

## Citizen Science Projects

<p><b>American Kestrel Partnership</b></p> <p>The North American kestrel (the smallest and most colorful) falcon population has been declining. To help study these birds, you can build and monitor your own kestrel boxes.</p>	<p><a href="http://kestrel.peregrinefund.org/">http://kestrel.peregrinefund.org/</a></p>
<p><b>The Audubon Christmas Bird Count</b></p> <p>From December 14<sup>th</sup> to January 5<sup>th</sup>, participants go out with a checklist of birds and bird watch to collect data about bird populations and conservation. This is the longest running wildlife census.</p>	<p><a href="http://birds.audubon.org/christmas-bird-count">http://birds.audubon.org/christmas-bird-count</a></p>
<p><b>Bee Hunt</b></p> <p>Bee Hunt is a participatory science project open to anyone, anywhere in North America where pollinators are flying. Four ways to participate: photograph pollinators, compare two areas of plants with different pollinators, provide nesting sites for mason bees and study them, and use bowls of soapy water to collect insects to inventory.</p>	<p><a href="http://www.discoverlife.org/bee/">http://www.discoverlife.org/bee/</a></p>
<p><b>BirdSleuth</b></p> <p>BirdSleuth is an inquiry-based science curriculum that engages kids in scientific study and real data collection through the Cornell Lab of Ornithology's citizen science projects. Each BirdSleuth module encourages students do what "real" scientists do: ask questions, collect data, look for patterns and evidence, test ideas, draw conclusions, and share results.</p>	<p><a href="http://www.birdsleuth.net/">http://www.birdsleuth.net/</a></p>
<p><b>BudBurst</b></p> <p>Project BudBurst is a network of people across the United States who monitor plants as the seasons change and submit ecological data based on the timing of leafing, flowering, and fruiting of plants. Whether you have an afternoon, a few weeks, a season, or a whole year, you can make an important contribution to a better understanding of changing climates.</p>	<p><a href="http://budburst.org/">http://budburst.org/</a></p>
<p><b>Bumblebee Conservation</b></p> <p>Help track five bumblebee species by sending in pictures of bees. Learn how to identify different bee species by downloading pocket guides and visiting species profile pages.</p>	<p><a href="http://www.xerces.org/bumblebees/">http://www.xerces.org/bumblebees/</a></p>
<p><b>Butterflies and Moths of North America</b></p> <p>Butterflies and Moths of North America is an ambitious effort to collect, store, and share species information and occurrence data. Get involved by sharing your sightings or sending in photographs. View other submissions in the image gallery, access species profiles, and verify recent submissions.</p>	<p><a href="http://www.butterfliesandmoths.org/">http://www.butterfliesandmoths.org/</a></p>
<p><b>Celebrate Urban Birds</b></p> <p>You can Celebrate Urban Birds by gardening, by organizing a community event, or by connecting to the outdoors through art projects. Become a citizen-scientist by observing birds in your neighborhood and sending the data to scientists at the Cornell Laboratory of Ornithology. This is a bilingual, free program.</p>	<p><a href="http://celebrateurbanbirds.org/">http://celebrateurbanbirds.org/</a></p>
<p><b>Citizen Sky</b></p> <p>Help us solve an 175 year old mystery. Citizen Sky is a citizen science project providing you with a chance to do real scientific research. We are seeking to understand a star that has been a mystery to scientists for many years. This star is epsilon Aurigae, a very interesting, very bright star located in the constellation Auriga, the charioteer. This star is bright enough to be seen with the unaided eye even in the most light-polluted cities, and it is visible every fall, winter, and spring.</p>	<p><a href="http://www.citizensky.org/">http://www.citizensky.org/</a></p>
<p><b>Citizen Weather Observer Program</b></p> <p>The Citizen Weather Observer Program (CWOP) is a public-private partnership with three main goals: 1) to collect weather data contributed by citizens; 2) to make these data available for weather services and homeland security; and 3) to provide feedback to the data contributors so that they have the tools to check and improve their data quality. In fact, the web address, wxqa.com, stands for weather quality assurance.</p>	<p><a href="http://www.wxqa.com/">http://www.wxqa.com/</a></p>

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**Community Collaborative Rain, Hail & Snow** <http://www.cocorahs.org/>

CoCoRaHS is a large nationwide network of weather watchers. Using low-cost instruments (ruler, rain gauge and hail pad) volunteers measure and report all forms of precipitation (rain, hail and snow). We learn about our weather and climate as we collectively map precipitation across the entire country.

**Communicating Climate Change** <http://astc.org/iglo/c3/>

The Association of Science-Technology Center's Communicating Climate Change (C3) project supports partnerships between science centers and scientific research institutions to talk about climate change at 12 locations across the United States.

**CyberTracker** <http://www.cybertracker.org/>

You can use CyberTracker on a Smartphone or handheld computer to record any type of observation. CyberTracker, which requires no programming skills, allows you to customize a series of screens for your own data collection needs. Our vision is to enable you to be part of a worldwide environmental monitoring network. Our mission is to help you improve environmental monitoring by increasing the efficiency of data gathering and to improve observer reliability.

**eBird** <http://ebird.org/content/ebird/>

A real-time, online checklist program, eBird has revolutionized the way that the birding community reports and accesses information about birds. eBird provides rich data sources for basic information on bird abundance and distribution at a variety of spatial and temporal scales. A birder simply enters when, where, and how they went birding, then fills out a checklist of all the birds seen and heard during the outing.

**FrogWatch USA** <http://www.aza.org/frogwatch/>

FrogWatch USA is AZA's flagship citizen science program that allows individuals and families to learn about the wetlands in their communities and help conserve amphibians by reporting the calls of local frogs and toads. For over ten years, volunteers have been trained to enter their FrogWatch USA information and ongoing analyses of these data have been used to help develop practical strategies for the conservation of these important species.

**Galaxy Zoo** <http://www.galaxyzoo.org/>

Galaxy Zoo invites the public to help us explore the Universe by classifying galaxies according to their shape. The site also has an active forum and blog for discussing the project and citizen science in general.

**GLOBE at Night** <http://www.globeatnight.org/>

The GLOBE at Night program is an international citizen-science campaign to raise public awareness of the impact of light pollution by encouraging everyone everywhere to measure local levels of night sky brightness and contribute observations online to a world map. For two weeks in February or March, the constellation of Orion can be seen by everyone all over the world, children and adults match the appearance of Orion with 7 star maps of progressively fainter stars. They then submit

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their measurements on-line with their date, time and location.

### Great Worldwide Star Count

<http://www.windows2universe.org/starcount/>

The Great World Wide Starcount is a Windows to the Universe international citizen-science event that encourages everyone, astronomers and non-astronomers alike, to measure their local light pollution and report their observations online.

### IceWatch USA

[http://www.natureabounds.org/IceWatch\\_USA.html](http://www.natureabounds.org/IceWatch_USA.html)

With as little as 10 minutes, you can report information that will help to analyze how our climate will change in different regions of the United States, and how our ecosystems are reacting to the change.

### JellyWatch

<http://jellywatch.org/>

Jellywatch.org is a global citizen-science project that engages the public in monitoring the status of the ocean, and jellyfish populations in particular. The web database and mobile apps allow entry of sightings and exploration of user-submitted reports. The goals are to develop a worldwide time-series of jellyfish populations as a resource for ocean-goers (swimmers, surfers, and fisherman) and for management agencies.

### Journey North

<http://www.learner.org/jnorth/monarch/>

Participants track the Monarch Butterfly's spring migration by reporting their first sighting of an adult monarch butterfly. They also report the first spring sightings of milkweed, monarch butterfly eggs and/or caterpillars. The purpose of the study is to provide insight into the broad movement patterns and timing of monarch migration and possibly range expansion.

### Lost Ladybug Project

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

To help the nine spotted ladybug and others, scientists need to have detailed information on which species are still out there. You Can Help! 1. Go out and find ladybugs. 2. Photograph them! 3. Upload your digital images using our submission form or mail us photos, along with the time, date, location, and habitat. 4. Return ladybugs to the wild.

### Monarch Larva Monitoring Project

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

The Monarch Larval Monitoring Project (MLMP) is a citizen science project involving volunteers from across the United States and Canada in monarch research. It was developed to collect long-term data on larval monarch populations and milkweed habitat. The overarching goal of the project is to better understand how and why monarch populations vary in time and space, with a focus on monarch distribution and abundance during the breeding season in North America.

### Monarch Watch

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

To facilitate science education, we promote the use of monarch butterflies in classrooms and for independent studies of monarch biology by students. Through monarch tagging we engage the public in research on the monarch migration and dynamics of the population. Our conservation message is articulated through our Monarch Waystation program that encourages the public to create, conserve and protect monarch habitats.

### Monarchs in the Classroom

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

Monarchs in the Classroom provides a wide variety of materials and professional development

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opportunities for teachers, naturalists and citizens throughout the US. Two groups of behind the scenes people work together in a unique partnership to make this program successful: classroom teachers and scientists committed to sharing their expertise with the broader community. All of our programs reflect this partnership, combining real science with techniques that work for teachers, students and citizens, and promoting practices in which children learn science in ways that reflect the inquiry methods used by scientists to understand the natural world.

### **My NASA DATA**

<http://mynasadata.larc.nasa.gov/citizen-scientist/>

MY NASA DATA attempts to make NASA satellite data about the Earth available in a form that is accessible to the public through a standard web browser. For citizen scientists, the project has identified a number of science project ideas which tie local observations to the larger context and history available from satellite data. A mentor network is also available for relevant questions, and people with expertise are welcome to join it. We welcome reports of interesting projects carried out by citizen scientists using this resource.

### **Nestwatch**

<http://nestwatch.org/>

NestWatch teaches people about bird breeding biology and engages them in collecting and submitting nest records. Such records include information about nest site location, habitat, species, and number of eggs, young, and fledglings. "Citizen scientists" submit their nest records to our online database where their observations are compiled with those of other participants in a continent-wide effort to better understand and manage the impacts of environmental change on bird populations.

### **Operation RubyThroat**

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

Ruby-throated Hummingbirds (RTHU), *Archilochus colubris*, are the most widely distributed of the 339 species of hummingbirds, occurring in all ten countries of North and Central America. They come frequently to nectar plants and backyard sugar water feeders and are easily observed. Nonetheless, many aspects of RTHU natural history are not well understood, so "Operation RubyThroat: The Hummingbird Project" has teamed with EarthTrek to allow citizen scientists to collect data about RTHU migration and nesting.

### **Our Shared Forests**

<http://www.oursharedforests.org>

Our Shared Forests (OSF) is Ecuador and Georgia's Migratory Bird Partnership through Integrated Conservation, Bird Monitoring and Environmental Education. In Ecuador, OSF targets science-based habitat conservation throughout the Choco Andean Corridor, one of the earth's top five biodiversity hotspots. While, in both Ecuador and Georgia, it aims at creating awareness about 10 bird species that migrate between both regions.. Overall, this project is designed to bring light to the importance of conserving existing habitats and reestablishing fragmented habitats of neotropical migrant birds. Neotropical migrants are birds that spend their winters in North America and their summers in Central and South America. Habitats of these birds are becoming fragmented as trees are cut down for timber, development and agriculture.

### **Project Butterfly WINGS**

<http://www.flmnh.ufl.edu/wings/>

Project Butterfly WINGS: Winning Investigative Network for Great Science engages youth ages 9 to 13 in butterfly investigations designed to develop science inquiry and life skills. WINGS participants explore the outdoors, learn to identify common butterflies, and contribute to science by surveying

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butterflies and sharing their results online.

### **Project FeederWatch**

<http://www.birds.cornell.edu/pfw/>

A North American survey of the abundance and distribution of birds that visit feeders in winter.

### **Project Squirrel**

<http://projectsquirrel.org/>

You are invited to join Project Squirrel, a Citizen Science program for all ages. Participation only takes a few minutes--simply log on to ProjectSquirrel.org to tell us about the squirrels in your neighborhood.

### **S'COOL Rover**

<http://science-edu.larc.nasa.gov/SCOOL/Rover/>

NASA cloud observation project. Ground observation reports are compared to cloud information retrieved from satellite instruments in Earth orbit. Learn how to make and report a cloud observation at the time of a satellite overpass. Observations welcome from any interested observers, especially in places where official weather observations are rare. Get satellite overpass times, learn about making observations, report an observation, and explore the database of reported observations

### **Stardust@home**

<http://stardustathome.ssl.berkeley.edu/>

Join us in the search for interstellar dust! In 2006, the Stardust spacecraft returned particles of interstellar dust that originated in distant stars. But before they can be studied, these tiny dust grains will have to be found. This is where you come in! Our volunteers are using an online Virtual Microscope to search for these elusive particles, which were captured in aerogel.

### **Wildlife Watch**

<http://www.nwf.org/Wildlife/Wildlife-Conservation/Citizen-Science/Wildlife-Watch.aspx>

Through Wildlife Watch, participants gain first hand experience with plants and animals in their natural environment. The Wildlife Watch website features downloadable "watch" lists by state, and the capability for visitors to share wildlife sightings, photos and stories online. Wildlife Watch is an introductory citizen science program that is perfect for families, photographers, kids, outdoor enthusiasts and anyone who wants a deeper connection with world around them.

### **Worm Watch**

<http://www.naturewatch.ca/english/wormwatch/>

Worm Watch is a science based education program that makes learning about the soil ecosystem fun. It is also part of a national volunteer monitoring program used to identify ecological changes that may be affecting our environment.

### **YardMap**

<http://content.yardmap.org/>

YardMap enables people to map their habitat management and carbon neutral practices in backyards and parks, interact socially, and try out new landscape practices. Participants first locate their yards or parks on a Google map and then use easy point-and-click tools to define habitat types and sustainable activities, including actions like planting natives, putting up bird feeders, or installing solar panels. These practices are stored as data and linked to Cornell's citizen science bird observations.