

# 香港青少年科技創新大賽

## Hong Kong Youth Science & Technology Innovation Competition 2013 - 2014

### ➔ Introduction

Since its launch in 1997, the “Hong Kong Youth Science and Technology Innovation Competition” is now the largest and most popular science competition in Hong Kong with nearly 8,000 applicants from over 400 schools participating in this annual event. The competition targets on kindergarten, primary and secondary school students and teachers, with categories including Science Fiction Drawing, Invention, Research, Science and Technology Practical Activity.

### Objectives

- ◆ To strengthen students' creativity, innovative and practical skills in order to overcome challenges in the future.
- ◆ To stimulate students' imagination in scientific research and invention, and to allow them to put their ideas into practice.
- ◆ To provide an opportunity for students to showcase their scientific and innovative ideas.
- ◆ To arouse students' interests and raise their standard in science, and to nurture young science talents for the society.
- ◆ To encourage and commend outstanding schools, teachers and student societies who are dedicated in promoting science and technology education.

### ➔ Schedule

2013	31 Oct (Thu)	Briefing Session	Introduction of the competition and important announcements.
	25 Jan (Sat)	<b>Application Deadline</b>	All participants <b>MUST</b> submit their application online for entry.
	2-25 Jan	Submission of Science Fiction Drawing	Submission of <b>completed</b> Science Fiction Drawings.
	2 Jan-8 Feb	Submission of Research and Invention (Primary Division)	Submission of <b>completed</b> Primary research reports and inventions.
	2 Jan-15 Feb	Submission of Research and Invention (Secondary Division)	Submission of <b>completed</b> Secondary research reports and inventions.
2014	2 Jan-15 Feb	Submission of Projects by School Society, Teacher and School Divisions	Submission of completed projects in categories of Student Organized Science and Technology Activity, Teaching Aids Invention, Outstanding Science and Technology Teacher and School.
	22 Feb (Sat)	Preliminary Judging	Judges will select projects to enter into the Final Judging. Participants are <b>not required to attend</b> this stage of judging.
		Booth Set-up for Finalists	All selected participants (except Science Fiction Drawing) are required to set-up the booth.
	Late March (To Be Confirmed)	Final Judging and Public Exhibition	All selected participants are required to take part in interviews with judges, and present projects to visitors during public exhibition.
		Prize Presentation Ceremony	All award winning will be presented with prizes, scholarships, trophies or medals.

# 【Guideline of HKYSTIC 13-14】

## ➔ Application Procedures

- 1) Read the Application Guidelines thoroughly
- 2) Apply online
- 3) Obtain the Project Number
- 4) Invent/Research
- 5) Complete the Abstract Form
- 6) Submit the project

<b>Application</b>	<p><b>Online Application only</b> Interested parties can apply online at HKYSTIC website (<a href="http://stic.newgen.org.hk">http://stic.newgen.org.hk</a>) from 01 Nov 2013. Successful applicants will receive a confirmation email with project number upon completion of application.</p> <p><b>Points to Note:</b></p> <ul style="list-style-type: none"><li>➤ Application deadline: <b><u>25 January 2014 (Sat). (The online application system will be closed at 23:59)</u></b></li><li>➤ The online application system <b><u>will be closed on Wednesday from 10:00am to 12:00noon for weekly maintenance.</u></b></li><li>➤ Applicants can apply for more than one category or submit more than one project, but <b>separate application MUST be made for each project. Moreover, applicants cannot apply for more than one category with the same project.</b></li><li>➤ Applicants will be notified to attend various activities through email. <b>Please fill in the email address clearly and check it regularly.</b></li><li>➤ All information provided should be clear and correct.</li></ul>
<b>Submission</b>	<ul style="list-style-type: none"><li>➤ Each project must have its <b>individual Project Number</b> (Please refer to HKYSTIC website for updates) and <b>Abstract Form</b> which can be downloaded from HKYSTIC website.</li><li>➤ The <b>Completed Project</b> should be submitted along with the <b>Abstract Form</b> and <b>Other Related Materials</b> within the submission period by post (refer to postmark date) or in person to the Centre (Address: 21 Hong Kin Road, Tui Min Hoi Area, Sai Kung, N.T.) during office hours as follow:  <b>Monday-Friday: 9:30am-5:30pm</b> <b>Saturday: 9:30am-1:00pm(opened on 11 Jan, 25 Jan, 8 Feb, 15 Feb and 22 Feb only)</b> <b>Sunday and Public Holiday: Closed</b> <b>Other (Lunar New Year Holidays from 31 Jan to 5 Feb): Closed</b></li><li>➤ Project submission period is as follows:  <b>Science Fiction Drawing: 2-25 January 2014</b> <b>Primary Projects: 2 January – 8 February 2014</b> <b>All Other Projects: 2 January – 15 February 2014</b></li><li>➤ <b>Participation will be invalid</b> if completed project materials cannot be submitted by the deadline. (Postmark date will be regarded as the submission date)</li><li>➤ Participants qualified for final judging <b>MUST submit the e-copy (in word format) of their project abstract</b> and may need to hand in their data log book before the final judging (Finalists of Science Fiction Drawing Category need to submit abstract only), so <b>please keep these documents in a fine condition.</b></li></ul>

# 【Guideline of HKYSTIC 13-14】

## ➡ **Category 1: Science Fiction Drawing (Aged 14 or below, born on or after 1 April 1999)**

### ■ **General Information (Kinder, Primary and Secondary Divisions)**

With the advancement of science and technology, students can express their imaginative and creative ideas of the future by means of drawing. It also provides students the opportunity to display their artistic skill and scientific knowledge.

### ■ **General Rules**

- Divisions: **Kinder, Primary and Secondary Divisions** (Aged 14 or below, born on or after 1 April 1999).
- **Individual entry only** (no group work, including the creation process and drawing).
- The size of the drawing should be **54cmx39cm(+/-1cm)**.
- **MUST** be in **landscape** format.

### ■ **Assessment**

Criteria	Contents	Percentage
<b>Creativity</b>	Choice of topic and creativity	40%
<b>Aesthetic</b>	Design, coloring, drawing skills	35%
<b>Scientific</b>	Scientific basis and logical thinking	15%
<b>Presentation Skill*</b>	Ability to present ideas clearly and concisely and to handle judges' questions effectively	10%

\*Applicable to finalists only

The entries will be invalid in any of the following situations:

**Plagiarism, scientific errors, incorrect size, mixing up of science and myths, infringement of copyright figures, appearance of school logo or name**

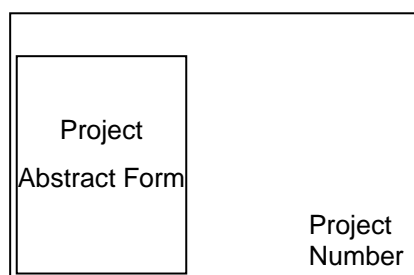
### ■ **Submission**

Items to be submitted:	No. of copies:
Drawing	1
Abstract Form	1

- Entries can be oil painting, traditional Chinese painting, aquarelle, gouache, pen painting, pencil drawing, crayon painting, prints, collage, computer graphics etc. The style and materials used are not restricted but **MUST** be in the form of a **2D drawing and not 3D model**.
- The Project Number **MUST** be written **at the lower right hand corner at the back of the drawing**.
- The Abstract Form **MUST** be attached **on the left hand side at the back of the drawing**.
- The size of the drawing should be **54cmx39cm(+/-1cm)**. The drawing **MUST** be in **landscape** format, and should be clean and neat.
- Applicants are suggested to keep an e-copy of the drawing since **all submitted drawings will NOT be returned**.

**Note: No school logo or name should appear on any works, otherwise participants will be disqualified.**

- At the back of the drawing:**
- **Attach Abstract Form**
  - **Write down Project Number**



# 【Guideline of HKYSTIC 13-14】

## ➡ Category 2: Research and Invention

### ■ General Information (Primary Division)

① Research	To research on science-related topic with experiments, surveys and/or investigation and the results must be presented in the form of a written report.
② Invention	To invent new product or technology for practical application, or a scaled down feasible and working model.

### ■ General Information (Secondary Division)

This division is divided into 5 categories according to different subjects and each subject is sub-divided into **Junior and Senior Sections**. Participants can submit either a research or an invention.

① Physics and Engineering	<b>Physics:</b> Research on principles, theories or laws of energy and their materials interaction. <b>Engineering:</b> Original and innovative practical applications of scientific principles for solving daily problems.
② Chemistry and Materials	<b>Chemistry:</b> Research or application of chemical principals. <b>Materials:</b> Research, inventions or applications of new materials.
③ Biology and Health	<b>Biology:</b> Research on the behavior of plants or animals. <b>Health:</b> Research on diseases, medicines or health related topics including the physical or psychological behavior of humans.
④ Energy and Environmental Science	<b>Energy:</b> Application or development of new energy sources. <b>Environmental:</b> Research on the sources or controls of pollutions (air, water, land resources etc).
⑤ Computer Science and Information Technology	<b>Computer Science:</b> Research on computing theories or applications and design of computing hardware or software. <b>Information Technology:</b> Research on information system and application.

### ■ General Rules

- Applicants can apply **individually** or in **group of not more than 3 members**, but all group members **MUST** be from the same division (Primary, Junior Secondary or Senior Secondary Divisions).
- New and significant research work and results **MUST** be shown if a similar or continuation project has been submitted in previous year's HKYSTIC.
- The project **MUST** be **completed within 2 years before the submission deadline**.
- The project cannot be illegal or harmful to the public.
- The project which lacks science principles or models that are not functional or research projects without conclusions will not be accepted.
- The whole working process (including the choice of topic, the creation processes and the completion of work) **MUST** be done by the applicant.
- All Research and Invention Manual and Report **MUST** include at least **1 photo showing the invention/research process** and at least **1 photo showing the participants with their finished invention**.

# 【Guideline of HKYSTIC 13-14】

## ➡ Category 2: Research and Invention

### ■ Assessment

Criteria	Contents	Percentage
Creativity	The creativity, advancement of technology involved and the difficulty of the project.	30%
Scientific(Research) or Practicality(Invention)	It includes the legitimacy, the accuracy and the reliability of the scientific principle and research method or It includes the anticipated socio-economical benefits of the project; the influences, applicability and promotional prospect of the project.	30%
Thoroughness	It includes the sufficiency of data and literature support, the level of completeness of the project.	15%
Skill	It includes the ability of processing data and operating equipment and the level of participation.	15%
Presentation Skill*	Ability to present ideas clearly and concisely and to handle judges' questions effectively.	10%

\*Applicable to finalists only

### ■ Submission Invention:

Items to be submitted	No. of copies
The real product or scaled down feasible model **	1
Project Abstract Form (Product photo <b>MUST</b> be attached)	4
Invention manual/Report (Chinese/English)	4
Multimedia items (If applicable)***	1

\*\* Size cannot exceed 100cm(L)x50cm(W)x150cm(H) and weight limit of the products placed on desk is 10 kg; the assigned Project Number **MUST** appear clearly on the product

\*\*\*Multimedia items can be VCD / DVD (Within 5 minutes) (Chinese/English)

### Research:

Items to be submitted	No. of copies
Research report (Chinese/English)**	4
Project Abstract Form	4
Multimedia items (If applicable) ***	1

\*\* Please refer to [Useful Guide](#) for research report format. The **project title, name of applicant and project number MUST be shown on the front page.**

\*\*\* Multimedia items can be VCD / DVD (Within 5 minutes) (Chinese/English)

**Note: No school logo or name should appear on any works, otherwise participants will be disqualified.**

# 【Guideline of HKYSTIC 13-14】



## Category 3: Student Organized Science and Technology Activity

### ■ General Information

Secondary students can compete in this category as a school club, class or society. The activity must be to an organized group activity to promote science or technology in school or to the public. Log sheets and summary of the activity should be submitted.

### ■ General Rules

- **Groups, classes** or **clubs/associations** in secondary schools will be the basic unit of participation. Teachers or other advisory organizations cannot participate in this competition.
- Clubs, classes or societies can assign **3 representatives** to compete.
- **Activity record** and **summary** should be provided (including paperwork and other necessary materials)
- The format can be **extracurricular activities, research studies or social activities**, but it **MUST** have an educational goal with science background and the following 5 criteria:

1. Clear Topic	Activities should be designed according to practicability of the school. They should be able to promote technological activities among students in which they can gain technological knowledge, principles and methods of science investigation and can cultivate a scientific mind, so that the benefits can be extended to the communities on aspects of education, production, economics and scientific culture, etc.
2. Complete Procedures	A systematic and complete report, schedule, and other necessary items, such as records or log sheets of how the actual work has been carried out. A final conclusion or evaluation should also be drawn.
3. Complete Materials	Including the planning and log sheets (content, time, venue, number of participants and name list), photos or VCD/DVD, news articles, etc. which can reflect the process of the whole activity.
4. Definite Results	Precise and clear word description (Chinese/English) on the results of activities by the persons-in-charge or the major participants are required. Other related items, such as photos, VCD/DVD or real objects can be submitted along with the written project.
5. Actual Benefits and Experiences	Including the experiences that the students have gained, the extent of effects and benefits covered in communities and suggestions for follow up work that is to be done in future.

# 【Guideline of HKYSTIC 13-14】



## Category 3: Student Organized Science and Technology Activity

### ■ Assessment

Criteria	Contents	Percentage
Practicality	Activities are matched with the knowledge and ability of participants, and with practicable means.	30%
Demonstrability	Activities should demonstrate clear aims of current technological development. The design and format should be scientific and have innovative ideas, easy to carry out, promote general science and focus on solving problems in daily life.	30%
Innovation	Content, procedures and methods of the design should be innovative and flexible so that they can be modified according to needs easily.	30%
Presentation Skill*	Ability to present ideas clearly and concisely and to handle judges' questions effectively	10%

\*Applicable to finalists only

### ■ Submission

Item to be submitted	No. of copies
Project Abstract Form	4
Project Report ( <b>Must</b> be handwritten or printed on A4 white paper) (Chinese/English)	4
Log sheets, photos, multimedia information, etc	4

**Note: No school logo or name should appear on any works, otherwise participants will be disqualified.**

# 【Guideline of HKYSTIC 13-14】



## Category 4: Outstanding Science and Technology Teacher Award

### ■ General Information

Outstanding Science and Technology Teacher Award is awarded to teachers who show excellent achievement in promoting science and technology education.

### ■ General Rules

- **Individual application only**
- Target: All Hong Kong **secondary and primary school teachers**
- The applicants must have related teaching experience in science and technological education
- Contents and teaching materials must be related to science and technological education
- **A completed report and a full set of teaching material** must be submitted

### ■ Assessment

Contents	Percentage
Past experiences in leading students science or technological related activities	10%
The principle and knowledge relating to science & technological education	40%
The project report and teaching materials for science and technology activities for students**	40%
Presentation Skill*	10%

\*Applicable to finalists only

\*\*The project report will be assessed based on the following 4 areas:

**Practicality 10%:** Activities are matched with the knowledge and ability of participants, and with practicable means.

**Demonstrability 10%:** Activities should demonstrate clear aims of current technological development. The design and format should be scientific and have innovative ideas, easy to carry out, promote general science and focus on solving problems in daily life.

**Innovation 15%:** Content, procedures and methods of the design should be innovative and flexible so that they can be modified according to needs easily.

**Completeness 5%:** Project should have been completed wholly or partially, with clear aims, well-planned procedures and results.

### ■ General Content of Project Proposal

- ① Title
- ② Background (with analysis) and objective
- ③ Target and total number of participants
- ④ Main Section
  - Activity Content
  - Main objectives, difficulties and innovative parts
  - Utilization of resources (E.g. venue, data, equipments, etc.)
  - Anticipated problems and respective solutions
  - Anticipated results and format
  - Assessment format and standard
  - Benefits for teenagers (E.g. ethical and intellectual benefits, etc.)

### ■ Submission

Item to be submitted	No. of copies
Teacher and Project Abstract Form	4
Project Proposal	4
News and Raw Materials (log books, photos, VCD/DVD etc)	4

**Note: No school logo or name should appear on any works, otherwise participants will be disqualified.**



# 【Guideline of HKYSTIC 13-14】

## Category 5: Teaching Aids Invention

### ■ General Information

Teaching aids refer to auxiliary tools or models for teaching science topics. New products or technology or scaled down models should be **functional**.

### ■ General Rules

- **Individual application only.**
- Target: **All Hong Kong secondary and primary teachers, technicians and teaching assistants.**
- The invention **MUST** be **completed within 2 years before the deadline of submission.**
- The ideas and design of the invention **MUST** be completed by the applicant solely. Plagiarism is prohibited.
- Projects cannot be illegal or harmful to the public.
- Projects which lack scientific principles or models which are not operative will not be accepted.
- All Research and Invention Manual and Report **MUST** include at least **1 photo showing the invention/research process** and at least **1 photo showing the participants with their invention.**

### ■ Assessment

Criteria	Contents	Percentage
Creativity	It includes the creativity, advancement of technology involved and the level of difficulty of the project.	30%
Practicality	It includes the anticipated socio-economic benefits and practical outcomes on educational purposes.	30%
Thoroughness	It includes the sufficiency of data and literature support, the level of completeness of the project.	15%
Skill	It includes the ability of processing data and operating equipment and the level of participation.	15%
Presentation Skill*	Ability to present ideas clearly and concisely and to handle judges' questions effectively	10%

\*Applicable to finalists only

### ■ Submission

Items to be submitted:	No. of copies
The Project Abstract Form (Product photo MUST be attached)	4
The actual invention or the scaled down workable model **	1
Invention Manual/Report ( <b>MUST</b> explain the principle of applications, usages, shortcomings and possible improvement)	4
Multimedia Items (If applicable) ***	1

\*\* Size cannot exceed 100cm(L)x50cm(W)x150cm(H) and weight limit of the products placed on desk is 10 kg; the assigned Project Number **MUST** appear clearly on the product

\*\*\*Multimedia items can be VCD / DVD (Within 5 minutes) (Chinese/English)

**Note: No school logo or name should appear on any works, otherwise participants will be disqualified.**

# 【Guideline of HKYSTIC 13-14】



## Category 6: Outstanding Science and Technology School

### ■ General Information

Outstanding Science and Technology School will be awarded to secondary schools and primary schools. Winning schools will be nominated to represent HKSAR to participate in the School of Distinction Award of the China Adolescents Science and Technology Innovation Contest.

### ■ General Rules

- School **MUST** have proven record and achievement in hosting and promoting science and technology activities
- School should have policy related to fostering and implementing science and technology education
- Only accept application from either **full-time or half day primary or secondary schools in Hong Kong**

### ■ Assessment

Criteria	Contents	Percentage
Science/Technology education philosophy	The practice of school policy on science/technology education philosophy, and how to develop sustainable science/technology education	10%
Promotion achievements in/outside school	The measures of promotion of science/technology education and participations in/outside school, science/technology curriculums and activities and teaching strategies	40%
Training of professionals and effective resources input	The professional training and development of science/technology teachers, the effective input of resources and build up of infrastructure	40%
External science and technology achievements	School science/technology education awards, including local/non-local science/technology competitions	10%

### ■ Submission

Items to be submitted:	No. of copies
Abstract Form	4
Project Report (Including documents, photos, VCD/DVD, etc)	4

**\*Please check Project Report Guidelines for details. (Chinese Version only)**

### ■ General Content of Project Report

1. School abstract
2. Science/Technology education philosophy
3. Promotion achievements in/outside school
4. Training of professionals and effective resources input
5. Science/Technology winning situation outside school

# 【Guideline of HKYSTIC 13-14】

## Awards

- ✦ The 1st, 2nd and 3rd Place Grand Awards and Merit Awards will be presented in each category.
- ✦ Grand Award winners will each be presented with a trophy and a certificate, while Merit Award winners will be presented with a medal and a certificate. All eligible participants and teachers will each be presented with a certificate of participation.
- ✦ Outstanding winners will be nominated to represent HKSAR to participate in various national and international science contests including the China Adolescents Science and Technology Innovation Contest\*, the Awarding Program for Future Scientists, the Taiwan International Science Fair, the Intel International Science and Engineering Fair and the International Sustainable World Project Olympiad.

\*Nomination Quota of the China Adolescents Science and Technology Innovation Contest is as follows:

Division	Quota
<b>Individual Basis</b>	
Senior Secondary Division	6
Junior Secondary Division	2
Primary Division	1
<b>Group Basis</b>	
Senior Secondary Division	2
Junior Secondary / Primary Division	1

\*\*The quota may subject to change

## ✦ **Best Project Award**

One award for Primary, Junior Secondary and Senior Secondary Divisions respectively. Awarded to the project with the highest overall score in that division.

## ✦ **Outstanding Participating School Award**

Awarded to primary and secondary schools which submit the largest number of outstanding projects. The assessment criteria are as follows:

Requirement	Mark(s)/project
Each qualified project submitted	1
Each project receiving a Merit Award	100
Each project receiving a 3rd Place Grand Award	200
Each project receiving a 2nd Place Grand Award	300
Each project receiving a 1st Place Grand Award	400

\*Marks will not be accumulated for each project. (i.e. 400 marks for a 1st Place Grand Award Project)

\*Separate calculation for Secondary and Primary School

# 【Guideline of HKYSTIC 13-14】

## Other Regulations

- ✧ All award winning projects and All science fiction drawings **will NOT be returned**. Only non-winning inventions can be retrieved by the applicants during a set period to be announced on a later date. Please check website for details after the Final.
- ✧ All projects **MUST** be **completed within 2 years before the application deadline (on or after January 2012)**.
- ✧ **No school name or logo** should appear on any projects (except for School Category), otherwise participants will be disqualified.
- ✧ Participants qualified for final judging **MUST** submit the **e-copy (in word format) of their project abstract** and may need to hand in their log book before final judging (Finalists of Science Fiction Drawing Category need to submit abstract only), so please keep these documents in a fine condition.
- ✧ The Centre **will not be responsible** for any disputes concerning the intellectual property rights of any projects.
- ✧ The Centre reserves the publication rights of all projects.
- ✧ The decisions of the Centre shall be final.

## Enquiries



**Tel** : 2792 3639  
**Fax** : 2792 0286  
**Email** : [stic@newgen.org.hk](mailto:stic@newgen.org.hk)  
**Website** : <http://stic.newgen.org.hk>  
**Address** : HKNCGA Science Innovation Centre,  
21 Hong Kin Road, Tui Min Hoi Area, Sai Kung, NT.