Citizen Science External Resources

Below you will find all of the links, organized alphabetically by chapter, that were mentioned throughout the Citizen Science course.

Chapter 1

Audubon's Christmas Bird Count

Every winter, thousands of volunteers take a bird census and submit their bird counts to the Audubon Society. The information collected guides conservation efforts by assessing bird populations.

Bat Detective

It can take six hours to go through one hour's worth of sound recording to detect and categorize bat calls. The scientists behind Bat Detective have help from citizen scientists from around the world to pore over the amount and range of data that helps them monitor bat populations.

Dognition Citizen Science

You'll play fun, science-based games with your dog. The more you play, the more you'll discover about how your dog's mind works. Your Dognition results will surprise you!

Environmental Preparedness & Resilience Empowering People

Help scientists monitor air quality with an air sampling device. Environmental Preparedness & Resilience Empowering People is a resource based on a low cost passive sampling platform including a common wristband and a stationary sampler. These samplers can be used to evaluate air quality and your personal environmental exposures.

Galaxy Zoo

We want to understand how galaxies are formed! Your job is very simple; all you need to do is classify the galaxies according to their shapes. If you're quick, you may even be the first person to see the galaxies you're asked to classify.

Penguin Watch

This citizen science website is trying to understand the lives of penguins. They want you to help mark images taken from nesting sites around Antarctica. They now monitor over 100 sites and need your help more than ever!

S'Cool

Clouds are an important part of our atmosphere, and scientists are studying how they affect our weather and climate. S'COOL observations provide one more piece of the puzzle. Observe clouds and assist in the validation of NASA's CERES satellite.

Season Spotter

Using modern technology, Season Spotter brings the ancient art of tracking the seasonal changes into the 21st century. While they can use automated algorithms to identify some of the vegetation changes, they need your eyes and brain to figure out the changes that are harder to spot!

YOU FOR YOUTH

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Citizen Science External Resources

[Verb Corner]

Why are the rules of grammar the way they are? What do words and sentences mean? How does thinking work? Decades of scientific discovery suggest that the answer to all three questions is the same. Click below to join a team of amateur and professional scientists that are trying to find the answers.

Chapter 2

[Autoimmune Citizen Science]

There are over 50 million Americans with an autoimmune disease and they're currently struggling individually or in small groups. Autoimmune Citizen Science takes the cumulative knowledge and experiences of the entire autoimmune disease community to help you to improve your quality of life. Their objective as a community is to organize the information provided by citizen scientists like you and make new discoveries based on trends observed across thousands of users.

[Bugs In Our Backyard]

Bugs In Our Backyard (BioB) is an educational outreach and collaborative research program, providing project-based learning opportunities for K-12 students– or anyone! The core activity for BioB takes advantage of the bugs in your own backyard, schoolyard or neighborhood. Students can become citizen-scientists by surveying this diversity of insects and plants.

[Bumble Bee Watch]

Bumble Bee Watch is a collaborative effort to track and conserve North America's bumble bees. They need your help! Because these animals are widely distributed the best way to keep track of them is with an army of volunteers across the country armed with cameras. With any luck, you might help scientists find remnant populations of rare species before they go extinct.

[Cities at Night]

Cities at Night is a citizen science project whose aim is to create a Google maps style map of the world using night photographs taken by astronauts onboard the ISS. NASA has a database with almost half a million pictures taken by the astronauts on the International Space Station. Organizing the pictures with a computer is non-viable. Computers need very complicated algorithms to interpret photographs. The human eye knows right away if the camera was pointing at a city or just at the stars, which is why we created Cities at Night, a platform with 3 apps where anybody can help while looking through beautiful pictures taken from space.

[Citizen Scientists Help Residents Breathe Healthier Air in Newark, New Jersey] (YouTube)

There are many ways to make your community a healthier place to live. The U.S. Environmental Protection Agency often collaborates with these citizen scientists to reduce pollution. Watch this video on how New Jersey Environmental Federation focused on areas where children play and the amount of pollution they are exposed to in the Newark area.

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Citizen Science External Resources

[Community Collaborative Rain, Hail & Snow Network](#) (CoCoRaHs)

CoCoRaHS (pronounced KO-ko-rozz) is a grassroots volunteer network of backyard weather observers of all ages and backgrounds working together to measure and map precipitation (rain, hail and snow) in their local communities. By using low-cost measurement tools, stressing training and education, and utilizing an interactive Web-site, our aim is to provide the highest quality data for natural resource, education and research applications. The Web page provides the ability for observers to see the observations mapped out in "real time", as well as providing a wealth of information for data users.

[Higgs Hunters](#)

Uncover the building blocks of the universe by helping scientists search for unknown exotic particles in the Large Hadron Collider data.

[Lost Ladybug Project](#)

Across North America ladybug species composition is changing. Over the past twenty years native ladybugs that were once very common have become extremely rare. They are asking you to join them in finding out where all the ladybugs have gone so we can try to prevent more native species from becoming so rare.

[Measuring Vitamin C in Food](#)

Take part and share your data with thousands of students from around the world. Test your fruit and vegetables for vitamin C using simple kitchen equipment and household items.

[Nanocrafter](#)

Nanocrafter is a scientific discovery game about synthetic biology. Use pieces of DNA to build everything from computer circuits to nanoscale machines, and help advance scientific research with your inventions!

[Old Weather](#)

Help scientists recover Arctic and worldwide weather observations made by United States ships since the mid-19th century by transcribing ships' logs. These transcriptions will contribute to climate model projections and will improve our knowledge of past environmental conditions. Historians will use your work to track past ship movements and tell the stories of the people on board.

[Open Tree Map](#)

OpenTreeMap is a collaborative platform for crowdsourced tree inventory, ecosystem services calculations, urban forestry analysis, and community engagement.

[Panamath](#)

Panamath measures your number sense and approximate number system (ANS) aptitude. Recent research has demonstrated a relationship between performance on this test and basic mathematical ability. Through a grant from the U.S. National Science Foundation, this test has been made publicly available free of charge so that researchers can use it in their studies, educators can assess their students, and anyone of any age can test themselves

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Citizen Science External Resources

[Project Noah]

Project Noah was created to provide people of all ages with a simple, easy-to-use way to share their experiences with wildlife. By encouraging your students to share their observations and contribute to Project Noah missions, you not only help students to reconnect with nature, you provide them with real opportunities to make a difference.

[Project Squirrel]

No matter where you live, city or suburb, from the Midwest to the East Coast, Canada to California, whether squirrels live in your neighborhood or not, you are encouraged to become a squirrel monitor. Project Squirrel want to know where squirrels are as well as where they aren't!

[Radio JOVE]

The Radio JOVE project is a hands-on inquiry-based educational project that allows students, teachers and the general public to learn about radio astronomy by building their own radio telescope from an inexpensive kit and/or using remote radio telescopes through the internet. Participants also collaborate with each other through interactions and sharing of data on the network.

[School of Ants]

The School of Ants project is a citizen-scientist driven study of the ants that live in urban areas, particularly around homes and schools. Citizen Scientists, like you, are involved in collecting ants in schoolyards and backyards using a standardized protocol so that real scientists can make detailed maps of the wildlife that lives just outside our doorsteps. The maps that are created with these data give quite a lot of information about native and introduced ants in cities all over the United States.

[Season Spotter]

Using modern technology, Season Spotter brings the ancient art of tracking the seasonal changes into the 21st century. While they can use automated algorithms to identify some of the vegetation changes, they need your eyes and brain to figure out the changes that are harder to spot!

[Snapshot Serengeti]

Hundreds of camera traps in Serengeti National Park, Tanzania, are providing a powerful new window into the dynamics of Africa's most elusive wildlife species. Snapshot Serengeti needs your help to classify all the different animals caught in millions of camera trap images.

[Soil Collection Program]

With millions of fungi on earth, you likely have many new species living in your area. Whether you live in a big city, a small community, or the pristine wilderness, you can help find them. Participation is simple. Just send a scoop of soil from your backyard. With dozens of fungi occupying a single handful of soil, you can help scientists explore the vast uncharted potential of fungi and their natural products to fight against pediatric and breast cancers, fungal infections, and much more.

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[Spacewarps]

Massive galaxies warp space-time, bending light rays so that we can see around them. These gravitational lenses are very rare, but data through this project has already helped in finding dozens of new candidates. Spacewarps is improving their analysis using your data, and finding even more interesting images - help find a few more lenses!

Chapter 3

[AnnoTate]

AnnoTate is a transcription tool developed to enable volunteers to read and transcribe the personal papers of British-born and émigré artists, including Josef Herman, Barbara Hepworth and Kurt Schwitters. Drawn from the world's largest archive of British Art - Tate Archive - participants can help to provide full text transcriptions of handwritten documents, helping to reveal the inspiration and stories behind some of the greatest works of the past century.

[Games With Words]

Learn about language and about yourself while advancing cutting-edge science. How good is *your* language sense?

[Notes From Nature]

Only a small fraction of all natural history specimen data is available digitally over the Internet, while the vast majority remains locked away from view and use. The Notes from Nature transcription project is a citizen science platform built to address this problem by helping to digitize the world's biological collections. Scientists use such data and information in order to address key environmental issues we are facing right now, such as the impacts of climate change and how diseases affect wildlife and humans.

[Shakespeare's World]

Transcribe handwritten documents by Shakespeare's contemporaries and help us understand his life and times. Along the way you'll find words that have yet to be recorded in the authoritative Oxford English Dictionary, and which will eventually be added to this important resource.

Implementation Strategies

[AgeGuess]

AgeGuess is a simple on-line game in which you can post your photos, have other people guess your age, as well as guess the age of other users. AgeGuess investigates the differences between perceived age (how old you look) and chronological age (your age) as a potential aging biomarker.

[Audubon's Christmas Bird Count]

Every winter, thousands of volunteers take a bird census and submit their bird counts to the Audubon Society. The information collected guides conservation efforts by assessing bird populations.

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[BioBlitz]

A BioBlitz is an event that focuses on finding and identifying as many species as possible in a specific area over a short period of time. At a BioBlitz, scientists, families, students, teachers, and other community members work together to get an overall count of the plants, animals, fungi, and other organisms that live in a place.

[Celebrate Urban Birds]

Founded in 2007, Celebrate Urban Birds is a year-round project developed and launched by The Cornell Lab of Ornithology. Its primary purpose is to reach diverse urban audiences who do not already participate in science or scientific investigation.

[Celebrate Urban Birds—Get Your Kit]

[Flip The Clinic]

Flip the Clinic is an open experiment to transform the healthcare experience. It is where patients and health practitioners improve medical care, together. Flips are actionable ideas for change.

[Frog Watch USA]

Volunteers are the foundation of the FrogWatch USA community - these trained individuals listen for frogs and toads during evenings from February through August and submit these observations to a national online database. Learn more about becoming or continuing as a FrogWatch USA volunteer.

[Globe at Night]

Globe at Night is an international citizen-science campaign to raise public awareness of the impact of light pollution by inviting citizen-scientists to measure & submit their night sky brightness observations. It's easy to get involved - all you need is computer or smart phone!

[Monterey Bay National Marine Sanctuary]

Trained volunteers participate in a one-day Sanctuary-wide volunteer water quality monitoring event designed to increase information and public awareness about water quality issues affecting watersheds that drain to the Monterey Bay National Marine Sanctuary (MBNMS). The information they provide is used by resource agencies, local governments and community groups to protect and improve the health of our local streams through the 303(d) list among other resources.

[MPing]

Weather radars cannot “see” at the ground, so mPING reports are used by the NOAA National Weather Service to fine-tune their forecasts. NSSL uses the data in a variety of ways, including to develop new radar and forecasting technologies and techniques.

[NoiseTube]

The NoiseTube project proposes a participative approach for monitoring noise pollution by involving the general public. The NoiseTube mobile app extends the current usage of mobile phones by turning them into noise sensors enabling citizens to measure the sound exposure in their everyday environment. Furthermore, each user can participate in creating a collective map of noise pollution by sharing geolocalized measurement data with the NoiseTube community.

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[Project FeederWatch]

Project FeederWatch is a winter-long survey of birds that visit feeders at backyards, nature centers, community areas, and other locales in North America. FeederWatchers periodically count the birds they see at their feeders from November through early April and send their counts to Project FeederWatch. FeederWatch data help scientists track broad scale movements of winter bird populations and long-term trends in bird distribution and abundance.

[S'Cool]

Clouds are an important part of our atmosphere, and scientists are studying how they affect our weather and climate. S'COOL observations provide one more piece of the puzzle. Observe clouds and assist in the validation of NASA's CERES satellite.

[Snapshot Serengeti]

Hundreds of camera traps in Serengeti National Park, Tanzania, are providing a powerful new window into the dynamics of Africa's most elusive wildlife species. Your help is needed to classify all the different animals caught in millions of camera trap images.

[Sterile Cotton Tipped Swabs]

These sterile swabs can be used for a number of different jobs by an investigator. These cotton-tipped swabs are made with USP grade cotton and are packaged 2 swabs in a sterile wrapper.

[Squirrel Mapper]

Contribute observations of squirrels from your own neighborhood, test hypotheses about why squirrel color varies geographically, directly measure natural selection on squirrel coloration by participating in the "squirrel hunt" exercise and view the geographical pattern of morphs across the gray squirrel's range

[What's Invasive]

Invasive species are a threat to native plants and animals, crowding natives, consuming food sources, or acting as fire hazards. Having groups such as schools run short-term "campaigns" is highly effective for locating invasive species. Join the fight against invasive species!

[WildCam Gorongosa]

Gorongosa National Park in Mozambique was once among the most diverse places on Earth, but decades of war decimated the park's large animal populations. Now, an international conservation effort is working to restore the park's wildlife—and they need you to help document this incredible recovery. Join in identifying Gorongosa's animals in trail camera photos and become part of this conservation team!

[YardMap]

Join this virtual neighborhood and talk with others interested in creating beautiful and sustainable landscapes. Get out in your yard, create habitat, and update your map to show the world the positive changes you've made!

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