



CEOS Youth Initiative Poster / Video challenge

Following two international webinars, students are invited to participate in the CEOS Youth Initiative poster / video challenge. This is an opportunity for students to showcase their own independent research and input their voice into the CEOS process.

Posters and videos will be showcased at the CEOS Plenary event in November 2026 where students will have the chance to present their work to International Space Agencies leaders and Earth Observation leaders.



Poster / Video Challenge

Age Group: 14-16 years (younger/older students is ok)

Formats: Digital poster or short (1-2 minute) video

Students may work individually or in small groups. Recommended group size is 2 students.

Objective:

Design a digital poster or video to showcase how satellite-based Earth observation is used to monitor, protect, and understand our planet. Your poster or video should highlight the role and value of satellite Earth observations for understanding the Earth and its atmosphere, for applications such as climate, natural disasters, urban development, biodiversity, etc. Use visuals and infographics to present your ideas effectively.

Poster / Video Guidelines:

1. Below is a list of potential subject areas, however this list is not exhaustive, and students are encouraged to focus on areas of their particular interest.

a) **Design a new Earth Observation satellite:** "If you could design a new Earth observation satellite, what would its mission be, and how would it contribute to global challenges?"

Guiding questions:

- What environmental or societal issue will your satellite focus on? (e.g., climate, disaster response, deforestation, ocean health, air pollution)
- What type of sensors and instruments will your satellite have?
- What orbit will it follow, and why? (Low Earth Orbit, Geostationary Orbit)
- How will your satellite share its data internationally? (Who will use the data—scientists, governments, organizations?)
- How will your satellite improve current Earth observation capabilities? (New technology, better resolution, faster data transmission)

b) **Conduct a research project into the use of satellite Earth observations**

- **Tracking Change from Space:** Compare satellite images over time to show melting glaciers, rising sea levels or deforestation (Potential data sources [Landsat](#), [Sentinel](#), [MODIS and others](#), [monitoring the environment](#))

- **Natural Disaster Monitoring:** Highlight how satellites detect and track hurricanes, wildfires, floods, or earthquakes (Potential data sources: [tropical cyclones](#), [floods](#) (click on a daily product and look for the areas coloured red), [wildfires](#), [more fires](#), [even more fires](#), and [spectacular imagery of various events](#)).
 - **Ocean Observation and Marine Health:** Show how satellites track ocean temperatures, coral bleaching, algal blooms, and pollution. (Potential data sources: [marine pollution](#), [coral bleaching](#), [sea surface temperatures](#), [pollution](#))
 - **Air Pollution Monitoring from Space:** Illustrate how satellites like Sentinel-5P track air pollutants like CO₂, NO₂, and aerosols (Potential data sources: [Sentinel-5P](#), [TEMPO](#))
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2. Design Elements:

Some ideas:

- **Key facts or statistics** related to satellite Earth observation, [CEOS's programs](#), or recent discoveries made possible by satellites
 - **Be creative!** Add fun facts, eg. a “Did you know?” section,
 - Include **satellite imagery** or visual representations of Earth taken from space.
 - Show **before-and-after comparisons** (e.g., deforestation, melting ice caps, city growth).
 - Use **infographics** or diagrams to explain satellite technology and how it works, referencing CEOS initiatives where relevant.
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3. Format & Submission:

For those doing a poster:

- Your virtual poster should be submitted in **JPEG, PNG, or PDF format**.
- Poster should be **A3 size** (297 x 420 mm or 11.7 x 16.5 inches) in portrait or landscape orientation.
- Keep your design clear, engaging, and informative
- It should be visually appealing with a balance of images, facts, and simple text. Use colours that make the poster vibrant but readable, ensuring the information is easy to follow
- Students from all countries (except Hobart, Australia): we will display the posters on screens at the conference in November.
- Students from Hobart, Australia: we will print out the posters and display them on poster boards at the conference. Students will have the opportunity to talk about the posters to the CEOS leaders.

Important Tips for Poster Design:

- **Readable Text:** Use **large fonts** for titles and important points to ensure that text is legible even on smaller screens.
- **Colour & Contrast:** Make sure there is enough **contrast** between background colours and text. Avoid overly bright or dark backgrounds that can make reading difficult.
- **Image Quality:** If using satellite images or graphics, make sure they are clear and have proper **attribution** if needed (e.g., crediting the source of the satellite imagery).
- **Organised Layout:** Use a **clear structure** with headings and bullet points to organize your information. This will make it easy for viewers to absorb the information.



Some posters from 2025 as an example.

For videos:

- The video should be around 1 to 2 minutes long
- The use of AI or video tools such as Powtoon is accepted
- Use the topics under section 1 as a guide. How you present the information is up to you - let your imagination run free! It could be a presentation on a topic, an interview.. anything! Another idea is to design a video for a younger audience, teaching them about Earth observation satellites.
- School/parent permission required if students are on the screen
- Videos will be displayed on screens at the CEOS Plenary in Australia in November 2026

Technical requirements:

- **File type:** MP4
- **Codec:** H.264 (widely compatible, high quality)
- **Resolution:**
 - **Ideal:** 1920 × 1080 (1080p)
 - **Minimum acceptable:** 1280 × 720 (720p)
- **Frame rate:** 25fps
- **Orientation:** landscape (16:9)
- **Bitrate:** Target: 10–20 Mbps (avoid heavy compression)
- **Audio Requirements**
 - Audio format: Embedded in the MP4
 - Sample rate: 44.1 kHz or 48 kHz
 - Recording advice:
 - Use a dedicated microphone if possible (USB mic, lav, headset)
 - Record in a quiet room, minimal echo
 - Avoid ceiling fans, air conditioners, traffic noise
 - Optional (but helpful): a separate audio file (WAV) if you have it

4. Submission Process:

- Please use the following naming format for videos:

SchoolName_StudentLastName_Topic_V1.mp4

For example: NafplioHS_Ioannidis_Biodiversity_V1.mp4

- Please use the following naming format for posters:
SchoolName_StudentLastName_Topic_V1.pdf (or *.jpg or *.png)
For example: ShibaKokusaiHS_Yasui_Thunderstorms_V1.pdf
- Email your submissions to agnes.lane@bom.gov.au by **31 July 2026**
- If your file sizes are too large for email, send us a message and we'll provide a sharepoint or google link.

5. Target Criteria:

- **Creativity:** How visually engaging and innovative is the poster/video?
- **Accuracy:** How well does the poster/video convey information to the audience?
- **Clarity:** Is the information presented in an easy-to-understand format?
- **Impact:** Does the poster/video raise awareness of the importance of satellite technology in solving real-world problems?

Good luck, and let your creativity and curiosity take flight, just like the satellites you'll be showcasing! 🌍🚀