



How to conduct an online lesson for the EDU-ARCTIC schools network

EDU-ARCTIC project

EDU-ARCTIC is an EU-funded project focused on using Arctic research as a vehicle to strengthen science education curricula all across Europe. It aims to encourage students aged 13 to 20 to pursue further education in science, technology, engineering and mathematics (STEM), setting them on a path to perhaps one day work in one of these sectors.

EDU-ARCTIC uses interactive, innovative online tools that allow everyone to use Arctic research as a teaching tool in secondary school education in Europe. One of the main components of the EDU-ARCTIC, proposed to students aged 13-20 and their teachers is a series of online lessons conducted by scientists from research institutions and polar stations.

We cooperate with almost **900 teachers from schools in 47 countries** (as per February 2019) and the network is still growing!

Find more about EDU-ARCTIC in [a short video](#) and on [our website](#).

ONLINE LESSONS

This is the main component of the EDU-ARCTIC program. Transmissions from polar stations, and research institutions are freely offered to schools in Europe and worldwide. Online lessons may cover very wide range of disciplines and research topics: environmental sciences, geophysics (seismology, Earth magnetism), geology, geomorphology, climatology, climate change, atmospheric chemistry and physics, hydrology, ecology, soil science, oceanography, microbiology, marine, biology, biodiversity, paleoecology, limnology and additionally anthropology, the sociology of Arctic regions, human biology and medicine, genetics, zoology, biology and to some extent socio-humanities. The lessons focus on natural science topics, polar research and why they are key to helping to solve important challenges in society.

Find more on [our portal](#). See also [calendar of online lessons](#).

EDU-ARCTIC online lessons are recorded and published on our [YouTube channel](#) (unless you disagree). You may watch some [previous webinars in English](#), [Polish](#) and [other languages](#).

HOW TO START

1. If you want to conduct a lesson for EDU-ARCTIC schools, please contact us:
 - a. Agata Goździk, Project Coordinator gozdzik@igf.edu.pl +48226915650
 - b. Or use general e-mail edukacja@igf.edu.pl
2. Invitation for a lesson will be published on portal and should include information on topic, date and time, and short description. It should be scheduled and published **minimum 2-3 weeks in advance**.
3. In order to publish invitation for the lesson, please send to us:
 - a. Date and time (in UTC) – if you are flexible on time, just let us know, what hours and days suit you best. Before scheduling the lesson, you may also check our online calendar: <https://edu-arctic.eu/program/lessons>
 - b. Title of the lesson (if it is in national language, please provide also title in English)
 - c. Graphic/photo, which will be used for publication (minimum size is 970x546 pixels, but if you have an interesting photo, which is smaller, don't worry! Send it to us and we will try to prepare an appropriate graphic.)
 - d. Short description of the lesson (teaser) – 250 to 550 characters
 - e. Longer description with information on the content, school level or students' age, additional requirements, preparations before the lesson etc. It is also useful to provide here a few details about yourself (institution, your position, interest etc.). In the description of each lesson, information on required language skills could be also provided.
 - f. If you want teachers to read or print some materials before the lesson, you may also send it to us before scheduling the lesson (if material is not yet ready, you may send it later to us and we will distribute it to teachers)

TECHNICAL INFORMATION

1. Online lessons are conducted via **Cisco Webex**. You do not need to install anything. You only need updated browser and actual Java plug-in. You will receive the link to the lesson in advance.
2. You need online camera, microphone and speakers for the lesson.
3. You may watch a [short tutorial](#) on how to connect to Cisco (start from 0:35).
4. We also encourage you **to have a test in advance** in a moment suitable for you (to schedule a test, please send information on chosen date and time to edukacja@igf.edu.pl).



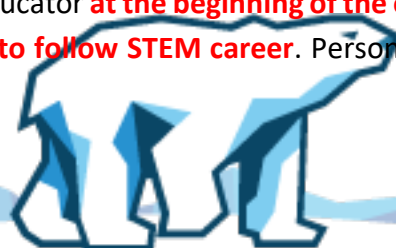
5. During the webinar you may **share files** (ppt presentation, graphics and animations), you may **share your screen** or **any application running on your computer** (during the test with us you may check all the options). You may also organize an **online quiz** (don't worry, we will help you!).
6. Microphones of participants are muted during the webinar and communication is possible via chat. If you wish that participants communicate in audio, you may let them a chance for questions and answers session at the end of the webinar.

PREPARATION FOR THE LESSON

1. EDU-ARCTIC provides [Polarpedia](#) – an online encyclopedia that contains a glossary of scientific terms on polar phenomena and natural sciences. If you think that **key scientific terminology** should be provided to teachers in advance, please, let us know. You may send as terms in English or we will prepare them ourselves and ask you for checking their correctness. In such a case, in the description/invitation for the lesson **links to Polarpedia terms** will be published.
2. **Visual materials** should be proposed and used to the extent possible, especially during English lessons, when it may be difficult for pupils to understand without graphics, animations.
3. Students and teachers appreciate playing online quizzes e.g. **Kahoot quizzes**. If you wish to organize a quiz, please let us know. If you send us questions and answers (preferably 4, one correct), we will prepare the quiz and help you play with students during your webinar.
4. It is also appreciated, if **worksheets** with exercises and tasks to be done by students are prepared and send to teachers in order to be printed before lesson. If you wish to prepare a worksheet, please let us know. We cooperate with methodological adviser, who may prepare a worksheet for the lesson, based on your presentation.
5. You may also conduct a short online survey (we usually use mentimeter.com or sli.do). You may send us questions for the survey (open and close questions, ratings etc.) and we will organize it for you.

CONDUCTING THE LESSON

1. Log in to Cisco at least **15 minutes in advance**, to check audio and video settings and upload your files.
2. It is recommended that each educator **at the beginning of the online lesson will elaborate why and how he/she decided to follow STEM career**. Personal perspective, information



on his/her career path will be something unique, and may help to encourage scientific careers and contribute to career advice in schools.

3. It is recommended that online lessons should also start with **something intriguing, mysterious, unexpected (some science stories)**, as this will allow to involve pupils in learning just from the very beginning.
4. **Start with a small talk first.** Such a small talk will allow participating pupils to get familiar with your English accent and will enhance the further understanding of the lesson. Don't speak too quickly and use simple language (as far as it is possible). For majority of EDU-ARCTIC students and teachers English is a foreign language.
5. Teachers suggested using **marker to point** some important elements, equations, numbers etc. Marker is available in Cisco (make a test first).
6. During online lessons pupils' motivation needs to be identified and stimulated by additional activities. Exercises make pupils active; e.g. **Kahoot quizzes or online surveys.**
7. If some worksheets are prepared for students, during the lesson you may display them and a few minutes later display correct answers. They may also serve as a homework.
8. Educators should not provide too much information. **They should engage in activities, inspire and surprise student, rather than concentrate on many facts and information.**

QUESTIONS?

contact us:

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GOOD LUCK!



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