



# MILSET STEAM PHOTO CONTEST REPORT 2024

The International Movement for Leisure Activities in  
Science and Technology

[www.milset.org](http://www.milset.org)

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The International Movement for Leisure Activities in Science and Technology (MILSET) organized the 2024 edition of the **MILSET STEAM Photo Contest (SPC)**, which ran from April to August 2024. The SPC provides an opportunity for youth to express their observations of science through creative photography. The activity is free and open to participants aged 13 to 25 from all over the world.

## Goals of the Programme:

- **Engage youth in science, technology, engineering, arts, and mathematics (STEAM) by:**
  - Exploring visual aspects of STEAM through the art and science of photography.
  - Capturing images that demonstrate and communicate STEAM concepts and phenomena.
  - Applying STEAM techniques to the capture of digital photos.
- **Build a collection of STEAM photos** from youth worldwide to be used by MILSET and its member organizations.

## Photo Eligibility:

- Each contestant may submit a maximum of three photos for judging. An online form must be completed for each submission.
- Any photo that demonstrates, communicates, or explains a scientific, technological, engineering, or mathematical concept or phenomenon is eligible.
- The online form requires the contestant to briefly describe the concept or phenomenon associated with each photo.
- Photos must be the sole work of the contestant.
- Photos must be captured using a digital camera. Photos created using software are not permitted.
- Processing, including cropping and adjustments to correct or enhance exposure or colors, is acceptable; however, the addition, removal, or distortion of meaningful content is not permitted.
- Photos must not include a watermark or descriptive text.

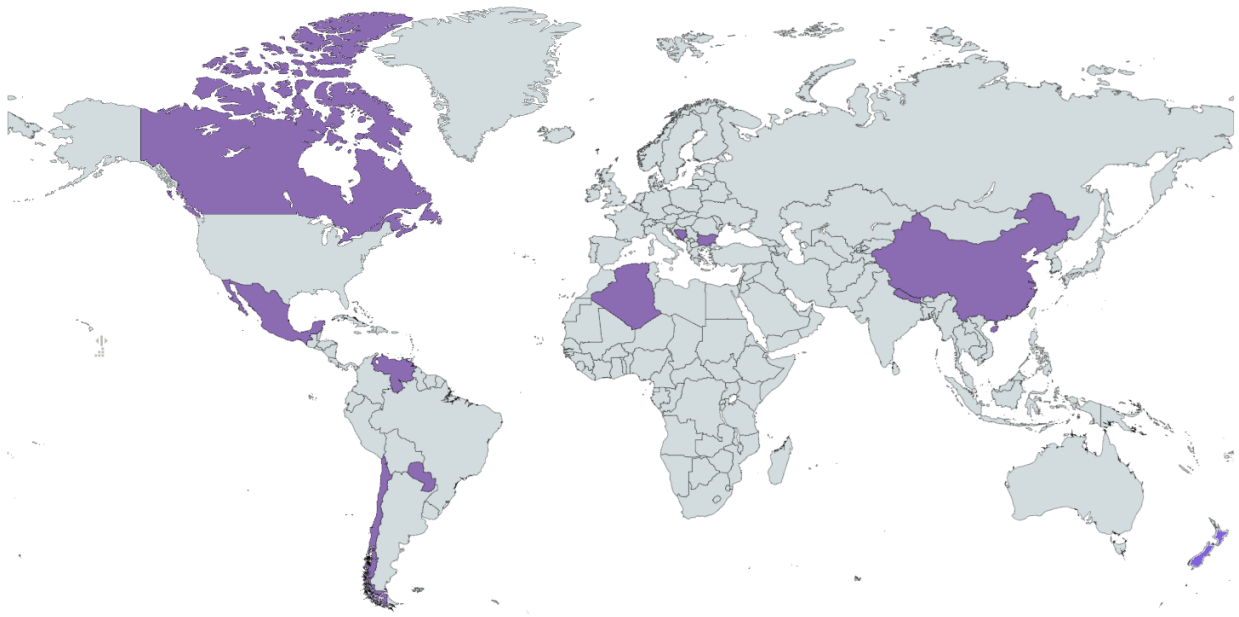
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## REGISTRATION

The **MILSET STEAM Photo Contest 2024** is a global initiative aimed at engaging youth with a passion for science and photography. The **MILSET SPC 2024** received submissions on a wide range of topics, including Engineering, Computer & Robotics Applications, Health Sciences, Nature (Environment and Ecosystems), Pure and Applied Sciences, and Space Sciences.

During the registration period of **5 months** (from April to August 2024), a total of **243 photographs** were submitted by participants from **11 countries**. Each participant had the opportunity to submit between one and three photos, accompanied by a scientific explanation, through the registration system developed for this purpose. Of the **161 participants**, **71% were minors (aged 13 to 17)**, while **29% were adults (aged 18 to 25)**.

We had participants representing 5 MILSET regions and New Zealand:



Canada



China  
Nepal



Algeria



Chile  
Mexico  
Paraguay  
Venezuela



Bosnia & Herzegovina  
Bulgaria

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The **243 photographs** received underwent the following evaluation phases:

- 1. Compliance with Rules:** In this phase, all photographs were assessed for adherence to the established rules, including participant age within the permissible range, the inclusion of a scientific explanation in English, and the absence of visible modifications to the photographs. Submissions that met these criteria were moved to the next evaluation phase.
- 2. Scientific Explanation & Image Quality:** During this phase, the jury evaluated the photographs and assigned scores based on the following criteria:

No.	Description	Rating
<b>Photo Criteria – Technical Qualities</b>		<b>Rate each criterion from 0 to 5 points</b>
1	Exposure	
2	Colour Balance	
3	Sharpness, Bokeh and Blur	
4	<b>Colour photo:</b> Hue and Saturation or <b>Black and white photo:</b> Tonality and contrast	
<b>Photo Criteria – Creativity, Originality and Aesthetics</b>		<b>Rate each criterion from 0 to 5 points</b>
5	Format and Framing	
6	Presence and Placement of Primary Subject	
7	Lighting (Natural or Artificial)	
8	Shapes and Lines	
9	Picture Depth (use of multiple planes)	
10	Dynamics between Key Picture Elements	
<b>Photo criterion – STEAM Relevance</b>		<b>Rate this criterion from 0 to 20 points</b>
11	How well is the STEAM concept or phenomenon captured in the photo	
<b>Informational Content Criterion</b>		<b>Rate this criterion from 0 to 15 points</b>
12	Demonstration of an in-depth understanding and knowledge of the STEAM concept or phenomenon presented in the photo	
<b>Effective Communication Criterion</b>		<b>Rate this criterion from 0 to 15 points</b>
13	Effective communication in rendering the STEAM concept or phenomenon accessible to the non-scientific observer	
		<b>TOTAL</b>

After all this process only 115 photographs reached the second phase.

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## RESULTS

The best scored photographs are shown below:



Title: **Star Tracks - A Gift from Tens of Thousands of Years Ago**

Author: Yuxuan Gong

Country: China

**Description:** This photo was taken in November 2023 in the empty JiXi wetland. The tracks of the stars were recorded from 22:00 to 04:00. As we all know, the sun and moon rise in the east and set in the west, and the stars also rise in the east. On a clear night, when I shoot with my camera pointed due north and held still relative to the Earth, using a long exposure, the stars leave circular trails in the night sky over time. This is due to the rotation of the Earth, which causes stars, like the Sun, to move from east to west in the night sky each night, at about 15 degrees per hour per star. Long exposures cause stars to move in circular arcs, with stars near the poles producing the smallest circles and stars near the equator producing the largest circles.



Title: **Levitating**

Author: Xuanzhi Du

Country: China

**Description:** There's a magnet at the bulb's bottom and electromagnetic coils in the base. When powered on, a magnetic field is created. The repulsive force balances with the bulb's weight and keeps it floating. The electromagnetic waves emitted from the base induce a current in the bulb's coils, lighting it up.

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Title: **Icelandic Blue Ice Caves**

Author: Han Lang

Country: China

**Description:** Blue ice caves in Iceland are formed through the interplay of glacial movement, melting, and refreezing. These caves typically occur within glaciers like Vatnajökull (shown in picture), the largest ice cap in Iceland. This is because during warmer months, meltwater from the glaciers surface seeps down through cracks and crevasses, flowing underneath the glacier. This flowing water carves out tunnels and caverns within the ice. As temperatures drop, the water refreezes, creating smooth and polished ice walls. Moreover, the intense blue color of the ice caves is due to the density and age of the ice, which absorbs all colors of the light spectrum except blue, resulting in the vibrant hue. The continuous movement of the glacier reshapes these caves, making each one unique and often temporary



## PEOPLE CHOICE AWARD WINNER

Title: **Autumn Leaf**

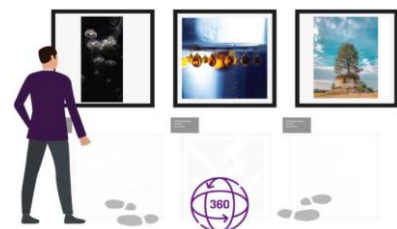
Author: Oshadha Perera

Country: New Zealand

**Description:** Autumn leaves turn yellow because chlorophyll breaks down, revealing carotenoids, which are pigments responsible for yellow hues. As chlorophyll fades, the green colour diminishes, allowing the yellow pigments to become more visible.

Explore the Top 15 Stunning Shots of 2024 Now  
Live at the MILSET SPC Virtual Gallery!

<https://spc-virtual.milset.org/2024/>





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## SOCIAL MEDIA CAMPAING

An official image and social media campaign were developed to promote the activity. This campaign was launched across the following MILSET accounts:

- MILSET Facebook
- MILSET Twitter (X)
- MILSET Instagram
- MILSET LinkedIn

The impact of the campaign on social media was measured using the following categories:

- **High Impact:** Reached more than 1,000 people
- **Medium Impact:** Reached between 500 and 999 people
- **Low Impact:** Reached fewer than 500 people

For the campaign developed, the impact achieved was classified as

Post	Posting date	Impact	Organic Reach
Registration Open	02/04/2024	Medium	760
How to participate	16/04/2024	High	1033
Submit your best pics -area	18/04/2024	Medium	506
Submit your best pics -area	25/04/2024	Medium	896
Submit your best pics -area	02/05/2024	Medium	560
Submit your best pics -area	16/05/2024	Low	435
Submit your best pics -area	06/06/2024	Low	208
Registration Open - reminder	31/07/2024	High	1181
Countdown	03/08/2024	Low	445
Countdown	05/08/2024	Medium	550
People Choice Award Announcement	02/11/2024	High	1148
Countdown to present winners	06/11/2024	Medium	514
Countdown to present winners	06/11/2024	Low	166
Countdown to present winners	07/11/2024	Low	299
Winner 3rd place	08/11/2024	Low	476
Winner 3rd place	08/11/2024	Low	351
Winner 2nd place	08/11/2024	Low	414
Winner 1rst place	08/11/2024	Low	472
Photo Gallery	17/12/2024	Medium	517

# MILSET STEAM PHOTO CONTEST 2024 REPORT

This MILSET programme was developed in 2024 with the support of:

## **JURY COMMITTEE:**

- Normand Fafard - MILSET SPC Jury President - Canada
- Nahiel Flores Fajardo - Mexico
- Joshua Heli Cervantes Durán - Mexico
- Misraim Gilberto Alvarez – Mexico

## **TECHNICAL COMMITTEE:**

- Desiré Zúñiga Torillo- MILSET SPC Coordination Team
- Berenice Suarez Rodríguez – MILSET SPC Coordination Team / MILSET Managing Director
- Lisette Vela Reyes – MILSET Communication Manager
- Jose Alberto Garcia Torres – MILSET IT Coordinator

Join us in capturing the magic of STEM at  
**MILSET STEAM Photo Contest 2025!**