CITIZEN SCIENCE TOOLS AND RESOURCES FOR EXTENSION PROFESSIONALS

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What is citizen science?

Citizen science is the involvement of the public in scientific research – whether community-driven research or global investigations.

-Citizen Science Association, citizenscience.org

Citizen science is also known as ...

Amateur science ...
Volunteer monitoring ...
Crowdsourcing ...
Public participation in scientific research (PPSR) ...
Who here is involved and how?

- 4-H
- Horticulture/Agriculture/Natural Resources
- Family and Consumer Sci.
- County
- State/regional
- Project/science team
- Volunteer leader
- Both
- Participant
- Other non-Extension folks

- Involved in citizen science
- Thinking about becoming involved
- Just here to learn
Videos to introduce citizen science

Darlene Cavalier, SciStarter.com:

[YouTube](https://www.youtube.com), interview with SciTechNow, May 9, 2016

SciShow – he talks really fast, but there is a great example of citizen scientists co-authoring a paper and feeding back to the scientists – [YouTube](https://www.youtube.com)

Examples of youth citizen scientists: [PBSKids’ SciGirls](https://www.pbs.org/]
To dip your toe in and play a game:

- **FoldIt/Eterna** (computer)
- **QuantumMoves** (app)
- **Skill Lab** (app)
- **Reverse the Odds** (app)

**BUT ... none of these give feedback or data to the participants.**
Help make science happen by volunteering for a real research project.

Topics ▼ Type ▲

- Observation
- Questionnaire
- Fieldwork
- Data Processing
Federal Crowdsourcing and Citizen Science Toolkit

How To: Step by Step
This toolkit shows five basic process steps for planning, designing and carrying out a crowdsourcing or citizen science project. At each step, you’ll find a list of tips you can use to keep your project on track. See the process steps

Case Study Overview
Case studies in this toolkit serve as models and provide success stories and challenges to consider while planning a project. You can browse through agency case studies to get ideas for a project of your own. Browse case studies

Resource Library
The resource library provides a list of all resources in this toolkit which you can browse through by category. You can also find resources within each of the process steps in the "How To" section of the toolkit. View resources

The Project Catalog: Find Federally Sponsored Projects

Federal Crowdsourcing and Citizen Science Community
The Federal Community of Practice on Crowdsourcing and Citizen Science (CCS)

Other Innovation Communities
- Challenges and Prizes
- OpenGov
- Ideation CoP
Tips for working with scientists

Scientist-Community Partnerships: A Scientist's Guide to Successful Collaboration

This guide was written for scientists, but it could be a point for introductory discussion as you explore collaboration.

And your IRB office: project approval is *required* if you collect data about people for research. If it’s for evaluation, or involving youth as the researchers, it’s more gray area. When in doubt, seek approval.
What about other materials to support learning?

• Cornell Lab of Ornithology – BirdSleuth: Most Wanted Birds
• School of Ants/Your Wild Life teaching modules
• SciStarter in the classroom (plus blog to meet NGSS standards)
• Lesson plans with a Citizen Science Game
What about international work?

“Distinct national and cultural traditions shape how and in what fields nonscientists get involved with scientific projects.”

Citizen Science in a Global Perspective webinar

https://learn.extension.org/events/2714

Tuesday, July 19, 2016, 8am ET (2pm Berlin time)

*Registration in advance required
So you have data ... now what?

Data analysis is the process of looking for patterns in the information you have collected.

First, reach out to a citizen science organization to see if anyone is analyzing similar data or would partner to help analyze your data.
Check with your university statistics department or evaluation specialists in Ag Education.
Consider middle or high school students who need science fair projects (including agriscience fair)!
Learn to analyze data yourself.

• **Data Management Guide** from DataONE
• Capacity4health.org – Resource Library, search for “data”
  
  Webinars, etc. on Intro and Intermediate data analysis, including how to present data.
  
  1-hour webinar “Intro to Basic Data Analysis”

• **UF Electronic Document Information Service**
  
  Israel (1992a). Phases of Data Analysis
  
  Israel (1992b). Elaborating Program Impacts through Data Analysis
Seek help from consultants.

Scroll down ...

Comparisons
Compare any data collected at any site to any other site and see dynamic charts

Trends
See dynamic charts showing trends at locations for any measurement

Relationships
Create scatterplots for relating any two variables or measurements

Evaluate Success
Where can I find a collaborator?

• On Facebook:
  - European CSA – geared toward practitioners/leaders
  - Australian CSA – geared toward participants
  - Your Citizen Science – grew out of ocean CS
  - Society for Amateur Scientists - current incarnation
  - Citizen Scientists’ League – offshoot of Society of Amateur Scientists
Where to find collaborators

- eXtension CS community and listserv: http://people.extension.org/communities/1404
- Citizen Science Association listserv and working groups: http://www.citizenscience.org

Twitter and blogs:
- Caren Cooper, @coopsciscoop, host of monthly #CitSciChat
- Chandra Clarke, @CitizenScience_
How can I fund my work?

National Science Foundation education grants or as broader impacts on other disciplinary research grants.

NIFA Integrated Research and Extension/Education grants.

Links from Citizen Science Center (Chandra Clarke)

Federal toolkit resources – scroll down to funding.

Explore revenue enhancement through Extension through donation or cost-recovery.
Guide for Growing Programs

Volunteer monitoring can be a tremendous asset to water quality and quantity protection and restoration efforts. While volunteers contribute their efforts to these citizen science initiatives for “free,” these cost-effective programs require a great deal of planning and ongoing management. Luckily, many resources have been developed over time.
Evaluation is a great point for collaboration. All of your universities likely have education departments/colleges. They have expertise in evaluation and often have students needing class projects or real-world projects with which to work. At UF: Program Development and Evaluation Center.

Roadmap Team Pages
Want to connect with an Initiative or Priority Work Group? Use these Team Pages, based on the new Extension Roadmap, to locate others who work in your area of expertise, contact team leaders, view the statewide Plan of Action, read meeting minutes, learn the latest news, and find a wide variety of resources to help faculty share, collaborate and educate. Try it out and let us know what you think. More...

2015 - 2016 In-service Trainings
Registration is opened for the 2015 - 2016 In-service training. You need a GatorLink username and password to register for training programs. More...

Economic Impact
Investments in UF/IFAS Research and Extension programs have shown significant returns that hold great promise for creating jobs and improving the economic vitality of Florida. See how PDEC uses Workload data, along with...
Integrate with other Extension efforts.

Maker Community

- How Extension Can Serve the Maker Movement
- https://people.extension.org/communities/1712

Drones/Unmanned Aircraft System

- i3 Issue Corps: Drone, Drone on the Range
- https://people.extension.org/communities/1708

Climate Change, Ag Literacy, Ag-STEM Education, Master Gardeners ...
Join the eXtension Citizen Science community!

http://people.extension.org/communities/1404

Register for a FREE extension ID if you haven’t already, then try the link again.

View the Introduction to Citizen Science in Extension webinar from June 28, 2016.

Contact me:
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Citizen Science

This community supports those interested in utilizing citizen science or public participation in scientific research in their Extension programming. Citizen science is research that is crowd-sourced by amateur or professional scientists or researchers and involves volunteer participation in project design, data collection, and analysis. It is not limited to those in Agriculture and Natural Resources program areas, rather we encourage participation in all of the Extension areas including Family and Consumer Sciences, 4-H Youth Development, and Community Viability.

People and Activity

- 2 Leaders
- 36 Members
- 7 Invitations

Invite others to join

Activity Notifications: OFF

Elsewhere in eXtension

Links to information for this community in other eXtension applications

create.extension.org
Community Dashboard

Community Forums

Community Forum (Google Group)
Post to forum by email:
citizenscience@extension.org

Community Attributes edit settings