



# THE GLOBE PROGRAM

Global Learning and Observations to Benefit the Environment

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## Student Climate Research Campaign

### Great Global Investigation of Climate Intensive Observing Period



## Teacher Participation Guide

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## Purpose

To involve students in short-term and long-term scientific studies focused on the relationship of temperature and precipitation with climate near their school and in comparisons with schools across the globe as a contribution to scientific research.

## Overview

This global investigation will focus on defining local climate through GLOBE protocols and the student inquiry question “What is my climate and how has it changed?” Students are asked to collect and enter temperature and precipitation data in the GLOBE database and investigate how to classify local weather and climate using these atmospheric data.

## Great Global Investigation of Climate Intensive Observing Periods (IOPs)

While temperature and precipitation measurements can and should be taken and uploaded at any time throughout the year, seasonal changes of temperature and precipitation can be seen by focusing on the months associated with equinoxes and solstices. While changes can be seen, the specific seasonal changes will vary across latitude and continents depending on factors such as climate variability, proximity to water, elevation, topography, and other conditions like drought or impacts due to extreme events. To enable schools to participate during periods with the most representative seasonal fluctuations in temperature and precipitation are captured while allowing for maximum participation to occur, the following focused intensive observing periods (IOPs) for The Great Global Investigation of Climate have been designated, beginning September 2011:

	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul
Great Global Investigation of Climate											

## What is needed

In order to participate in the Great Global Investigation of Climate IOP, you will need the following materials:

- Installed rain gauge
- Snowboard
- A meter stick
- A straight-sided container
- A container for the snowpack-rain equivalent sample
- Something flat and clean to slide under inverted containers
- Digital multi-day max/min thermometer or max/min thermometer

- Atmosphere Investigation Data Sheet
- Clipboard
- Pencil or pen

## Time needed to participate

- Identify and establish a new atmospheric study site and report data: *1 – 2 class periods*
- Conduct repeat observation of an established atmospheric site and report data: *30 minutes*

## What to do and how to do it

### Collect air temperature and precipitation data

1. Identify and establish a representative atmospheric study site, if your school has not previously established a study site. Refer to the Site Selection and Set-up guide for information regarding identification and establishment of an atmosphere site.
2. Follow the Rainfall Protocol or Solid Precipitation Protocol directions for collecting atmospheric data and record data on the Atmosphere Investigation Data Sheet.
3. Follow the Max/Min/Current Air Temperature Protocol or Digital Multi-Day Max/Min/Current Air and Soil Temperature Protocol directions for collecting atmospheric data, depending on your instrumentation, and record data on the Atmosphere Investigation Data Sheet.

### Report data to the GLOBE database

1. Sign In on the globe website ([www.globe.gov](http://www.globe.gov)) using your email address and password.
2. Navigate to your public page by hovering over the drop down “Go to” menu in the upper right hand corner, and selecting “My Public Pages”.
3. Click on the “Data Entry” tab.
4. Select either "Define a New Site" at the bottom of the page or an existing site from the list of existing sites for your school. Please note that each site will contain information that indicates which protocols have been used at that particular site.
5. Fill in the data form as directed and select "Send Data".