2024 IEYI

International Exhibition for Young Inventors

RULEBOOK

Organizers: Executive Secretariat of International Exhibition for Young Inventors

Important Dates:

- **Exhibition dates:** Aug. 2~Aug. 7, 2024
- **Online Registration:** May 1 ~ May 31, 2024

Venue: Stadium, National Taiwan Normal University, Taipei

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FAX: +886-2-2394-6832

E-mail: ieyitw@gmail.com

Website: http://www.ieyiun.org/

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1. About IEYI

In the interaction between people and people, data, and things in the world, data processing will be surpassed by artificial intelligence (such as ChatGPT), and the interaction between people and things will be increasingly surpassed by intelligent robots. Under the threat of transcendence, humans need innovation in things; innovation in things requires new inventions, especially young people with rich imaginations.

The Japan Invention Association (JIII) initiated and organized the International Forum for Invention Promotion (IFIP) in 2004 to hold the International Exhibition for Young Inventors (IEYI). Since then, IFIP members have taken turns organizing this event to encourage global young people to innovate and invent, providing a platform for young people to use their imagination and enhance their international vision.

During the period of Covid-19, we only can conduct the virtual exhibition for 4 years. However, the year 2024 will be the 20th anniversary; we would like to invite young inventors to present their inventions physically and have a nice cultural trip in Taiwan. Thus, let see each other in August 2024.

Essentiality of IEYI

The main objectives of IEYI are as follows:

5. To fuel students' understanding of the world around them by triggering scientific thinking and promoting learning of core concepts in science and technology.
6. To provide students with design knowledge and skills needed for their future career.
7. To stimulate the creative approach for innovations and inventions.
8. To develop core competencies such as problem-solving, critical thinking, and communication skills in students.
9. To strengthen the interchange of cultures and to encourage the acculturalization of youth invention.

Sponsorships

Government:

- K-12 Education Administration, Ministry of Education
- Department of Education, New Taipei City Government
- Education Department, Taipei City Government
- Department of Education, Taoyuan City Government
- Department of Education Keelung City Government
- Department of Education, Lienchiang County Government

Enterprises:

- China Productivity Center Chengde Education and Training Center
- SINBON Electronics
- Gigabyte Ming Wei Education Foundation
- Elite Semiconductor Microelectronics Technology (ESMT) Educational Foundation
- Fubon Educational Foundation
- Supreme Electronics Co. Ltd.
- Innodisk Educational Foundation
- Yang Sheng Education Foundation

2. Important Dates & Event Agenda

Table 1 : Important Dates

Dates	Events
May 1 ~ May 31, 2024	Online Registration
※Teams should complete the registration, including submitting application forms to IEYI website: **www.ieyiun.org**	
June 30, 2024	**For Virtual Exhibition Team :** Video Upload Deadline
※For Virtual Team: Video should be uploaded to an open platform first, attach the video link in the "invention information form" and upload the form onto IEYI website: **www.ieyiun.org**	
June 1 ~ June 15, 2024	**For both Online and On-site :** Application Forms Review
※Teams will only receive a letter from IEYI office when the submitted document needs to be revised. List for teams that completed the registration will be announced after June 20 at once on the IEYI website: **www.ieyiun.org**	
June 15, 2024	Revised & Deadline of Resubmit Application Forms
※If the submitted forms are not completed, teams will receive a notification letter. Please revise the forms according to the instruction in the letter.	
Aug. 2 ~ Aug. 7, 2024 **(Detailed activities will be announced later on)**	**IEYI 2024 in Taipei** **Venue: Stadium, National Taiwan Normal University** **(162, Section 1, Heping E. Rd., Taipei City 106, Taiwan)**

※Taiwan time (GMT+8).

Table 2: Event Agenda

<table>
<tr><td></td><td>8/2(Fri)
Arriving</td><td>8/3(Sat)
Day 1</td><td>8/4(Sun)
Day 2</td><td>8/5(Mon)
Day 3</td><td>8/6(Tues)
Day 4</td><td>8/7(Wed)
Day 5</td><td>8/8(Thurs)
Day 6</td><td>8/9(Fri)
Day 7</td></tr>
<tr><td>09:00</td><td rowspan="5">Arriving Taiwan</td><td>Opening Ceremony</td><td rowspan="3">Exhibition & Judging</td><td rowspan="7">International Forum of Technology Contest and Education
(Foreign delegates)
City Tour
(Foreign students)</td><td rowspan="12">Cultural trip /
Science & Technology Park Trip/
School visiting
(Foreign participants)</td><td rowspan="12">Cultural trip/
Science& Technology Park Trip/
School visiting
(Foreign participants)</td><td rowspan="12">Cultural trip
(Self-guided tour)
(Foreign participants)</td><td rowspan="12">Departure</td></tr>
<tr><td>10:00</td><td rowspan="2">Exhibition & Judging</td></tr>
<tr><td>11:00</td></tr>
<tr><td>12:00</td><td>lunch hour</td><td>lunch hour</td></tr>
<tr><td>13:30</td><td rowspan="4">Exhibition & Judging</td><td rowspan="4">Exhibition & Judging
(include online inventions)</td></tr>
<tr><td>14:00</td><td rowspan="4">Check in

Booth Setup

Delegates Meeting</td></tr>
<tr><td>15:00</td></tr>
<tr><td>16:00</td></tr>
<tr><td>17:00</td><td rowspan="3">Reception Dinner</td><td rowspan="3">Judges meeting & dinner</td><td rowspan="3">Awards ceremony & Dinner</td></tr>
<tr><td>18:00</td><td></td></tr>
<tr><td>~</td><td></td></tr>
</table>

3. Contestants

3.1 **Contest Groups**: International Exhibition for Young Inventors is divided into two divisions.

3.1.1 ***Junior Group*** for students from 6 to 13 years old.

3.1.2 ***Senior Group*** for students from 14 to 19 years old.

3.2 **Team Members:**

3.2.1 **Numbers of invention contestants**: Each invention can have up to 3 contestants.

3.2.2 **Numbers of invention advisors**: 3 advisors (The **third** advisor is optional and only allowed as an English instructor).

3.2.3 **Numbers of artwork contestants**: There can only be 1 contestant

3.2.4 **Numbers of artwork advisors**: 2 advisors in each team (The **second** advisor is optional and only allowed as an English instructor.)

3.3 **Team registration scopes:** Each country to register multiple teams in different invention categories.

3.4 **Participating limits:** Each contestant is only allowed to participate with one category of invention or artwork.

3.5 **Disqualification:** If a team member is found to be unqualified during the eligibility check, the organizer will disqualify him/her from the competition. Once the information of the participating team members is confirmed, it cannot be changed in the future.

3.6 **No Registration Fee:** There is no registration fee for the 2024 IEYI World Contest.

3.7 **Accommodation subsidy for foreign teams:** If more than **10 entries** from a country participate in the on-site competition and are among **the first 20 countries** to complete the entry registration process, they will receive a **subsidy of USD 1,500 per country** for accommodation.

3.8 **Restrictions:**

3.8.1 **Invention Group**: Participants may choose either online (remote) or on-site competition.

3.8.2 **Artwork Group**: Participants of the artwork group can only participate in the on-site drawing competition.

3.9 **Competition Methods of Invention Group:**

3.9.1 **Virtual competition (Video submission)**: Participants who cannot attend the on-site exhibition may submit videos of their inventions to participate in the remote contest, and the scoring will be done through

the remote judging of their inventions during the exhibition day 2.

3.9.2 On-site Exhibition: Participating teams will be present during the competition time for exhibition and scoring at the 1st and 2nd day.

3.10 Competition Methods of Artwork Group: On-site drawing and on-site scoring.

3.10.1 Competition time for the Artwork Group: On-site drawing (2 hours) and on-site marking for the Artwork Group.

3.10.2 Quota limit (Artwork Group): Because of the space available for the competition, there will be a tentative quota of 5 artworks for each country (including Age 13 and below and Age 14 and above). If there are some quotas are left, they will be filled proportionally according to the number of entries submitted by each country. So, please list the waiting order, if your country will apply the left quotas.

4. Registrations

4.1 Requirements of Participation:

4.1.1 The age limitation: Contestants must be students between 6 to 19 years old (i.e. students from elementary schools, junior high schools, senior high schools or vocational high schools).

4.1.2 Writing style: Contestants and advisors should provide official *Romanized* names (i.e. spelled with English alphabets), as shown on the passport, in their registration documents. All the registration information must be filled out in English.

4.1.3 Avoiding Typos: The award certificates will be printed in English based on the names provided in the registration documents. **Please make sure that your English name is correct when registering.**

4.2 Date of Registration: The online registration period: from **May 1** to **May 31, 2024**

4.3 Online Registration Link: http://www.ieyiun.org/

4.4 Steps to Register:

4.4.1 To ensure understanding: Please read the IEYI Rulebook thoroughly.

4.4.2 To save time of registration: Please follow the instructions in the registration guideline (URL: https://reurl.cc/vdge0A) to register online.

Note: **To check providing information correctively: ※Please choose an instructor in the team as the representative to register to ensure the information is correct.**

4.4.3 Documentation: Fill out required documents including registration form, invention introduction form and payment form (Forms can be downloaded through website, see registration guideline "Step.18", or use Appendix A, B & C attached at the end of rulebook.), and upload all the completed documents to the website.

※Please reconfirm all the information is correct when completing.

4.4.4 Registration Deadline: Please complete all the procedures according to application handbook before **May 31**, 2024 Taiwan time (GMT+8).

5. Video Submissions (Virtual Competition: Invention Group only)

5.1 Video Uploading Issues:

5.1.1 Uploading video platform: Please upload your video to an online platform (e.g. YouTube, Google Drive…).

5.1.2 Alternatives: Private settings of the video must be set as "public" in order for judges to evaluate during the evaluation period.

5.1.3 Accessibility: After the evaluation period, teams can decide whether to open the link to public of not (see appendix A and A-1).

5.2 Video Format:

5.2.1 Title: "Invention Number (given through system when registering online) & Invention Title" (e.g. ERJR001 Smart wallet).

5.2.2 Length: Within 1~2 minutes. (Opening and ending of the film should be included).

5.2.3 Ratio: The standard aspect ratio for the invention video is length to width 16:9 or 4:3**.**

5.2.4 Content: Students must elaborate the details based on three main evaluative categories: Creativity, Operability, and Marketability & Benefits in the video.

5.2.5 Specification: The video can be shot by any kinds of electronic devices.

5.2.6 Others:

- English caption (i.e. subtitle) is suggested.
- High resolution is suggested.
- Special effects and background music used in the video will **not** be graded.
- "Invention Number & Invention Name" is recommended to be put on the upper right or left corner of the video for the judges' reference.
- Please make sure the recording environment have no external interference.
- Please make sure the audio is clear and understandable with appropriate

volume.

- Please make sure the link provided is accessible. (e.g. if you upload the video on YouTube, make sure you set the private setting to "public").

6. Invention Criteria

Creation must adhere to all exhibition specifications. The invention must be safe and not belong to the field of basic scientific research or pure art creations. General criteria are listed below:

(1) Exclusion 1: Pure art creations such as poetry, songs, short stories, sculptures, etc., will **NOT** be qualified for this exhibition.

(2) Exclusion 2: Basic or pure scientific research experiments involving living organisms will **NOT** be qualified for this exhibition.

(3) Exclusion 3: Inventions must be safe. **NO** explosives, corrosives, poison substances and combustible materials are allowed.

6.1 Invention Categories

An invention must be registered in one of the following ten categories:

(1) Disaster management: Inventions are useful in detecting, preventing natural disasters or post-disaster management (e.g. technologies/ products/ systems).

(2) Education: Inventions that show usefulness in classrooms or elsewhere for educative purposes.

(3) Recreation & sports: Invention that improves activities involve in recreational purposes (e.g. sports, entertainment, etc.)

(4) Foods & agriculture: Inventions that improve the qualities of agricultural practices or inventions that solve contemporary food issues. This category involves only inventions that belong to system/technology/product but does not include the food item itself.

**** Creation should not involve any living organisms.(This item can be excluded via video exhibition)***

(5) Green technology & sustainability: Inventions that create sustainability, reduce pollution, promote energy efficiency, and environmentally friendliness.

(6) Safety & health: Inventions that contribute to safety and health (e.g. devices, system, practices).

(7) Technology for special needs: Inventions that contribute to the convenience of minorities, people with special needs (e.g. children, people with disability, pregnant women).

(8) Technology for elderly people: Inventions that contribute to the convenience of the

special needs of elderly people.

(9) Industrial design & convenience devices for daily life: Inventions that are useful and improve the convenience of the daily life routine (e.g. cleaning tools, kitchen tools, etc.).

(10) Artwork: Artwork illustrating imaginations of the future world, consisting of new forms of science and technology.

6.2 Invention Specifications

6.2.1 Invention material

Inventions or devices will be displayed in public. Materials of the invention can be considered and used at one's own desire. However, the materials should be durable or non-fragile and safe. Inventions or devices made of dangerous, rotten materials or living organisms will be disqualified.

6.2.2 Specification

6.2.2.1 Invention:

(1) **About the weight:** Inventions should be *less than* **<u>10 kilograms</u>**.

(2) **About the size:** The size of inventions should not exceed **<u>1 meter</u>** in width, length and height.

(3) **Software design:** If the invention is a computer program, made of materials which are not durable or does not possess lasting effect, participants should explain the purposes, creation process and model of inventions through other means other than actual demonstration (i.e. with Power point and VCR or other aids).

(4) **Addition presentation:** Participants can use handouts (A4 size, two-sided) or brochures to exhibit and explain their inventions in the video. (i.e. this regulation is not applicable to 2024 IEYI World Virtual Contest)

6.2.2.2 Artwork

(1) **The spec. of drawing paper**: Artwork should be drawn on B3 drawing paper (35.3 centimeter*50centimetre).

(2) **Painting materials:** Artwork can be expressed in various painting methods such as water-colour, crayon, paint, ink, colour pencil, etc.

(3) **Exclusion:** Sketches, clip art and three-dimensional models are not allowed.

7. Judging Scheme

7.1 The Composition of Judges: The judging panel will be primarily comprised of delegates from the member institutions/countries. The accumulated scores of each invention from all the judges will form the basis for the awards.

7.2 Invention Scoring Method:

7.2.1 Judges: The invention is judged from multiple aspects by experts in related fields.

7.2.2 Judging categories: The invention will be scored according to Creativity, Marketability & Benefits, and Operability.

7.2.3 Judging approaches: Each judge is only responsible for one section, and the score is based on the scoring criteria to prevent individual judges from affecting the results of a respective invention.

7.2.4 Scoring rubrics: Table 1 below shows the temporary scoring rubrics.

Table 3: Scoring criteria for each invention

Scoring Criteria	
Creativity (40%)	***Innovative Function* (13%)**
	1. High: Newly innovative functions (more prospective than current existing products) (10-13%)
	2. Middle: Refined and better function (6-9%)
	3. Low: Mildly progressive (similar to current existing products) (1-5%)
	***Innovative Machining* (12%)**
	1. High: High-quality machining process (9-12%)
	2. Middle: Improve some parts of the machining process (5-8%)
	3. Low: Mildly progressive (similar to current existing products or process) (1-4%)
	***Application of Scientific Nature* (13%)**
	1. High: Various application of scientific nature with high innovation (10-13%)
	2. Middle: Several applications of scientific nature with less innovation (6-9%)
	3. Low: Few application of scientific nature with no innovation (1-5%)
	***Patentability* (2%)**
	1. High: Invention patents has pended (National or International) (2%)
	2. Middle: Modification patents has pended (National or International) (1%)
	3. Low: No patent (0%)
	※ Patent certificate should show the name of either instructors or participants.
	Total score of creativity _____

Marketability& Benefits (30%)	***Environmental Friendly* (10%)**
	1. High: Recyclable and eco-friendly with less pollution. Meets 4R environmental concepts (7-10%)
	2. Middle: Partially recyclable and eco-friendly with a certain amount of pollution. Meets 4R environmental concepts (4-6%)
	3. Low: Non-recyclable and not eco-friendly with serious pollution. Fail to meet 4R environmental concepts (1-3%)
	***Market Demand* (5%)**
	1. High: Completely meets market demands (4-5%)
	2. Middle: Partially meets market demands (2-3%)
	3. Low: Fail to meet market demands (1%)
	***Social Contribution* (5%)**
	1. High: High social contribution (4-5%)
	2. Middle: A certain level of social contribution (2-3%)
	3. Low: Low social contribution, even cause damage to the society (1%)
	Appearance* (5%) *(shapes, colors, and sizes)
	1. High: Appearance meets the usage situation (4-5%)
	2. Middle: Special appearance but lack of innovation. (2-3%)
	3. Low: Appearance fail to fit the invention (1%)
	***Exquisiteness* (5%)**
	1. High: High process of the appearance and dimensional accuracy (4-5%)
	2. Middle: Process of the appearance that fits normal end product (2-3%)
	3. Low: Poor process of the appearance (1%)
	Total score of marketability & efficiency _____
Operability (30%)	***Operation* (10%)**
	1. High: Operational procedure is quick, easy, and labor-saving (7-10%)
	2. Middle: Operational procedure can be known after learning or training (4-6%)
	3. Low: Operational procedure is complex, time-consuming, and laborious (1-3%)
	***Constitutive Property* (10%)**
	1. High: High stability. Inventions can be used repeatedly. (7-10%)
	2. Middle: Middle stability. Inventions can be used for a while. (4-6%)
	3. Low: Low stability. Inventions can only be used for few times. (1-3%)
	***Overall Collocation* (10%)**
	1. High: High collocation of elements and design of the invention (7-10%)
	2. Middle: Middle collocation of elements and design of the invention (4-6%)
	3. Low: Low collocation of elements and design of the invention (1-3%)
	Total score of operability _____

* **Note**: The total score from each judge will be ranked. The judge panel will discuss and decide the final score for each invention based on ranking scores rather than on raw scores.

7.3 Artwork Scoring Method:

7.3.1 Judging categories: The artwork will be scored according to Subjectivity, Creativity, and Composition.

7.3.2 Scoring rubrics: Table 2 below shows the temporary scoring rubrics.

Table 4: Scoring criteria for each artwork

Scoring Criteria		
Subjectivity (40%)	Based on whether the drawn artworks and the content published by the students have future technology and scientific knowledge.	The novelty of conception
Creativity (30%)		
Composition (30%)	Colour and Structure	

8. Awards

8.1. The award allocation:

8.1.1 Golden awards: The top 12±2% of the inventions/artworks will receive golden award. (Extra gold medals determined by the numbers of invention from each country are not included)

8.1.2 Silver awards: The top 13% to 38% (25% of the teams) of the total score will win the silver award.

8.1.3 Bronze awards: The top 39% to 69% (30% of the teams) of the total score will win the silver medal,

8.1.4 Special awards: The rest of the inventions/artworks will receive Special awards.

8.2. Country Selected Medals:

8.2.1 For gold awards: Every 8 inventions/artworks from one country will guarantee 1 gold award.

8.2.2 For silver awards: Every 4-7 inventions/artworks from one country will guarantee 1 silver award.

8.2.3 For bronze awards: Country that less than 3 inventions/artworks will guarantee with 1 bronze medal.

9. Contact Information

We welcome any feedback from member institutions regarding the virtual competition format or IEYI 2024. Kindly direct all correspondence or questions to our email. Your valuable feedback is much appreciated.

TEL: +886-2-7749-3402

FAX: +886-2-2394-6832

E-mail: ieyitw@gmail.com

Website: www.ieyiun.org

APPENDIX A: REGISTRATION FORM (Invention)

* Please complete one form per invention.

Invention Number	
Invention Category	

Country			
Name of Invention			
Inventor's Information			
Name of Inventor (Inventor 1)	PLACE PHOTO HERE	(As stated in passport) First Name: Family Name:	
Sex	☐ Male ☐ Female	Name of School	
Age			
Date of Birth (Year/Month/Date)		Year in School	
Name of Inventor (Inventor 2)	PLACE PHOTO HERE	(As stated in passport) First Name: Family Name:	
Sex	☐ Male ☐ Female	Name of School	
Age			

Date of Birth (Year/Month/Date)		Year in School	
Name of Inventor (Inventor 3)	PLACE PHOTO HERE	(As stated in passport) First Name: Family Name:	
Sex	☐ Male ☐ Female	Name of School	
Age			
Date of Birth (Year/Month/Date)		Year in School	
Advisor's Information			
Name of Advisor (Advisor 1)	(As stated in passport) First Name: Family Name:		
Sex	☐ Male ☐ Female	Fax	
Tel & Mobile		Email	
Job Title and School Name			
Name of Advisor (Advisor 2)	(As stated in passport) First Name: Family Name:		
Sex	☐ Male ☐ Female	Fax	
Tel & Mobile		Email	
Job Title and School Name			
The third advisor can only be added when there are 3 contestants in the team that come from completely different school or there are both junior and senior contestants in a team.			

The third advisor is optional, but he or she must be an English teacher, who helps students with their English oral presentation skills.			
Name of Advisor (Advisor 3)	(As stated in passport) First Name: Family Name:		
Sex	☐ Male ☐ Female	Fax	
Tel & Mobile		Email	
Job Title and School Name			

☐ I confirm the above submission details are true and correct. All information will be processed as per the entry form submitted and the information will not be able to be changed after the registration period.

☐ *(Optional)* I confirm that after final result announcement (September 1, 2024), the video of this invention could be open to public.

APPENDIX A-1: REGISTRATION FORM (Artwork)

* Please complete one form per artwork.

Invention Number	
Invention Category	**Artwork**

Country			
Name of Painting			
Inventor's Information			
Name of Inventor (Inventor 1)	PLACE PHOTO HERE (As stated in passport) First Name: Family Name:		
Sex	☐ Male ☐ Female	Name of School	
Age			
Date of Birth (Year/Month/Date)		Year in School	
Advisor's Information			
Name of Advisor (Advisor 1)	(As stated in passport) First Name: Family Name:		
Sex	☐ Male ☐ Female	Fax	
Tel & Mobile		Email	
Job Title and School Name			

The second advisor is optional, but he or she must be an English teacher who helps students with their English oral presentation skills.			
Name of Advisor (Advisor 2)	(As stated in passport) First Name: Family Name:		
Sex	☐ Male ☐ Female	Fax	
Tel & Mobile		Email	
Job Title and School Name			

☐ I confirm the above submission details are true and correct. All information will be processed as per the entry form submitted and the information will not be able to be changed after the registration period.

☐ *(Optional)* I confirm that after final result announcement (September 1, 2024), the video of this invention could be open to public.

APPENDIX B: INVENTION INFORMATION FORM (Invention)

Invention Number	
Invention Category	

Name of Invention					Country			
Name of School								
Size of the Invention	Length		Width		Height		Weight	
Link of the video								

1. Please briefly explain the submission piece.

(Please do not exceed 200-300 words in English.)

2. Outstanding characteristics of the invention or device (what sets it apart from previous creations).

3. Operation and effects of the invention or device.

4. Other points or aspects that should be considered.
5. Information on patents or other industrial property rights of this submission (if any). Please provide Information in English and patent-related document (picture).

Photograph of the exhibition piece

(Please show the internal structure of the work by illustration, if necessary.)

PLACE PHOTO HERE

APPENDIX B-1: INVENTION INFORMATION FORM (Artwork)

Invention Number	
Invention Category	**Artwork**

Name of Artwork			Country	
Name of School				
Size of the Artwork	Length		Width	
Link of the video				

1. Please briefly explain the submission piece.

(Please do not exceed 200-300 words in English.)

2. Outstanding characteristics of the artwork.

3. Other points or aspects that should be considered.

Photograph of the exhibition piece

PLACE PHOTO HERE