

Our Planet: EARTH

February 20th, 2019

The webinar will begin at 1:00 p.m. (MT) and will be recorded.

While you're waiting:

- 1) Find the toolbar – it will either be on the bottom or top of your Zoom window
- 2) Introduce yourself in the chat box (please select “Share with All” *not* “Share with Panelists”)
- 3) Click audio “Join by Computer” – you won’t have microphone access

Tip for viewing: You can resize and move the location of the video and slide screens by clicking and dragging them

Facilitator Introduction

Claire Ratcliffe (Space Science Institute)

Keliann LaConte (Space Science Institute)

Paul Dusenbery (Space Science Institute)

Theresa Schwerin (Institute for Global Environmental Strategies)

Today's Agenda

Welcome and Introductions

Our Planet: EARTH Campaign

Guest Facilitator: Theresa Schwerin & Citizen Science

Engaging Teens in the Campaign

Hands-On Activity: Polar Bears Go with the Floes

Q&A

Icebreaker Poll Question

Have you ever...? (check all that apply)

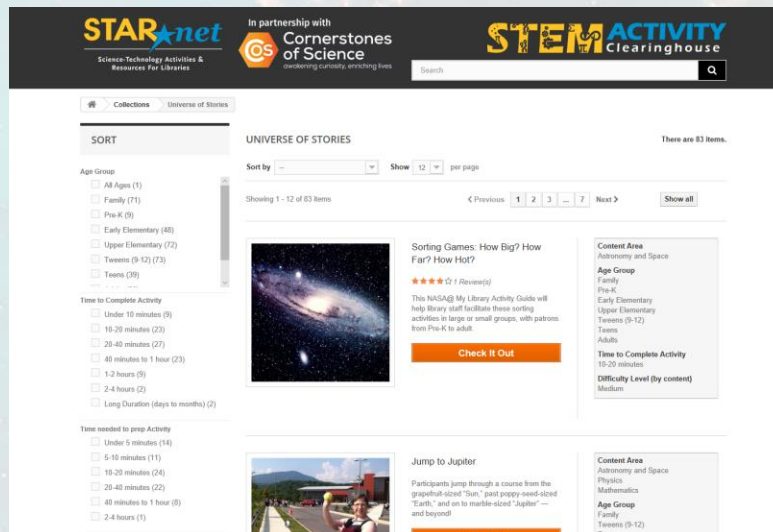
- a. Slipped on ice
- b. Been ice fishing
- c. Been ice skating
- d. Gotten your tongue stuck on ice
- e. All of the above

Earth Day Trivia Question

How many people in the United States participated in the first Earth Day on April 22, 1970?

- a. 200
- b. 5,000
- c. 7 million
- d. 20 million

STEM ACTIVITY Clearinghouse



Like an activity and think other library staff should know how great it is? Didn't like an activity or have modifications to make it better? **Make sure to leave a review!**



A national campaign for libraries & their communities

This campaign is sponsored by NASA through STAR Net's *NASA@ My Library* program that is managed by the Space Science Institute.

Why Now?



Our Planet:
EARTH

This national campaign is an outgrowth of three converging events during April 2020:

- Citizen Science Month,
- the 50th Anniversary of Earth Day,
- and the recent adoption by ALA of “sustainability” as a new core value of librarianship. Every community can and must make a difference.

Campaign Goals

- 1) Provide libraries with rich and effective resources that they can use to develop engaging environmental programs,
- 2) Promote citizen science opportunities, and
- 3) Build lasting collaborations around environmental sustainability both within the library community and beyond.



Register your Library by April 30th:

www.starnetlibraries.org/our-planet-earth/



Community Dialogues in Public Libraries

- **Informal conversations** with community stakeholders, leaders, and members
- **Encourages libraries to reach out to new partners**, consider how to better reach underserved audiences, and better meet their patrons where they are
- **This Framework is constantly evolving**, and we hope to encourage more libraries and other informal venues to contribute





Community Dialogues Webinars

- Tuesday, March 10th at 11:00 am MT
- Wednesday, March 11th at 12:00 pm MT
- Thursday, March 26th at 2:00 pm MT
- Wednesday, April 15th at 12:00 pm MT

The first 500 libraries committed to this will receive our “Arctic to Antarctica” game!

Citizen Science in the Library



Theresa Schwerin
Vice President, Education Programs
Institute for Global Environmental
Strategies (IGES)

Theresa_Schwerin@strategies.org



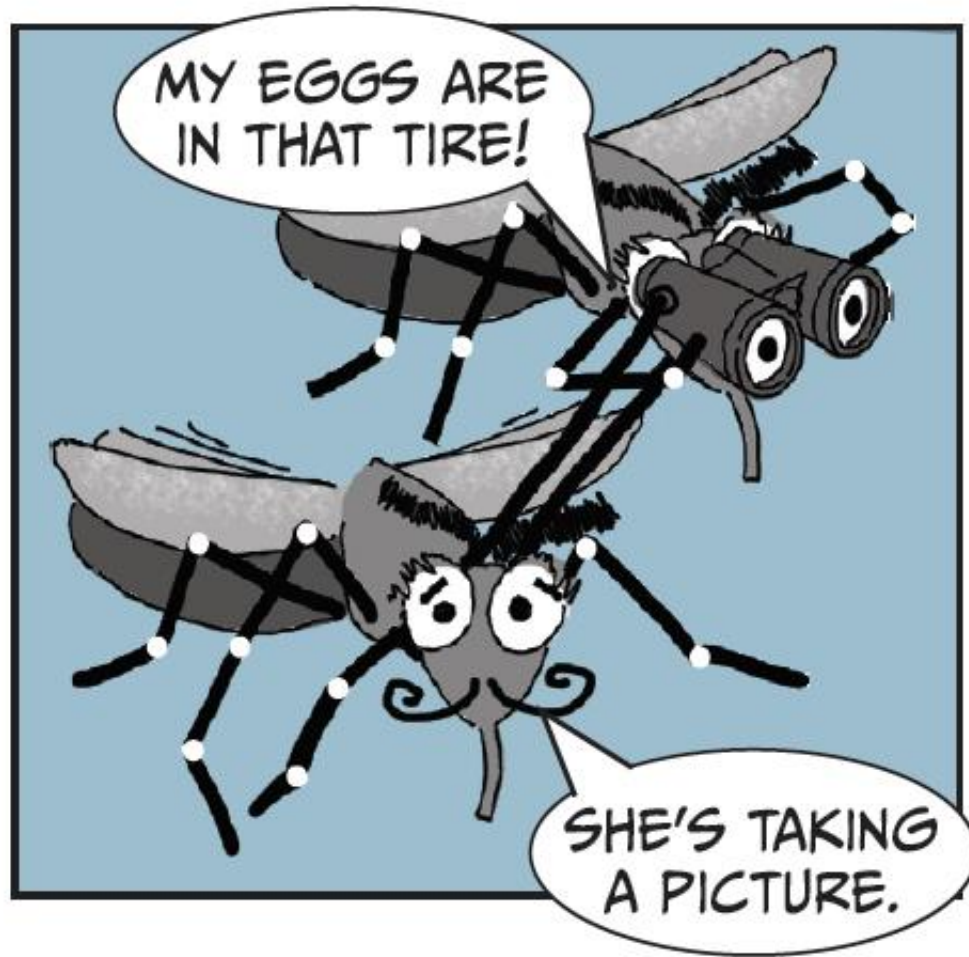
Citizen Science and Libraries

Theresa Schwerin
Institute for Global Environmental Strategies



What is a Citizen Scientist:

A person who volunteers with science research – for example by making and recording observations



Choose your protocol:

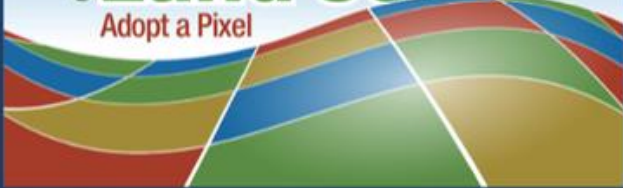
GLOBE
clouds



GLOBE
**mosquito
habitat
mapper**



GLOBE
Land Cover
Adopt a Pixel

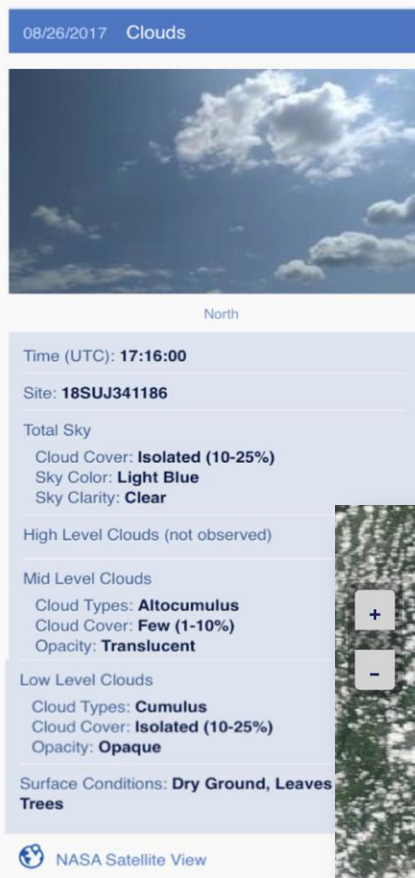


GLOBE
Trees

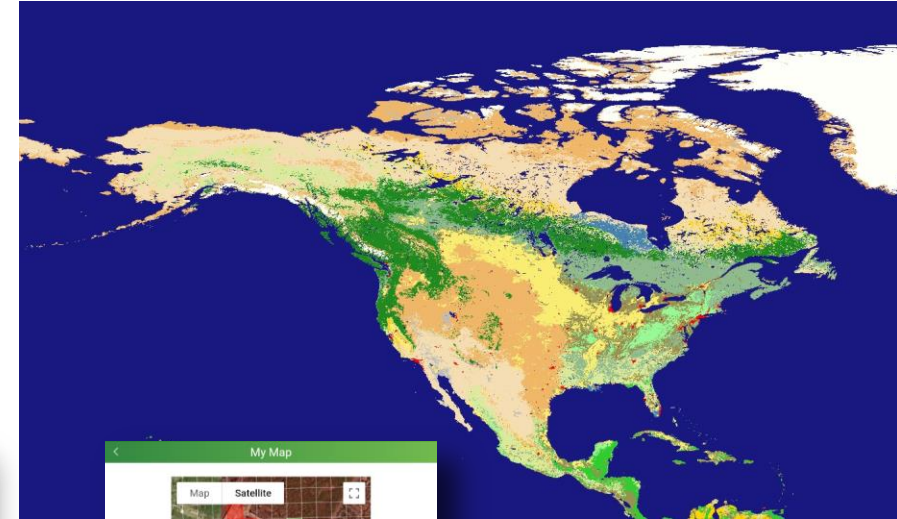
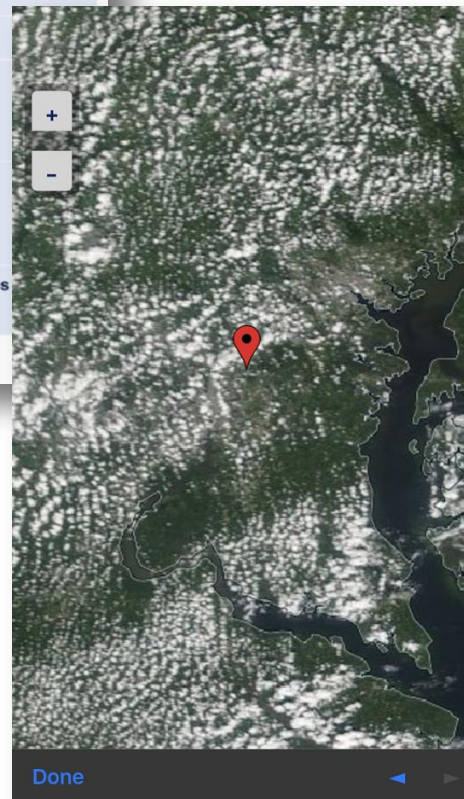


THE
GLOBE PROGRAM 

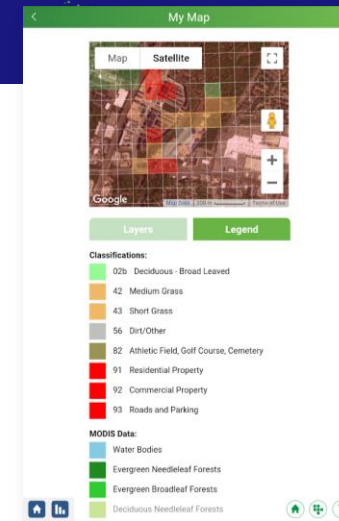
Choose your protocol:



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

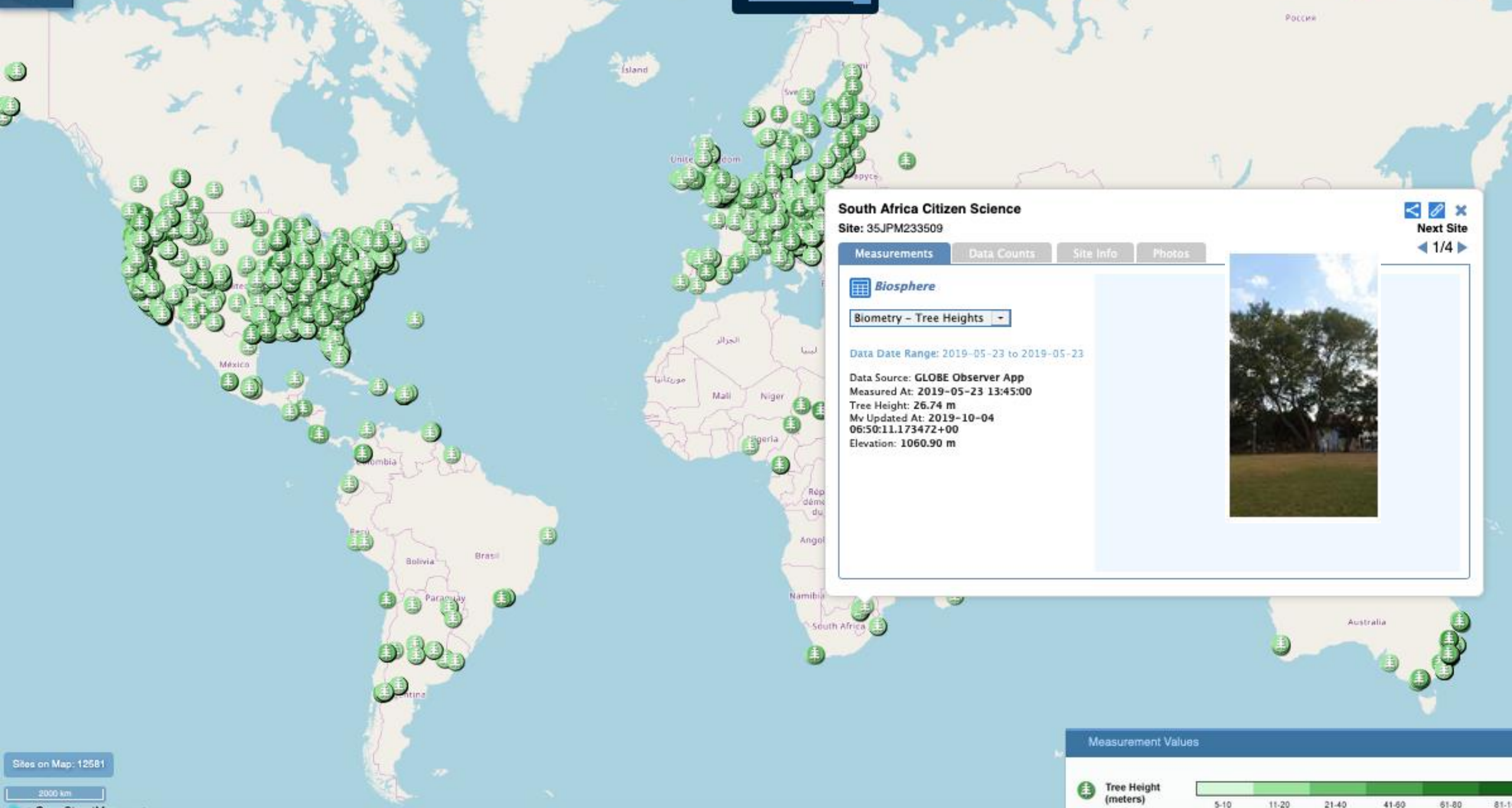


Satellite-based land cover map (top) and user-created map (left)





Aim your camera at the base of the tree



South Africa Citizen Science

Site: 35JPM233509

- Measurements
- Data Counts
- Site Info
- Photos

 **Biosphere**

Biometry - Tree Heights

Data Date Range: 2019-05-23 to 2019-05-23

Data Source: **GLOBE Observer App**
Measured At: 2019-05-23 13:45:00
Tree Height: 26.74 m
Mv Updated At: 2019-10-04 06:50:11.173472+00
Elevation: 1060.90 m




  
Next Site
1/4

Sites on Map: 12581

2000 km

Measurement Values

 Tree Height (meters)





TOOLKIT for INFORMAL EDUCATORS

Hands-on activities,
games, and resources
(e.g., books, videos,
FAQs) to build content
knowledge and skills

[Observer.globe.gov/
toolkit](http://Observer.globe.gov/toolkit)

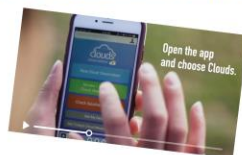
GLOBE clouds

Create a Cloudscape



In this activity, participants create a collage using different materials to represent the various types of clouds.

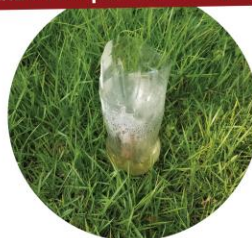
This activity can be completed individually or as a collaborative project.



You can supplement this activity with a video, like *Clouds: Getting Started*.

GLOBE mosquito habitat mapper

Build a Mosquito Larva Trap



Participants can upcycle a plastic bottle and turn it into a larva trap. This activity can be completed as part of a class or a "Leave a Bottle, Take a Bottle" station where visitors can donate or use materials.

Once larvae have been collected using the trap, participants can identify them using a clip-on microscope and the GLOBE Observer app.



GLOBE Land Cover Adopt a Pixel

Take a Land Cover Walk



Lead participants on a walk during which they learn to identify different types of land cover and discuss the effects that these land cover types have on the environment.

It is helpful to also print copies of the *Land Cover Reference Guide*.



GLOBE Trees

Measuring tree height is just one way that scientists study the health of forests and ecosystems around the world. Give it a try using this paper clinometer.

You can also measure tree height using the Trees tool within the GLOBE Observer app. Simply point your phone or tablet's camera at the base and top of the tree. Then walk to the tree, counting your steps. The app will calculate the height for you.

Constructing the Clinometer

1. Pull a knotted string through the circle in the upper right corner of the clinometer.
2. Attach a weight (like a paper clip or washer) to the bottom of the string.
3. Tape your straw to the top of the page.
4. Clip to a clipboard or hold against a hard surface like a book or piece of cardboard.

Using the Clinometer

1. Find a tree on level ground that is at least 15 ft. tall. Stand where you can clearly see the base and the top.
2. Look at the top of the tree through the drinking straw.
3. Use the clinometer to measure the angle at which you are looking at the tree. It helps to have a friend tell you where the string crosses the arc.
4. Walk to the base of the tree, counting your steps.

Your Height ft. x 0.413 = ft.

Your Height ft. - 4 = ft.

Step Length ft. x # of Steps = ft.

Distance from Tree ft. x Clinometer Angle + Eye Height = ft.

Tree Height ft. ÷ 12 = ft.

Library Field Testing GLOBE Observer and Toolkit

Participating libraries recruited through STAR Net Library network

Libraries:

- LaSalle Public Library (IL)
- Haddonfield Public Library (NJ)
- Lamar Bruni Vergara Inner City Branch (TX)
- Lee County Library System (FL)
- Kenton County Public Library (KY)
- Cumberland County Public Library (NC)
- Los Angeles Public Library (CA)
- SW Oklahoma City Public Library





Library Programming Using
GLOBE Observer

Tree Challenge 2020: Make Every Tree Count

April 1-30

- In celebration of GLOBE 25th anniversary and Earth Day 50th
- Measure the height of as many different trees as possible using the Trees tool in the [GLOBE Observer app](https://observer.globe.gov).
- individuals, schools, and registered teams that measure the most trees recognized as top observers.
- Recorded Webinar from February 19 and Facilitators Guide to support libraries and other informal educators



<https://observer.globe.gov/trees-2020>



THE
GLOBE PROGRAM 



THE **GLOBE** PROGRAM



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[Resources](#)

Trees Challenge 2020: Make Every Tree Count

April 1, 2020 to April 30, 2020

Short link to this page: <https://observer.globe.gov/trees-2020>

To celebrate the 50th anniversary of Earth Day and the 25th anniversary of the GLOBE Program, GLOBE Observer is hosting a month-long citizen science challenge in April 2020. Volunteers are invited to measure the height of as many different trees as possible throughout the month using the Trees tool in the [GLOBE Observer app](#). The individuals, schools, and registered teams that measure the most trees will be recognized as top observers in the challenge.



[Observer.globe.gov](https://observer.globe.gov)

Trees Challenge 2020: Make Every Tree Count

Facilitator's Guide for Informal Educators

The Challenge

To celebrate the 50th anniversary of Earth Day and the 25th anniversary of the [GLOBE Program](#), GLOBE Observer is hosting a month-long citizen science challenge in April 2020. Volunteers are invited to measure the height of as many different trees as possible throughout the month using the Trees tool in the [GLOBE Observer app](#). The individuals, schools, and registered teams that measure the most trees will be recognized as top observers in the challenge.

This page contains information relevant to informal educators who are interested in participating in the challenge, including an overview of the science, steps for taking observations and creating teams, and resources that are useful for developing and promoting Trees Challenge 2020 programming. It can also be downloaded in a [PDF version for easier printing](#).

[Return to Top](#)

Timeline and Important Dates

February 19 - [Webinar for Educators](#) at 2:00 - 3:30 pm EST (19:00 to 20:30 UTC)

March 30 - Facebook Live at 1:00 pm EST (17:00 UTC)

April 1 - Start of challenge

April 1 - National Go on a Walk day

April 7 - World Health Day (see Science Connections to Public Health)

April 22 - 50th Earth Day

April 22 - GLOBE's 25th anniversary

April 24 - Arbor Day

April 30 - End of challenge

May 3 - Last day to submit data

May TBD - Winners Announced

Quick Navigation Links:

- [The Challenge](#)
- [Timeline and Important Dates](#)
- [Communications](#)
- [The Science](#)
- [Making Observations](#)
- [Creating a Team](#)
- [Using the Toolkit](#)
- [Community Connections](#)
- [FAQs](#)
- [Connections to Boy Scouts](#)
- [Connections to Girl Scouts](#)
- [Connections to Libraries](#)
- [Planning Timeline](#)

Trees Challenge 2020 Resources

This page contains resources specifically for the the Trees Challenge 2020: Make Every Tree Count. For more general Trees resources and activities, check the [resource library for individual observers](#) or the Trees section of the [toolkit for informal educators](#).



Trees Challenge 2020 - Facilitator's Guide

A printable PDF version of the Trees Challenge 2020: Make Every Tree Count - Facilitator's Guide for Informal Educators.

[Webpage version of the Facilitator's Guide](#)



Trees Challenge 2020 Flyers

A printable poster and promotional flyers for the Trees Challenge 2020, including options to customize with team name and referral code. Includes both full color and black and white versions of the quarter-sheet flyer. (PDF files, downloaded as a zipped folder.)

[Los folletos en español \(carpeta comprimida de archivos PDF\)](#)




Trees Challenge 2020 Promotion Resources

A folder of promotional flyers and templates, as well as logos and other images that can be used in the promotion of events for the Trees Challenge 2020. (PDF and image files in a zipped folder.)



Build a Paper Clinometer – from the GLOBE Observer Toolkit

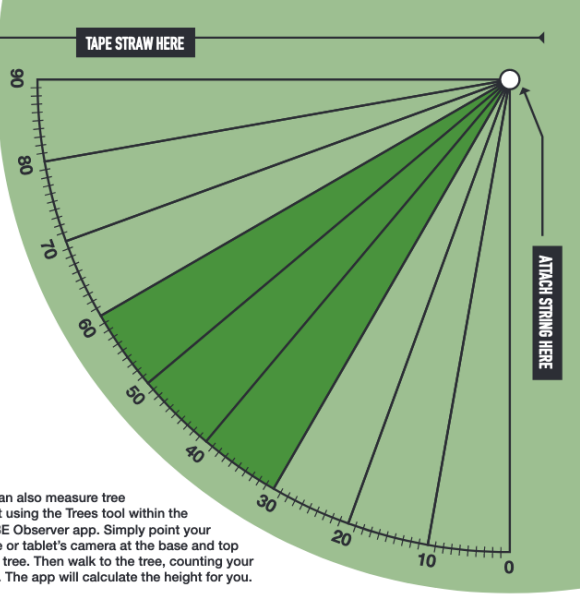
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Your Height in x 0.413 = in


Your Height in - 4 = in

Step Length in x # of Steps = in

Distance from Tree in x Tan = in

Distance from Tree in + Eye Height in = Tree Height in

Tree Height in ÷ 12 = ft



<https://observer.globe.gov/toolkit/trees-toolkit/activities>



Photo courtesy of Los Angeles Public Library. Used with permission.

Trees STEAM Activities and Programming - LaSalle Public Library



Blog

<http://www.starnetlibraries.org/uncategorized/make-every-tree-count-programs-you-can-use/>

Videos

<https://www.youtube.com/watch?v=9D1Mu6I2knl&feature=youtu.be>

Extra Video: Programming with Gratitude Rocks:

<https://www.youtube.com/watch?v=ilLoppskP5M&feature=youtu.be>

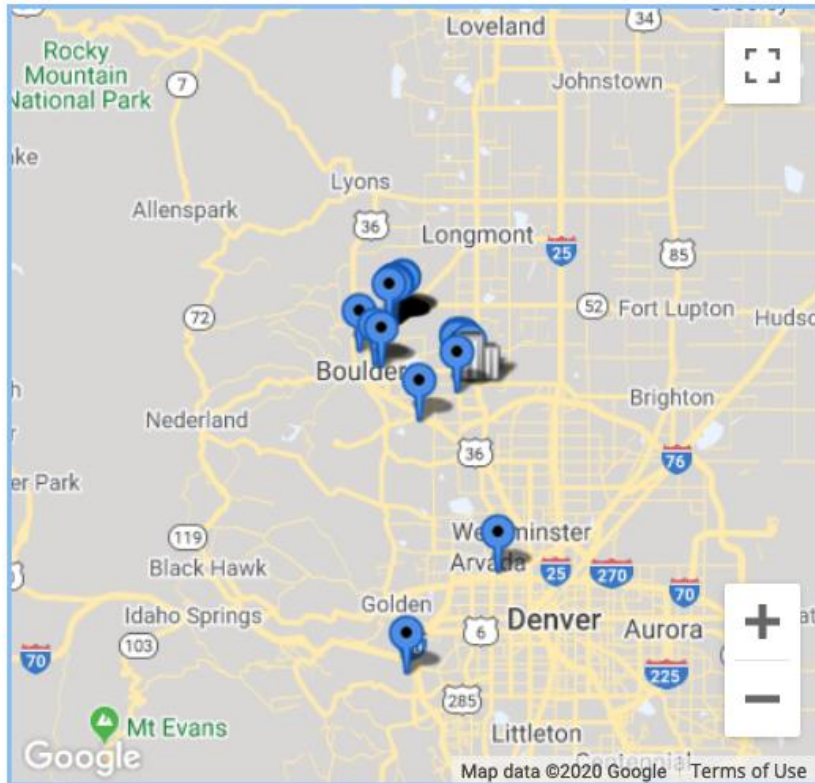
Create a GLOBE Team for your library/community!

Colorado Cloudsters

Colorado, United States of America

Year Created: 2019 Referral Code: GLIDWUYO

Data Site Locations



Members / Observations

Members

2

Clouds

228

Download and customize promotional resources

National Aeronautics and Space Administration



TREES CHALLENGE 2020

APRIL 1 - APRIL 30

GET STARTED

Download the GLOBE Observer app and start measuring tree height with your phone's built-in sensors.

TEAM UP WITH US

Go to settings and join our team!

Team Name

Referral Code

In celebration of the 50th Anniversary of Earth Day and the 25th Anniversary of the GLOBE Program, we are challenging you to make every tree count by using the GLOBE Observer app to contribute to a global tree inventory.

LEARN MORE

observer.globe.gov/trees-2020

www.nasa.gov

Tips for Teams

- 🔗 If you set up multiple teams, try starting each team name with the same string to make it easier to group your teams together: example Scouts Australia Troop Name
- 🔗 Keep your team private if you want to use the tool to track engagement
- 🔗 Use poster and/or handout to distribute your team name and referral code to your guests
- 🔗 After you create a team, register with us to participate in the challenge:
<https://observer.globe.gov/trees-2020>



Trees Challenge 2020 - Team Registration

Thank you for your interest in the Trees Challenge 2020: Make Every Tree Count, which will take place from April 1-30, 2020. Before you fill out the form below, make sure you have created your team in the GLOBE system (<https://www.globe.gov/globe-community/globe-teams/create-a-globe-team>). You may use a pre-existing team if you wish – it is not necessary to create a new team specifically for the challenge. For full details about how to participate, please visit the main challenge page, <https://observer.globe.gov/trees-2020>.

* Required

Team Name (identical to what you used to create the team in GLOBE) *

Your answer

Type of Group (for example, a library, after school club, scout troop, senior center, family, soccer team, etc.) *

Your answer

Contact Email (to send a confirmation of your registration for the challenge): *

Your answer

Submit

For more information

GLOBE Observer: observer.globe.gov/

- **Spring 2020 Trees Challenge:** <https://observer.globe.gov/trees-2020>
- **Toolkits for Informal Educators:** <https://observer.globe.gov/toolkit>

STAR Net Blogs on Trees Programming

<http://www.starnetlibraries.org/uncategorized/make-every-tree-count-programs-you-can-use/>

Videos on Trees Related Programs in Libraries

LaSalle Public Library (Brittany Blomquist)

STEAM Programs: <https://www.youtube.com/watch?v=9D1Mu6l2knI&feature=youtu.be>

Gratitude Rocks: <https://www.youtube.com/watch?v=ilLoppskP5M&feature=youtu.be>

Los Angeles Public Library (Vivienne Byrd)

Neighborhood Science: https://www.youtube.com/watch?v=LaMubii9vSM&feature=emb_err_watch_on_yt

Engaging Teens in Advocacy

Why Teens?

- Passionate & Energetic
- Optimistic
- Determined
- Creative
- Intelligent
- Flexible
- Awareness of Diverse Viewpoints



Photo Credit: Pixabay

Special thanks to Erin Hoopes!



Engaging Teens in Advocacy

40 Developmental Assets: Building Blocks of Healthy Development

External:

- Community values youth
- Youth as resources
- Service to others
- Safety

Internal:

- Caring
- Equality and social/environmental justice
- Integrity
- Responsibility
- Planning and decision-making

Engaging Teens in Advocacy

5 Stages to Action

1. Identifying the problem: What issues matter most to them?

- What do you believe are some of the most serious environmental problems present in our community?

Engaging Teens in Advocacy

5 Stages to Action

2. Brainstorming and Thinking Big

- What do we wish we could do if we had the power and resources?

Engaging Teens in Advocacy

5 Stages to Action

3. Narrow Down to One Topic: Decision Making and Goal Setting

- Given our resources and the range of ideas we've brainstormed, what is the most realistic goal we can accomplish?

Engaging Teens in Advocacy

5 Stages to Action

4. Planning and Taking Action


- What are the steps we need to take to achieve our goal?

Engaging Teens in Advocacy

5 Stages to Action

5. Evaluate

- What was our positive impact and how can we sustain it over time?

The background of the slide is a cosmic scene featuring a large, glowing nebula in shades of orange, yellow, and blue, set against a dark space filled with numerous stars of varying brightness. The text is overlaid on this background.

Share in
the chat
box

How have you involved teens
in civic or environmental
action?

Polar Bears Go with the Flow and Your Teens

- Explores a serious topic in a light-hearted way
- Connects to the every day
- Provides tips for taking action



The background of the slide is a deep space image. It features a large, glowing nebula in shades of orange, yellow, and red, located in the upper right quadrant. The rest of the background is a deep blue or teal color, filled with numerous small, bright white stars. Some stars have prominent four-pointed diffraction patterns. The overall effect is a serene and majestic cosmic scene.

Thank you!

Any Questions?