

## Connecting Citizen Science & Project Learning Tree



The term "citizen science" has been used to describe a range of ideas, from a philosophy of public engagement in scientific discourse to the work of scientists driven by a social conscience.

In North America, citizen science typically refers to research collaborations between scientists and volunteers, particularly (but not exclusively) to expand opportunities for scientific data collection and to provide access to scientific information for community members. To put it simply, citizen science involves:

*"projects in which volunteers partner with scientists to answer real-world questions."*

Benefits of participating in citizen science projects include:

- Interacting with scientists
- Practicing scientific thinking
- Increasing knowledge of a scientific discipline
- Benefiting from associated preservation or sustainability outcomes
- Engaging with members of the community and the environment
- Helping researchers to maximize the amount of data collected on a project
- Empowering ordinary people to contribute to important scientific results

The following pages detail a small subset of the citizen science projects currently underway across North America—as well as offer tangible suggestions for how volunteers might couple the citizen science project content with existing PLT activities, resources, and programming. We welcome your comments, suggestions, and questions at [informaiton@plt.org](mailto:informaiton@plt.org).

Sources:

Citizen Science Center. <http://www.citizensciencecenter.com/>

Earthwatch Institute. <https://earthwatch.org/>

Scitable by Nature Education. <https://www.nature.com/scitable>

Smithsonian Magazine. <https://www.smithsonianmag.com/>

## FrogWatch USA

<https://www.aza.org/frogwatch>

Provides families opportunities to learn about wetlands in their communities by reporting on the calls of local frogs and toads. Volunteers listen for frogs and toads during evenings from February through August and submit these observations to a national online database. This information is used to monitor populations of frogs, which are important indicators of environmental health. To contribute to this project individuals should join their [local FrogWatch chapter](#) and attend a volunteer training session either online or in person.

### PLT Activity Connections:

- Watch on Wetlands
- Web of Life
- Charting Diversity



## Monarch Larva Monitoring

<https://monarchlab.org/mlmp>

This project aims to better understand the distribution and abundance of breeding monarchs and to use that knowledge to inform and inspire monarch conservation. Volunteers aid in conserving monarchs and their threatened migratory phenomenon, and advancing understanding of butterfly ecology in general. Individuals are able to choose from a variety of activities to support the project such as submitting data about milkweed density, or collecting monarch eggs and larvae to rear indoors and recording survival statistics. Free in person and online trainings are available.

### PLT Activity Connections:

- Can it Be Real?
- Tropical Treehouse
- Life on the Edge

**Mexico &  
Canada  
Included!**



## Project BudBurst

<https://budburst.org/>

Budburst citizen scientists answer critical ecological research questions by making observations of the timing of plant life cycle events. After making observations, volunteers submit data online through a BudBurst account. Participants can also choose to contribute to specific projects through BudBurst – such as monitoring pollinator’s preference for native or non-native plants.

### PLT Activity Connections:

- Bursting Buds
- The Closer You Look
- Invasive Species



## The Lost Ladybug Project

<http://www.lostladybug.org/>

Over the past 20 years, native ladybugs that were once common have become extremely rare. No one knows exactly how, why, or what impact this will have on ladybug diversity or the role ladybugs play in keeping plant-feeding insect populations low. This project asks participants to submit

pictures of ladybugs they observe and data about the date, time, location, weather, and habitat. No training is necessary, so you can get started today!

### PLT Activity Connections:

- Peppermint Beetle
- Planet Diversity
- Did You Notice?



## NatGeo BioBlitz

<https://www.nationalgeographic.org/projects/bioblitz/>

The goal of a BioBlitz is to find and identify as many species as possible in a designated area over a short period of time. At a BioBlitz, participants work together to get an overall count of the plants, animals, fungi, and other organisms that live in a specific place. The National Geographic BioBlitz website can be used either to find an upcoming event or as a How-To resource to create your own. No training is necessary.

### PLT Activity Connections:

- Schoolyard Safari
- Name that Tree
- Trees as Habitats



## Cornell Lab Feeder Watch

Project FeederWatch is a North American winter bird population survey. Participants count birds seen at feeders from November through April and submit their results. This data helps scientists track winter bird populations and trends in bird distribution and abundance. There is an \$18 participation fee, and volunteers receive an instructional handbook.

### PLT Activity Connections:

- Habitat Pen Pals
- Schoolyard Safari
- Trees as Habitats

**Mexico & Canada Included!**

<https://feederwatch.org/>



## Journey North

Journey North provides an easy entry point to citizen science, with simple protocols and online support. Reported sightings are mapped in real-time as migration waves move across the continent. Participants report field sightings, view maps, take pictures, and leave comments. Journey North

### PLT Activity Connections:

- Our Changing World
- People, Places, Things
- Watch on Wetlands

has multiple projects including songbirds, hummingbirds, monarch butterflies, frogs, and gray whales. No training required.

<https://journeynorth.org/>

**Mexico & Canada Included!**



## Forest Fungus Project

This project investigates the environmental and climatic factors affecting the distribution of fungi. Soil communities are some of the most diverse, yet least understood, ecological systems on the planet. This project targets participant samples from all states east of the Mississippi River. Participation involves identifying tree species, gathering soil samples, and mailing in specimens. While no training required, the website contains detailed information on sample collection and tree identification.

### PLT Activity Connections:

- Soil Stories
- Nature's Recyclers
- The Forest of S.T. Shrew

<http://forestfungiproject.org>

