment”**, the poster should be a study of the knowledge related to the topic. Participants **MUST** be nominated by schools and each poster is produced by one student. Each school can nominate a maximum of 5 students and each student can only submit one poster. Results will be announced on the day of Initial Judging cum Project Exhibition. Shortlisted students will be notified to attend the prize giving ceremony on that day.

Sample of Scientific Wallchart



Awards

1. Ten teams will be selected from each division (Junior and Senior Division) on the Initial Judging cum Project Exhibition day to enter the Final Judging. Winning teams will be selected on the day of Final Judging cum Award Presentation Ceremony.
2. 3 First Prizes and 3 Second Prizes will be selected from Scientific Wallchart Division on the Initial Judging cum Project Exhibition day.
3. To encourage more new schools leading students to explore the interest of science, a "Best Newcomer Award" will be given to first-time participating schools which achieve certain quality standard. (One team in Junior and Senior Divisions respectively)
4. To encourage students to continue their science research, a "Best Potential Award" will be given to students who could not advance to the Final Judging but have the potential of science research. (One team in Junior and Senior Divisions respectively)
5. To encourage students to develop projects concerning the people with special needs in the society, a "Society Care Award" will be given to outstanding teams which can provide related and feasible solutions. (One team in Junior and Senior Divisions respectively)
6. Students are encouraged to apply their scientific knowledge in their daily lives. "Energy, Engineering and Environment Award" will be given to outstanding projects related to this topic from Junior and Senior Divisions.
7. Champions of Junior and Senior Divisions will be sponsored to participate in an overseas exchange programme. Eligibility for participation may be subject to an age limit stipulated by the programme organizers.
8. Champions, 1st runner-ups and 2nd runner-ups of Junior and Senior Divisions will be sponsored to participate in a Science and Technology Exchange Programme. Eligibility for participation may be subject to an age limit stipulated by the programme organizers.
9. Book coupons will be given to winning teams of all divisions as an award.

Judging Criteria

Junior and Senior Divisions	
Type A Project (Invention)	Type B Project (Investigation)
A. Originality (15%) ➤ A new and original invention	A. Originality (10%) ➤ Innovativeness
B. Design of Invention (30%) ➤ Definition of applicability ➤ Application of theories ➤ Practicability ➤ Efficacy of invention	B. Definition of Problem and Analysis (30%) ➤ Definition of the problem ➤ Explanation of scientific phenomenon / relevance to the community ➤ Logic of analysis
C. Realization of Design (30%) ➤ Craftsmanship ➤ Experimental method ➤ Cost effectiveness	C. Methodology (35%) ➤ Literature review ➤ Choice of method for survey or investigation method ➤ Availability of research / experiment / data to support the findings / analysis of information ➤ Validity of findings ➤ Impact of findings
D. Presentation Skills (15%) ➤ Demonstration of operation and function of the invention ➤ Presentation of data ➤ Writing skills in the report ➤ Layout of the report ➤ Fluency of language	D. Presentation Skills (15%) ➤ Demonstration of experiment ➤ Presentation of data ➤ Writing skills in the report ➤ Layout of the report ➤ Fluency of language
E. Team Work (5%)	
F. Abstract (5%) (See Point 7A of Note for Participants on the next page) Ability to summarize clearly the project and its results in no more than 500 words for Chinese and 300 words for English	

Scientific Wallchart Division	Percentage
A. Science Knowledge ➤ Concept fully and properly explained ➤ Content is accurate, comprehensive and well supported	40
B. Creativity ➤ Interesting, engaging and visually stimulating ➤ Innovative	20
C. Literature Review ➤ Diversity of sources ➤ Authority of sources ➤ Validity of quoting literature	20
D. Presentation Skills ➤ Clarity of presentation ➤ Layout of the poster contents ➤ Fluency of language	20

Note for Participants

1. An entry that has been submitted to other competitions or exhibitions in previous school years will be accepted, provided that the entry has not received any award. Entries submitted to other competitions or exhibitions in the 2019/20 school year will also be accepted. If a participant has sought advice/assistance from any person, including his/her guiding teacher and assigned advisor, acknowledgement should be given to them in the application form and report.
2. Each team of Junior, Senior and Scientific Wallchart Divisions would receive HKD200 subsidy for project development. (The subsidy could only be used for materials of project research and exhibition booth decoration.)
3. The science projects submitted must be original work by the teams which should not infringe on the copyright of any third parties. All sources of information quoted in writing must be explicitly acknowledged. The organizer accepts no legal responsibility whatsoever in respect of any copyright issues.
4. All experiments must be performed under the supervision of teacher guide and strictly following the safety guidelines from Education Bureau. For more details, please refer to:
http://cd1.edb.hkedcity.net/cd/science/laboratory/safety/SafetyHandbook2013_English.pdf
5. The copyrights of the photos and videos of all activities, and science projects are deemed the properties of the organizers and the teams jointly. Once the application form is submitted, means that the teams agreed that the organizers have the rights to edit, delete, duplicate, file, transfer, issue or display the photos and videos of all activities, and science projects for educational or other non-commercial purposes.
6. Score sheets will not be distributed to teams. The results of competition shall be subject to the decision of the Judging Panel, participating teams shall not object. In all aspects, the Judging Panel shall be the final arbiter.
7. Participants are required to follow the specific requirements below when they submit their entries:

Junior and Senior Divisions	
Type A Project (Invention)	Type B Project (Investigation)
Parts A and B should be submitted with Times New Roman font or similar font, 10 – 12 point font size, and double spaced.	
The deadline for electronic submissions of parts A and B is HKG 2359 hours on 26 February 2020. Projects must be submitted to http://hksspc.hkfyg.org.hk. Late applications will not be accepted.	
A. Abstract (Note: this item will account for 5% of the total score) Should be written in English (maximum 300 words) AND Chinese (maximum 500 words). <u>The two versions must match with each other.</u>	
B. Report <ul style="list-style-type: none"> ➤ Describing the investigation and including relevant drawings, photos, tables, charts to support the findings ➤ Should be written in English or Chinese with maximum 1500 words and maximum 30 total pages. 	B. Report <ul style="list-style-type: none"> ➤ Describing the investigation and including relevant drawings, photos, tables, charts to support the findings ➤ It should be written in English (maximum 3,000 words) / Chinese (maximum 4,500 words). <u>Maximum total page number is 30.</u>
C. Model (display on Initial Judging) <ul style="list-style-type: none"> ➤ An actual device or a model not bigger than 90cm x 90 cm x 90 cm. Projects exceeding the above size will not be allowed to exhibit in the competition venue; OR ➤ A computer programme / model ready for demonstration on a personal computer ➤ Models need not be submitted to the Secretariat 	

Scientific Wallchart Division
Projects must be submitted to the HKSSPC Secretariat by 26 February 2020 by mail (according to the date of postmark) or by hand. Late applications will not be accepted. Address: Unit 211, 2/F, Lakeside 2, East Wing, Phase 2, Hong Kong Science Park, Pak Shek Kok, New Territories Office hours: 9:30 am-5:30 pm (Mon to Fri), 9:00 am-1:00 pm (Sat)
Poster <ul style="list-style-type: none"> ➤ An A1 size (Width: 841mm, Height: 594mm) poster ➤ Theme of “Energy, Engineering or Environment” ➤ With introduction, discussion, conclusion and literature references, etc ➤ School name and student name at the back of the poster