MILSET SPC REPORT

MILSET STEAM PHOTO CONTEST 2021 REPORT

The International Movement for Leisure Activities in Science and Technology

www.milset.org

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The International Movement for Leisure Activities in Science and Technology (MILSET) organised the **edition 2021** of the **MILSET STEAM Photo Contest (SPC)** from March to August 2021. The SPC aims at creating a leeway for youth to express what they observe within science, in photos creatively. The activity is free and open to participants of 13 to 25 years old from all over the world.

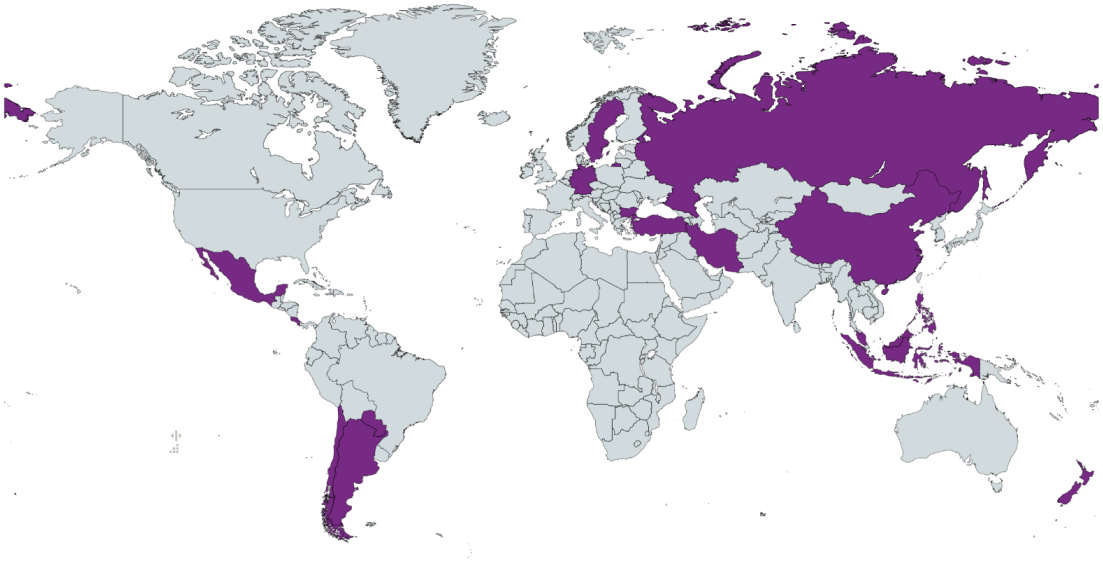
The **goals** of this activity are:

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

Photo Eligibility

- Each contestant may submit a maximum of three photos for judging. An online form must be completed
- 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 describe the concept briefly 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 by software are not permitted
- Processing, including cropping and adjustments to correct or enhance exposure or colours, is acceptable; the addition, removal or distortion of meaningful content is not permitted.
- Photos must not include a watermark or descriptive text.

MILSET SPC 2020 is free of charge activity addressed to all youth worldwide. During the registration period from **March to August 2021, 207 photographs from 16 countries were received.** The participants could submit from 1 to 3 photos, and their scientific explanation in the registration system developed. From 134 participants, 37% were adults (from 18 to 25 years old) and 63% minors (underage).



Each participant was requested to upload the photo(s) with its scientific explanation. For those participants under age (>18 years), a parent consent form was additionally requested.

The photographs received went through the following evaluation phases:

1. **Compliance of Rules:** During this step, all photographs were evaluated regarding their compliance with the rules (participant age within the range allowed, the scientific explanation in English, photographs without visible modifications, etc.). Those that followed the rules went to the next phase.

2. **Scientific explanation & quality of the image:** by this phase of evaluation, the jury defined the scores of the photographs based on the criteria mentioned below:

No.	***Description***	***Rating***
Photo Criteria – Technical Qualities		***Rate each criterion from 0 to 5 points***
1	Exposure	
2	Colour Balance	
3	Sharpness, Bokeh and Blur	
4	**Colour photo**: Hue and Saturation or **Black and white photo**: Tonality and contrast	

Photo Criteria – Creativity, Originality and Aesthetics		***Rate each criterion from 0 to 5 points***
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	

Photo criterion – STEAM Relevance		***Rate this criterion from 0 to 20 points***
11	How well is the STEAM concept or phenomenon captured in the photo	

Informational Content Criterion		***Rate this criterion from 0 to 15 points***
12	Demonstration of an in-depth understanding and knowledge of the STEAM concept or phenomenon presented in the photo	

Effective Communication Criterion		***Rate this criterion from 0 to 15 points***
13	Effective communication in rendering the STEAM concept or phenomenon accessible to the non-scientific observer	

	TOTAL	

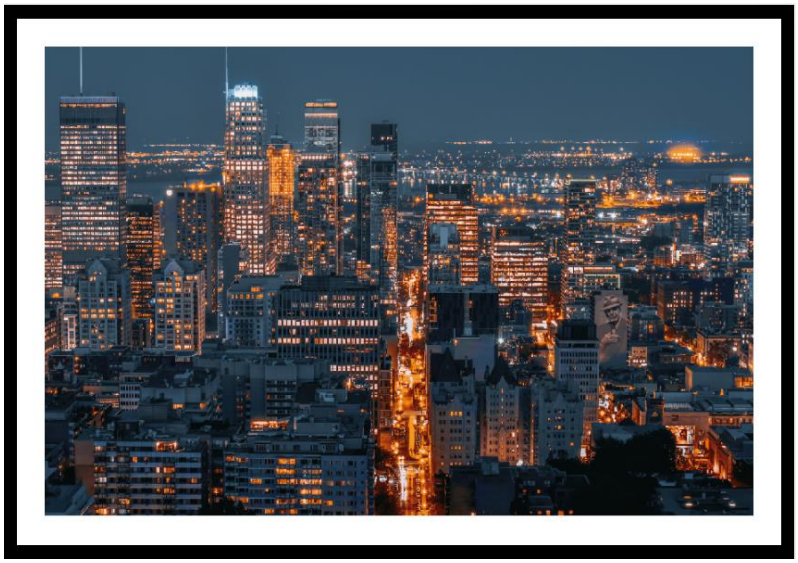
After all this process only 292 photographs reached the second phase.

It was developed a MILSET SPC Virtual Gallery, space where the 10 photographs best scored are shown.

https://spc-virtual.milset.org/2021/

The 1st , 2nd and 3rd places were obtained by:

1st Place



Author: **Zhiyi Sun**
Country: **China**
Title: **"Twenty Seconds Of Light Pollution"**
Prize: **250 Euros**

This photo recorded the light pollution in downtown Montreal at night for a short time with a shutter speed of twenty seconds. The content of the photo contains two parts: buildings, and lighting. For buildings, only blue-gray tones are retained. And the bright orange is used in the lighting part to form a sharp contrast with the blue-gray buildings, thus highlighting the light pollution of the city. Light pollution is excessive, misdirected, or inappropriate outdoor lighting. Too much light pollution washes out the view of the Universe, increasing energy consumption, interferes with astronomical research, disrupts ecosystems, and affects the health and safety of humans and wildlife. Light pollution can have as great an impact on the planet as levels of carbon monoxide and other airborne.

2nd Place

Author: **Yimin Liang**
Country: **China**
Title: **"Light Path"**
Prize: **National Geographic membership**

This picture clearly shows the path of light reflected. Because the edges of the glass have been cut into multiple bevels, light coming in from the edges will be reflected at multiple angles. The transmittance of glass is limited, so there only part of the light can get through it. Therefore, we can see that light had been reflected back when it irradiated to the surface of the transparent glass. But at the same time, there are still some lights can go through it, so the brightness of the reflected light was reduced, and the light internal reflection in the glass makes it looks like had been light up. At the same time, the rough surface of the table diffuses the light, reflecting parallel incoming light in many different directions, so the reflection looks blurry.

3rd Place

Author: **Shoucheng Chen**
Country: **China**
Title: **"Foregathering With The Kingfisher"**
Prize: **National Geographic membership**

Foregathering With The Kingfisher is a photo representing a beautiful Kingfisher picking up a small fish in its sharp beak. The photo shows the food chains between animals and how our mother Earth conducting our environemnt in a scientific manner. The weight of the fish that a kingfisher eats every day accounts for about 60% of its body weight.They will squat for a long time in a place with a good view of the water (such as a sticking branch, a protruding lotus, or a protruding stone platform on the shore). Once they see the prey, they will rush out like an arrow from the string. Entering the water, grabbing the fish, exiting the water, and flying back to the resting place are almost completed in an instant.

A deep appreciation to the following people who made possible this activity:

JURY COMMITTEE

- Normand Fafard - Canada MILSET SPC Jury President
- Seyed Mohamed Hasheminasb - Iran
- Alexander Semenov - Russia
- Guy Anduze - France
- Thierry Legault - France
- Nahiely Flores - Mexico
- Luis Monje Arenas - Spain

TECHNICAL COMMITTEE

- Berenice Suarez Rodriguez (MILSET Managing Director)
- Lisette Vela Reyes (MILSET Communication Manager)
- Jose Alberto Garcia Torres (MILSET IT Coordinator)

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