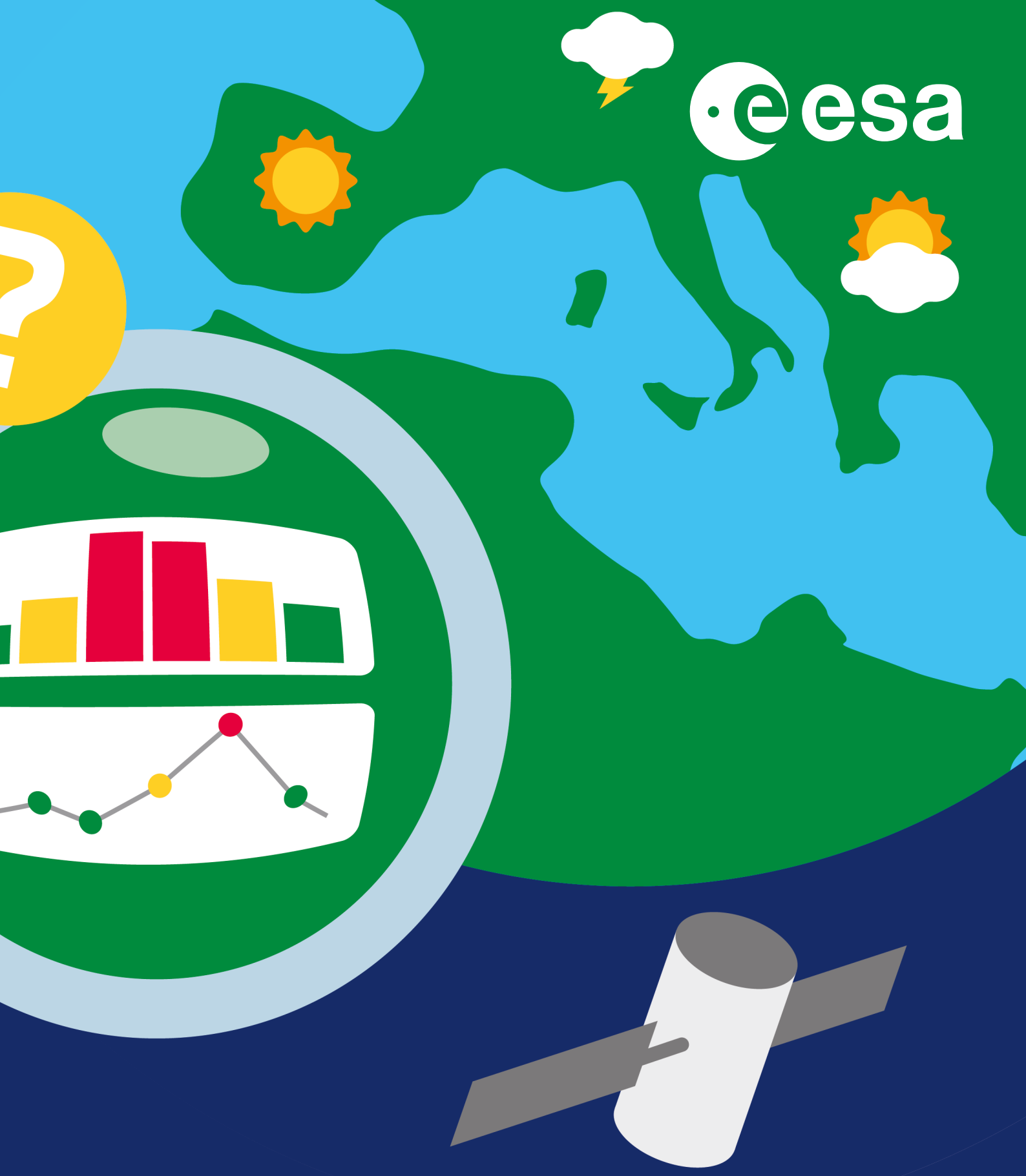


CLIMATE DETECTIVES

GUIDELINES 2020-2021

→ INTRODUCTION

ESA invites teachers and students between the ages of 8 and 15 to team up and join the ESA Climate Detectives school project, kicking off in September 2020 and running throughout the school year. In this project students will embrace the role of Climate Detectives while learning about Earth's environment and developing scientific skills through hands-on investigation and data collection. Student will identify a local climate problem, investigate it by using real satellite images or their own ground measurements, and finally propose actions to help reduce or monitor the problem. At the end students will share their results with the ESA Climate Detectives community on the project **sharing platform**. This way everyone can learn from their work and students can also raise awareness of the problem they have investigated.

Join us and help ESA make a difference in protecting Earth's climate!

→ Overview

The Climate Detectives 2020-2021 project features three phases:

Phase 1 – Identify a climate problem (17 September 2020 – 30 November 2020)

In this phase, students will be asked to identify a climate problem that they would like to investigate as 'Climate Detectives'. Students should define the problem based on questions that arise from their school studies and from observations in their local environment and that has a connection to the global climate.

Teams have until 30 November 2020 to identify a climate problem and submit their investigation plan online (maximum 450 words). In their investigation plan, the teams must give the following information:

1. Project title (max. 10 words)
2. What is your research question? (Max. 30 words?)
3. Describe the local climate problem/issue you want to investigate. (max. 150 words)
4. What kind of Earth observation data will you use?
5. Describe how you plan to investigate the climate problem and which data you plan to analyse. Also, describe how you plan to access/collect the data. (max. 250 words)

Scientists in the field of Earth observation and climate will review the investigation plans from all teams participating in the project. Teams will receive feedback and recommendations about their investigation plan in December 2020.

Phase 2 – Investigate the climate problem (December 2020 – 18 April 2021)

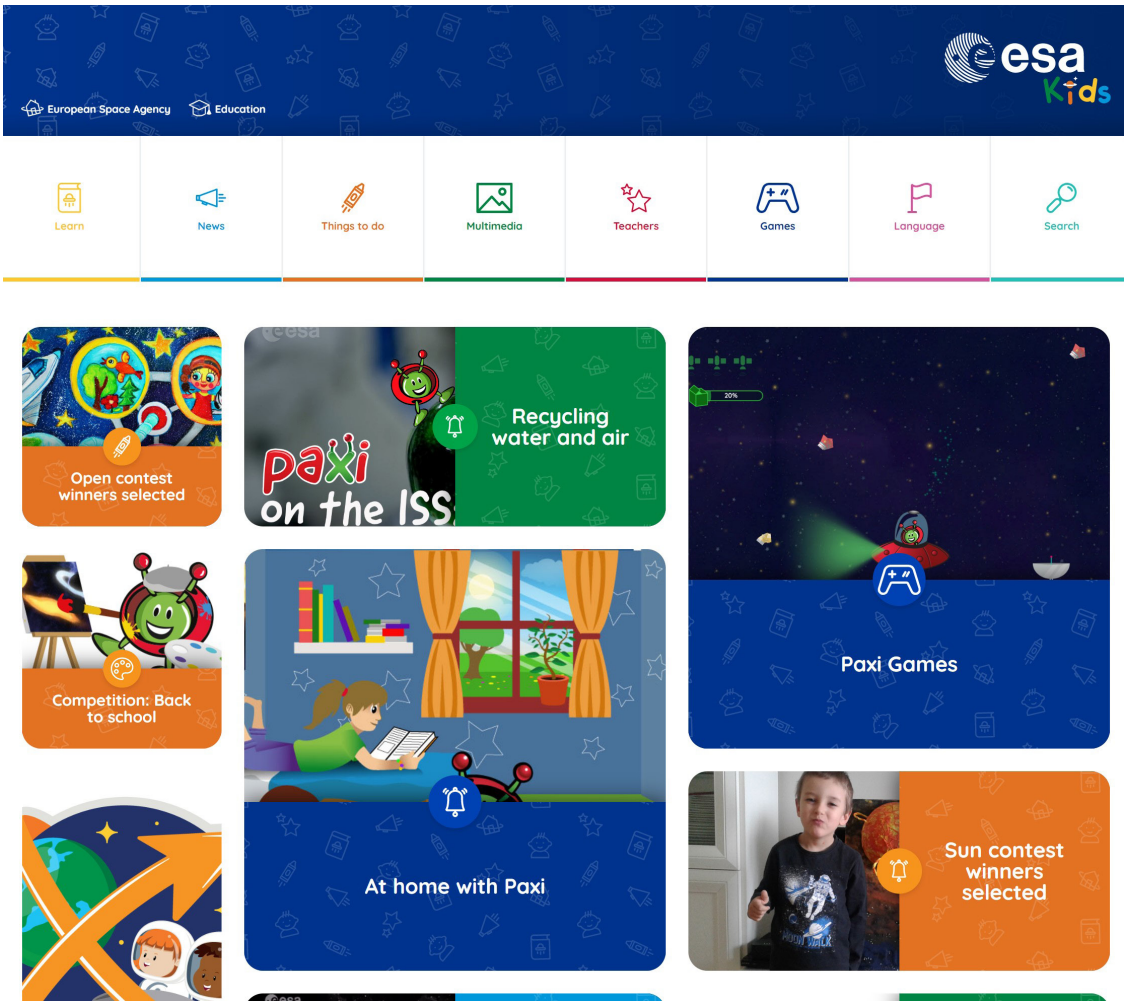
In this phase, students will collect, analyse and compare data to draw a conclusion about the problem they are investigating. The use of data is mandatory to enter the project. Such data can be either satellite or ground-based data retrieved from professional sources, or data obtained from measurements by the students, or a combination of them. For example, teams can make weather observations and compare them with historical climate data.

During Phase 2, ESA or, where applicable, the national coordinator will organize online events in which teams can "ask a scientist" questions related with their investigations.

Phase 3 – Share results and make a difference (19 April 2021 – 19 May 2021)

We can all make a difference! Based on the results of their investigations, students should decide on the actions they want to take - as individuals and as citizens – to help reduce or monitor the problem. Actions do not need to be limited to school time; for example, students could take home ideas and involve their families to put them into practice in their everyday lives, or could run a communication campaign to their school or local community to raise awareness.

Teams should record and provide evidence of their actions, and share them with the ESA Climate Detectives community on the project **sharing platform** . All teams who share their project will receive a certificate of participation by email in June 2021. The best projects will be highlighted on the sharing platform and the team members will receive Climate Detectives goodies. Teams of young climate scientists (from age 8 to 10 years old) that submit the best projects will also have their work highlighted in the **ESA Kids website**.



→ How to enter the project?

In Phase 1, teams have to register online and submit their investigation plan. **The deadline is 30 November 2020.**

In the cases where ESA has identified a national coordinator, teams shall register to Phase 1 through their national coordinator, in their national language:

- If you are a team from Austria, you should register through ESERO Austria. Find more information on **www.aec.at/esero**
- If you are a team from Czech Republic, you should register through ESERO Czech Republic. Find more information on **www.esero.sciencein.cz/detective**
- If you are a team from Denmark, you should register through ESERO Denmark. Find more information on **www.esero.dk**
- If you are a team from Finland, you should register through the Finish Science centre, Heureka. Find more information and register at **www.heureka.fi/ilmastoetsivat-2020-2021** (Finish) or at **www.skolresurs.fi/delta-med-din-klass-i-klimatdetektiverna** (Swedish)
- If you are a team from Ireland you can find more information on **esero.ie/climate-detectives**
- If you are a team from Italy, you should register through ESERO Italy. You can find more information at **www.esero.it/climate-detective**
- If you are a team from Luxembourg, you should register through ESERO Luxembourg. Find more information on **www.esero.lu**
- If you are a team from Norway, you should register through Nordic ESERO. Find more information on **www.esero.no/prosjekter/klimadetektiv**
- If you are a team from Poland, you should register through ESERO Poland. Find more information on **www.esero.kopernik.org.pl**
- If you are a team from Portugal, you should register through ESERO Portugal. Find more information on **www.esero.pt**
- If you are a team from Spain, you should register through ESERO Spain. Find more information on **www.esero.es**. For questions contact **esaclimatedetectives@esero.es**
- If you are a team from Sweden you should register through the National Museum of Science and Technology. Find more information on **www.tekniskamuseet.se**
- If you are a team from United Kingdom, you should register through ESERO UK. Find more information on **www.stem.org.uk/esero**

Teams from Belgium, Estonia, France, Germany, Greece, Hungary, Malta, the Netherlands, Romania, Switzerland, Canada, Latvia, Slovenia and Malta, have to apply to the project through the ESA Education office and the entries must be submitted in English.

→ Who can participate?

All the following eligibility conditions have to be fulfilled to participate in the ESA Climate Detectives project:

- Participation is open to teams from age 8 up to (and including) 15 years old.
- Teams must be comprised of a minimum of two students up to the whole class.
- Each team must be supervised by a teacher or educator acting as the team's point of contact with ESA's Education Office and, where applicable, with the respective National Coordinator. The project must be submitted by the teacher or educator.
- One teacher can sign up maximum three student teams.
- At least 50% of the team members must have the nationality of an ESA Member State . Further to the 22 Member States, also Canada, Latvia and Slovenia, based on their agreements with ESA, qualify to fully participate in the programmes of the ESA Education Office. In the framework of the current collaboration agreement between ESA and the Republic of Malta, teams from Malta can also participate in the Climate Detectives project.
- Team members must meet one of the following requirements:
    - Be enrolled full-time in a primary or secondary school located in an ESA Member State, Canada, Latvia, Malta and Slovenia; ESA will also accept entries from primary or secondary schools located outside an ESA Member State, Canada, Malta and Slovenia only if such schools are officially authorised and/or certified by the official Education authorities of an ESA Member State, Canada, Malta and Slovenia (for instance, French school outside Europe officially recognised by French Ministry of Education or delegated authority).
    - Be home schooled (certified by the National Ministry of Education or delegated authority in an ESA Member State, Canada, Finland, Malta and Slovenia).
    - Be a member of a club or after-school group, such as a science club or scouts located in an ESA Member State, Canada, Latvia, Malta or Slovenia.
- Each team can submit one entry only and each student can only be a member of one team.

ESA Member States: Austria, Belgium, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Luxembourg, the Netherlands, Norway, Poland, Portugal, Romania, Spain, Sweden, Switzerland and the United Kingdom.

→ Project requirements and constraints

When planning their investigation, teams shall have in consideration:

- Each team has to register and submit their investigation plan online (in total a maximum of 450 words).
- The project must include the use of data (from Earth Observation satellites or ground measurements) and be related to the topic 'climate'.

Entries not respecting the requirements above will be rejected.

By entering the Climate Detectives project, teams agree and certify that their submission is their original work, and that they have full legal right to use any portion that is not their original work. ESA bears no responsibility for verifying the authenticity of the proposals.

By submitting their final project, teams agree that their project will be shared on the Climate Detectives online platform. Participants accept that ESA Education and partners have the right to use the entirety or parts of the project for outreach and education purposes.

The interaction with scientists from the European climate and Earth observation community is a key element for the students to connect to real science research, and to reinforce their motivation and knowledge. In order for the organizers to be able to manage and provide scientific feedback for all the teams, the number of teams per country that can participate in the project may be limited. ESA Education and the national coordinators will do any possible efforts to give formal feedback to all entries. However, in the event of the number of participating teams exceeding capacity, ESA and the national coordinators reserve the right to close the application process earlier or to run a selection process of the entries that can be admitted based on quality.

→ Questions

For questions, consult the **Climate Detectives FAQ,** the Climate Detectives website **www.climatedetectives.esa.int**, or send an email to **climate.detectives@esa.int**.

For inspiration and questions, please consult also the **teacher guide**.