



GLOBE  
**Trees**

**Webinar Introduction**  
What is this all about?

# Agenda for the webinar:

- Introduction
- Importance of tree height observations - perspectives from researchers
- Trees tool walkthrough
- GLOBE Teams and how to use them for the challenge
- GLOBE Observer website and toolkit
- Implementing the challenge in informal education settings
- Question and answer session

# What is Citizen Science?

One definition: “Citizen science is a form of research collaboration involving members of the public in scientific research projects to address real-world problems.”



Poster from a blog by the Wilson Center's Common's Lab about the Citizen Science Association

Definition of citizen science from J. P. Cohn, “Citizen Science: Can Volunteers Do Real Research?” *BioScience*, vol. 58, no. 3, pp. 192–107, March 2008.

The  
**GLOBE**  
Program

Students  
collaborate  
with scientists



Hands-on science  
since 1995



<http://www.globe.gov>



International Program  
in 122 countries

Atmosphere/Climate,  
Hydrology, Soil,  
Land Cover/Biology,  
Phenology and  
Earth System  
Science Projects



Over 175 million  
environmental  
measurements reported





# Expanding through the GLOBE Observer app

08/26/2017 Clouds



North

Time (UTC): 17:16:00

Site: 18SUJ341186

Total Sky

Cloud Cover: **Isolated (10-25%)**  
Sky Color: **Light Blue**  
Sky Clarity: **Clear**

High Level Clouds (not observed)


Mid Level Clouds

Cloud Types: **Alto cumulus**  
Cloud Cover: **Few (1-10%)**  
Opacity: **Translucent**

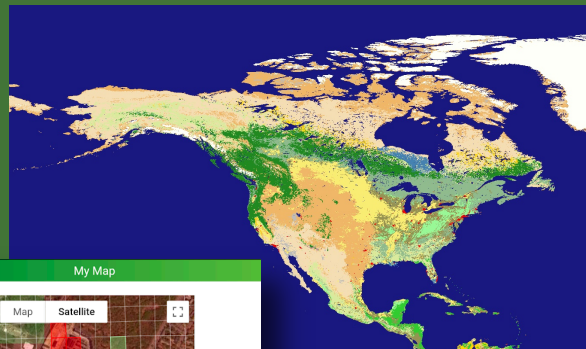
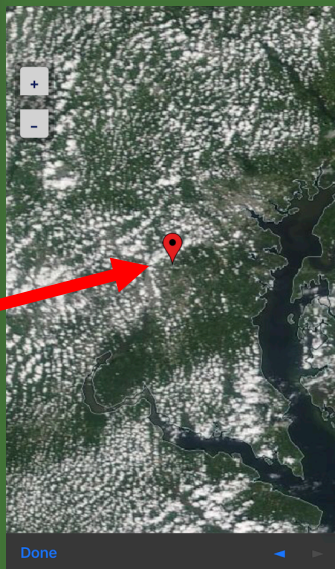
Low Level Clouds

Cloud Types: **Cumulus**  
Cloud Cover: **Isolated (10-25%)**  
Opacity: **Opaque**

Surface Conditions: **Dry Ground, Leaves on Trees**

 NASA Satellite View

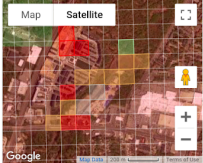
User cloud observation (left) and satellite cloud image (below)



Satellite-based land cover map (top) and user-created map (left)

My Map

Map Satellite



Layers Legend

Classifications:

- 02b Deciduous - Broad Leaved
- 42 Medium Grass
- 43 Short Grass
- 56 Dirt/Other
- 62 Athletic Field, Golf Course, Cemetery
- 91 Residential Property
- 92 Commercial Property
- 93 Roads and Parking

MODIS Data:

- Water Bodies
- Evergreen Needleleaf Forests
- Evergreen Broadleaf Forests
- Deciduous Needleleaf Forests



## GLOBE Observer

Choose your protocol:

 GLOBE clouds

 GLOBE mosquito habitat mapper

 GLOBE Land Cover  
Adopt a Pixel

 GLOBE Trees

# Trees Challenge 2020

- Celebrating the 50<sup>th</sup> anniversary of Earth Day and the 25<sup>th</sup> anniversary of the GLOBE Program
- April 1 – April 30, 2020
- Measure the height of as many different trees as possible using the NASA GO app
- Participate as an individual, team, or school
- Top observers in each category will be recognized

