

Update on the Student Climate Research Campaign

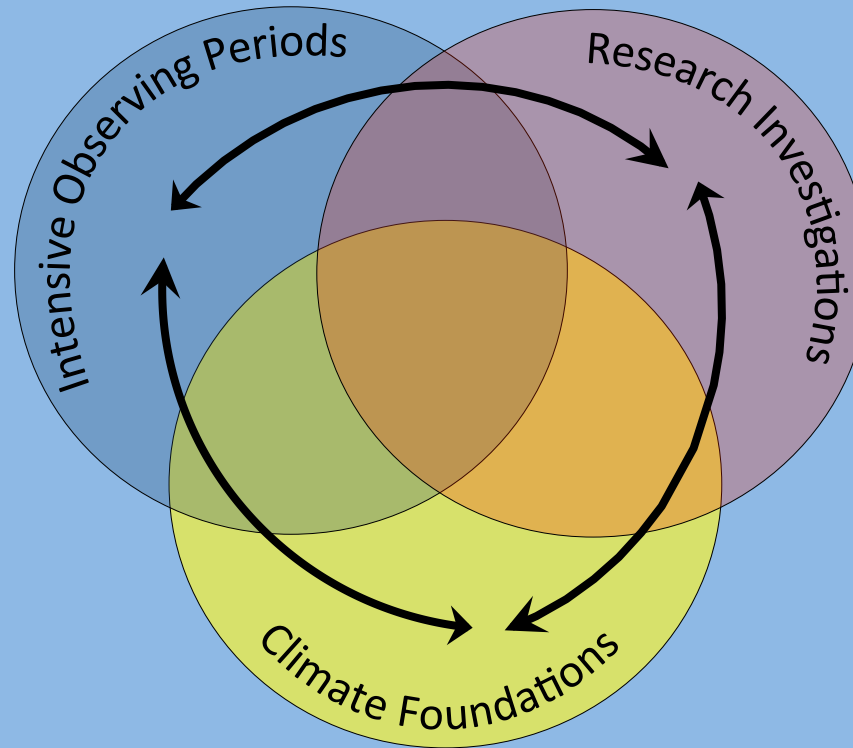


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Intensive Observing Periods

Students from around the world will be encouraged to take themed measurements over a short period of time and analyze their data.



Research Investigations

Students can carry out their own research projects, either alone, or with other schools in their country or around the world.



Climate Foundations

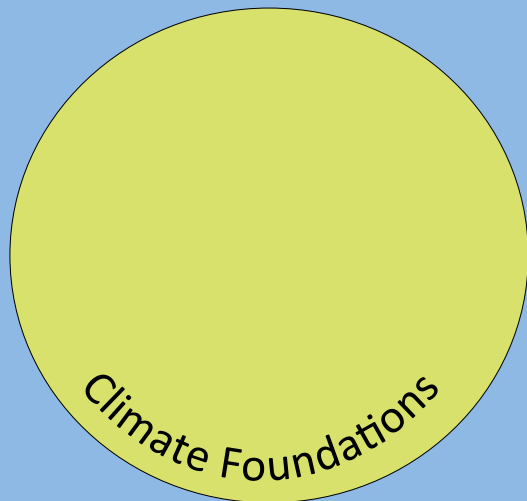
These introductory activities allow students to study real data and understand key concepts of weather and climate.



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Climate Foundations



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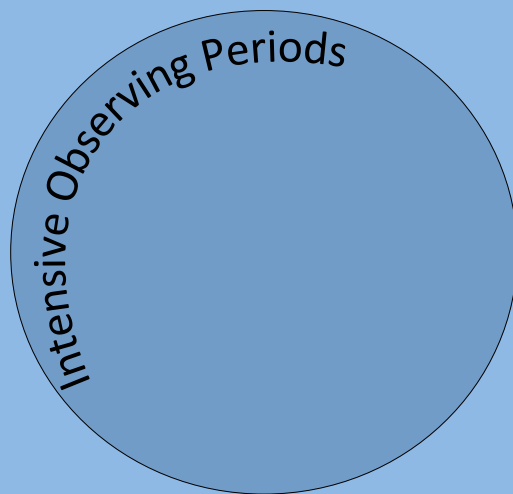
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Intensive Observing Periods



Intensive Observing Periods

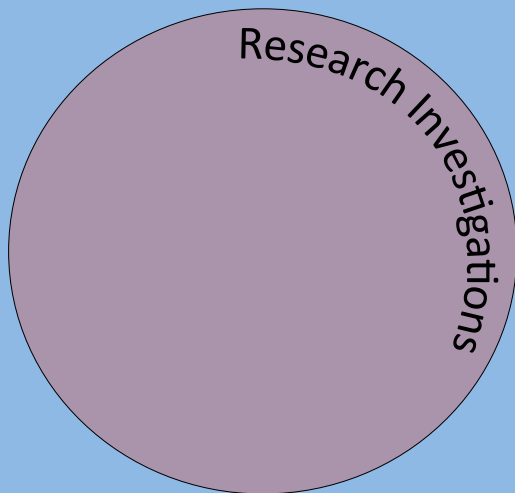
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Goals of the SCRC include:

- Increase student understanding and awareness of climate, including the broad and integrative nature of climate, the role of climate in shaping community, and the difference between climate and weather;
- Increase student understanding of and ability to conduct science research focused on climate;
- Improve student global awareness through collaborations among students, teachers, and scientists that are focused on understanding the Earth as a system.

Outcomes of the SCRC

Student Outcomes include:

- Students will conduct local to global inquiry-based climate research projects. These projects will be enhanced by mentorship by scientists, use of GLOBE data and other datasets, and collaboration with other GLOBE students. Students will share their findings via research reports and other learning artifacts.

Teacher Outcomes include:

- Teachers will incorporate inquiry-based climate research investigations in their classroom lessons and curriculum.



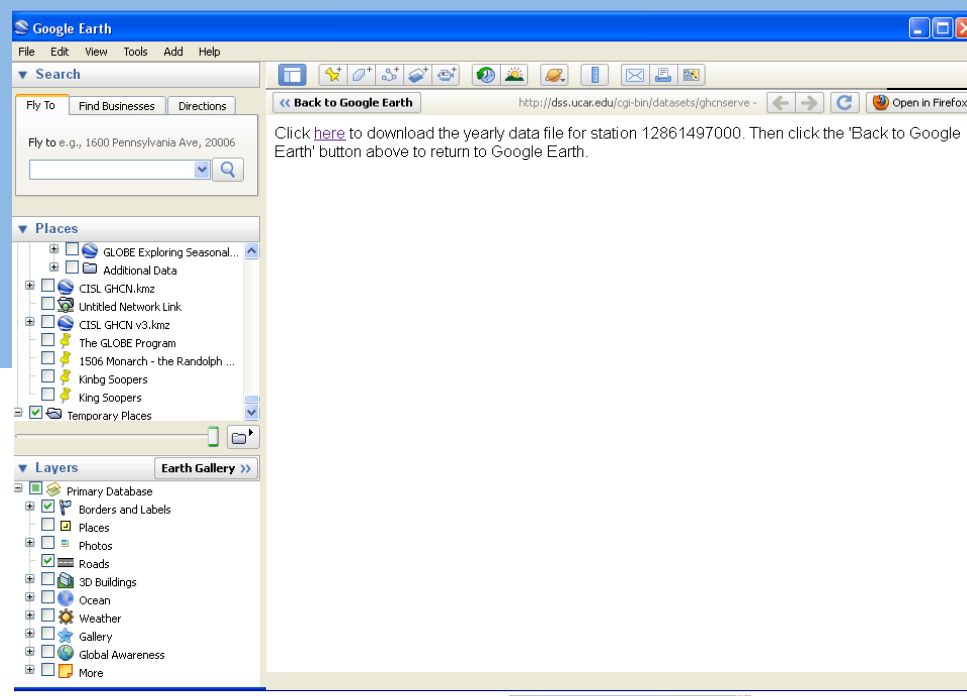
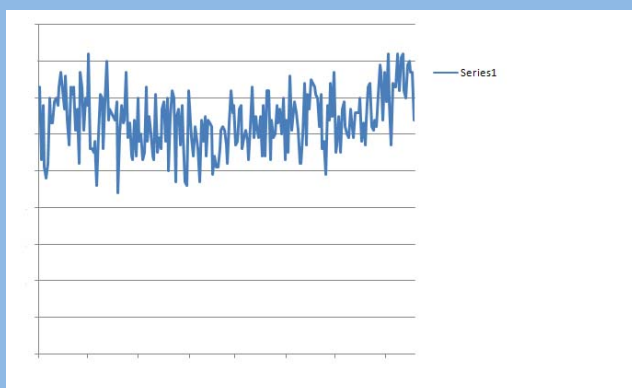
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Research: Inquiring About Climate

Four campaign themes will highlight connections between the processes that regulate: 1) global climate systems and the behavior of local climate and weather; 2) the sensitive dependence of ecosystems on climate; 3) the role that climate change plays in regulating air quality and its impact on human health; and, 4) the carbon cycle, including human inputs.

All schools are encouraged to begin their research investigations by exploring: “What is my climate, and how has it changed over time?”

GPO will make available to schools local, long-term temperature and precipitation data in a format that is easily accessible to both teachers and students. (currently displayed in Google Earth).



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The current Research Investigations Tool



Plan a student research project

GLOBE highly encourages students to use GLOBE data to help answer questions about how the environment around them works. Through research projects, students do science, learning the importance of creating hypotheses, analyzing data, drawing conclusions, and reporting their results. Scientific projects conducted by GLOBE students that include the use of GLOBE data or protocols can be submitted to be published on the GLOBE Web site. By sharing your valuable findings with the rest of the world you are completing the scientific process.

For ideas about types of studies that can be done using GLOBE data, and help finding useful data, see:

[Introduction](#)

[Classroom activities](#)

[Find schools with the most data](#)

To submit your research report, the report should follow a well-structured format used by science fairs that clearly conveys the details of your research project. This format, and some related information, is described in the following three documents:

[Sample Research Report](#)

[Student Research Report Format](#)

[Steps to a Successful Student Research Paper](#)

Submit a student research report

The "Submit a Report" link below gives a form that lets you send your full report to GLOBE in one of the following file formats:

- HTML
- Microsoft® Word
- Corel WordPerfect®
- Rich Text
- Adobe® PDF

[Submit a Report](#)

[Upload files \(photos, charts, presentations\) associated with a Report](#)



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Graphs and Tables hard to import

DataSummary

Table 1

Latitude Longitude Elevation SCode Name Site

54.192 16.1864 -7.1 qn8KVCG Complex of Schools No 2 in Koszalin SWS-01

50.4696 7.4362 116.9 zMMi9eI Kopernikus Gymnasium SWS-08

19 47.8 1407 BQaOcnb Lycee Jean Laborde SWS-02

-19.5215 45.86 98.2 fk2aECL Lycee Miandrivazo SWS-01

45.7462 17.064 135 4TTctBG OS Mate Lovraka SWS-02

41.8014 71.3715 20 The Gordon School

Secchi Disk data and Transparency tube:

The purpose of these graphs is to correlate the Secchi Disk and Transparency tube measurements together. If they both follow the same pattern, then the data can be concluded as correct. If the two do not follow the same trend, then that data is inconclusive. Though this section does not answer our question, it serves as to verify the validity of the data. The Gordon School does not do Secchi Disk tests, so its data is left out of this portion.

Graphs:

Table 2

NAME DATE SECCHI (cm) TUBE (cm)

Complex of Schools No 2 in Koszalin 1/17/07 350 102

Complex of Schools No 2 in Koszalin 1/24/07 350 101

Complex of Schools No 2 in Koszalin 2/1/07 350 96

Complex of Schools No 2 in Koszalin 2/8/07 350 100

Complex of Schools No 2 in Koszalin 2/15/07 350 100

Complex of Schools No 2 in Koszalin 2/22/07 350 102

Complex of Schools No 2 in Koszalin 3/1/07 350 98

Complex of Schools No 2 in Koszalin 3/8/07 350 102

Complex of Schools No 2 in Koszalin 3/15/07 350 105

Complex of Schools No 2 in Koszalin 3/22/07 350 96



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Quality Control may be needed

Report:

Abstract

Hypothesis

Does longitude affect the types of clouds seen at different longitudes in Germany?

Hypothesis: There is a greater amount of cirrus clouds seen in the East.

ResearchMethod

We first gathered information from three schools in Germany at different longitudes. The schools were Franz-Marc in Markt-Schwaben, Volksschule in Petersaurch, and Goethe in Wetzlar. Then, we made graphs.

DataSummary

There were more cirrus clouds in eastern Germany and most western school which we tested had the greatest amount of days. The school which we tested had the greatest amount of days.

Analysis

not included

Conclusions

We concluded that there are more cirrus clouds in eastern Germany than in western Germany. The schools which we tested had the greatest amount of days.

Discussion

Bibliography

Summary

On April 27, 2001 we conducted a field study in a moraine in the mountains of Colorado. We used protocols for soil, land cover and hydrology to make our observations.

Report:



For the complete report, please see the [online report](#).

Abstract

Hypothesis

ResearchMethod

DataSummary

Analysis

Conclusions

Discussion

Bibliography



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Review of Student Research

- Do you have a system in place for reviewing student work? If yes, how does the system function?
- Do you have any type of Peer Review system in place?
- Should student work meet a certain standard before being accepted and posted on the GLOBE Web site?
 - GLOBE has used a rubric for assessing quality of student work in the past
- Do teachers in your service area encourage student to conduct research projects? How are these projects used in promoting and growing GLOBE in your area? How could the GLOBE Program and the new Web site help you?



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Feedback Request

- What barriers do you currently face in assisting students with developing and conducting research projects?
- What tools (web or non-web) do you need to be able to help your students conduct research?
(e.g. report guidelines, online submission, visualizations of data, external data sets, etc)
- Do you currently provide a way for students to connect with local scientists? What types of scientist connections would be useful?



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Gracias

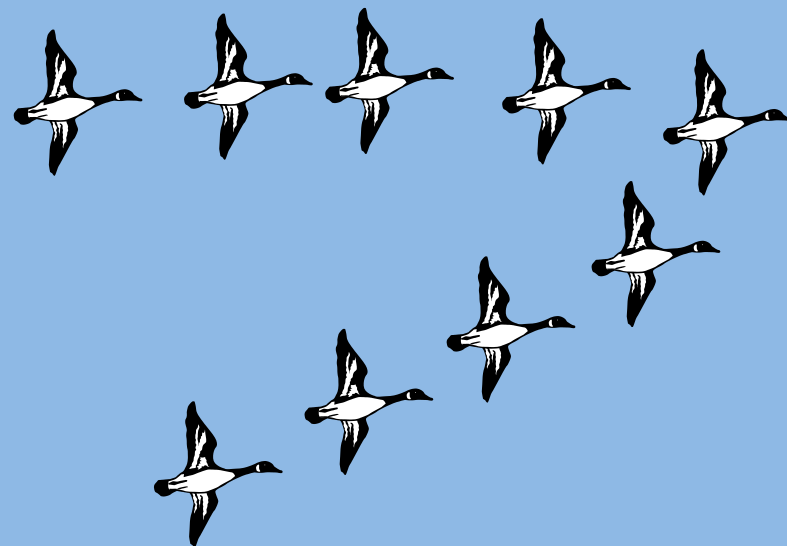
Merci

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Спасибо

Thank you



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Some quick announcements:

- Poster Session – Ballroom 18:30
- Wednesday
 - Carbon Cycle workshop [9:00 Insight]
 - Film 10:00 *and* 14:00 [Ballroom]
 - Social Media guest presentation 15:30 [Ballroom]
- Thursday
 - Bring water bottle
 - Breakfast OZ restaurant (6:00 – 6:45)
 - Board busses 6:45
- Shuttle Reservations – information available Wednesday morning at GLOBE Registration desk



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