
My NASA Data - GLOBE Connections

GLOBE Atmosphere - Additional Resources



The GLOBE resources on this page support student exploration of My NASA Data Atmospheric phenomena. These include campaigns, eTraining, pacing guides, and how to find related student projects.

eTraining

For online eTraining on GLOBE atmosphere protocols, visit the [Atmosphere eTraining page](#).

Introduction to Atmosphere - Learn about the GLOBE student investigations that explore the Earth's atmosphere, weather, and climate. After completing this module, you will be able to describe the structure and composition of the atmosphere and explain how differential heating of the Earth's surface generates our planet's air circulation patterns. You will be able to identify the atmosphere as one of the interacting components of our Earth system, and become familiar with the Atmosphere Protocols followed by GLOBE students when they collect data for their scientific investigations. Finally, you will explore the steps of setting up a GLOBE Atmosphere study site for and be introduced to GLOBE data reporting and visualization tools.

In order to enter data for a protocol, you will need to complete the Introduction to Atmosphere module and the protocol module. In addition, there may be supporting protocols required.

Campaigns

GLOBE campaigns are a great way to explore different phenomena. Students have the opportunity to use GLOBE protocols and submit data in conjunction with students around the world. These data will contribute to the goals of the campaign in addition to facilitating student learning.



The graphic features the NASA logo in the top left corner with the URL www.nasa.gov. The main title is "TIPS AND TRICKS NASA GLOBE OBSERVER CLOUDS". A central question asks "What does YOUR SKY look like?" with a tip: "Tip #1: Look at the clouds slightly above the horizon and focus on the ones near you." A hand holds a smartphone displaying the "Cloud Coverage" app interface with three options: "No Clouds or Contrails Observable", "Clouds or Contrails Observable", and "Obscured (Clouds or contrails more than 25% hidden from view)". The GLOBE Observer logo and website URL (observer.globe.gov) are in the bottom right.

USA Air Quality Campaign

- Engage in authentic air quality investigations in your community.
- Get support from NASA scientists and educators.
- Access extensive educational resources.

There are now multiple ways to participate in the Campaign! To facilitate this, we now have a dedicated GLOBE Air Quality Campaign Team to share your observations with the Air Quality Campaign community.

- If you're already making Cloud observations, you can learn more about the air quality in your area by analyzing your observations of sky color and visibility.
- You can combine sky color & visibility observations with either Calitoo observations or PM2.5 data from small sensors in your area.
- If you already have a Calitoo, we encourage you to continue to make measurements, but that is not required. (This means you're no longer limited by the weather or time of day to make observations!)
- You can incorporate data from NASA satellites. (WorldView, AerosolWatch)
- Students at GLOBE schools and Citizen Scientists can participate in the Campaign by submitting observations using the GLOBE Observer app or the Data Entry Tool, or through the GLOBE website.

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- Please consider having your students submit projects to GLOBE IVSS or GLOBE SRS.

To join the 2022-2023 GLOBE Air Quality Campaign:

1. Complete the Form at this link: www.tinyurl.com/globeairqualitycampaign
2. Join the Air Quality Campaign Team from the [GLOBE Teams Page](#). Filter for "Air Quality" to find the team or use the referral code **GLID4HWO**.
3. If you're not sure how to do this, please follow the instructions under [Join Team](#) on the GLOBE Observer Teams Page.

Cloud Challenges

There are periodic challenge periods to engage students in collecting (and submitting) cloud data using the cloud protocol. Check the [GLOBE Observer Data Collection Challenges](#) page to see if there is a current challenge. Of course, you can ALWAYS make cloud observations and submit your data. In addition, resources are available on pages detailing previous challenges such as the [Fall Cloud Challenge: What's up in your Sky?](#)

[Urban Heat Island Effect-Surface Temperature Field Campaign](#)

The University of Toledo is leading annual field campaigns focused on the impacts of urbanization on Earth's temperature. Help the scientists answer "How does surface cover of an area affect its surface temperature?" Set up research studies at your school looking at the differences of surface temperatures for different land cover.

Pacing Guides

GLOBE Educator One-Week Pacing guides are designed to facilitate implementation of The GLOBE Program's GLOBE Observer app tools. Each guide includes:

- A guiding question
- Contact information
- NGSS standards alignment
- Background information
- Five sequenced activities (One is using one of The GLOBE Program's GLOBE Observer tools.)
- Additional resources.

Each of the five sequenced activities includes assessment options and a question that relates to the guiding question. There are several GLOBE Educator One-Week Pacing Guides related to the atmosphere. These are:

- [Air Quality \(Aerosols\)](#) - Grades 6-12
- [Cloud Types Featuring NASA GLOBE CLOUD GAZE](#) - Grades 3-8
- [Clouds and Energy Budget](#) - Grades 6-12
- [Urban Heat Islands](#) - Grades 6-12

Student Projects

Find student projects related to the phenomenon you are exploring. These projects can be used as

background research for younger students, or as models for student projects. There is a [search filter](#) available to find the projects you would be most interested in seeing. Students can also submit their own reports on the same page.

THE GLOBE PROGRAM A Worldwide Science and Education Program

Home > Do GLOBE > Research & Resources > Student Research Reports

Research & Resources

- Student Research Reports
- Student Resources
- Teaching Resources
- Higher Ed Resources
- Publications
- GLOBE Equipment

Student Research Reports

Check out student research reports from around the world! Would you like to have your report added? Click on the graphic to the right to submit your report. Please note that projects can be uploaded in any language!

Interested in participating in the **GLOBE International Virtual Science Symposium**? Click [here](#) for more information!

Close Filter

Year: All

Region/Country: All

Grade Level:

- Lower Primary (grades K-2, ages 5-8)
- Upper Primary (grades 3-5, ages 8-11)
- Middle School (grades 6-8, ages 11-14)
- Secondary School (grades 9-12, ages 14-18)
- Undergraduate
- Graduate

Report Type:

- Standard Research Report
- International Virtual Science Symposium Report
- Mission Earth Report
- Mission Mosquito Report
- U.S. Student Research Symposia (SRS)

Protocols

- Atmosphere
- Biosphere
- Earth As a System
- Hydrosphere
- Pedosphere (Soil)

Upload Your Research Report

Apply Filter Clear

Source: ([GLOBE](#)

[Website](#))

You can filter on the following:

- Year
- Region/Country
- Grade Level
- Protocol - all GLOBE protocols are available
- Report Type - The report type options are different forums available for students to submit their work.

There are also mechanisms for students to participate in the [International Virtual Science Symposium](#) and [Student Research Symposia](#). Check them out!

