

Foundations of Citizen Science

Facilitator's Guide

Training Overview

The introduction to citizen science training prepares people to engage with citizen science projects, which is public engagement in real scientific research. You can engage with these projects via <https://scistarter.org/training>, but we have a presentation to get you started!

Training Agenda - 1 hour

1. Introduction - 5 min
2. What is Citizen Science? - 10 min
3. How to Get Started? - 12 min
4. Taking a Closer Look - 23 min
5. Wrap-up - 10 min

Introduction - 5 min (Slides 1-3)

- **Slide 1 - Intro** (2 min)
 - Ask participants to introduce themselves in the chat.
 - Briefly introduce yourself and your organization.
- **Slide 2 - Agenda** (1min)
 - Present the agenda for today's session.
- **Slide 3 - Brainstorm** (2 min)
 - Ask participants to brainstorm "*What comes to mind when you hear the phrase citizen science?*"
 - Read comments as they come through in the chat, referencing the commenters. Ex. "*Sarah C. says collecting data comes to mind when she hears the phrase citizen science*"
 - Summarize trends you notice in the chat. Ex. "*I see a lot of folks describing collecting data and actively engaging in their community as things that come to mind when you hear the phrase citizen science.*"

What is citizen science? - 10 min (Slides 4-14)



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- **Slides 4 & 5 - What is citizen science? (1 min)**

- Transition by saying *"So what is the definition of citizen science? It's simple!"*
- Read the definition: *"A collaboration between scientists and those of us who are curious, concerned, and motivated to make a difference. It's how people can make an impact on issues they care about...and help science!"*

- **Slides 6 & 7 - Imagine this tree activity (2 min)**

- Show the picture of the tree and ask participants to describe what they see in the chat.
 - Ask the various follow-up questions to narrow the focus of their descriptions.
- Reveal that they just participated in citizen science by collecting data that could be used to help scientists.

- **Slide 8 - Play the Intro to Citizen Science Video (2 min)**

- Play the 2 min intro video. It should play automatically. If it does not, play the link from YouTube. <https://www.youtube.com/watch?v=a-Jlo4MgNMo>

- **Slides 9 - 11 - Why is it important? (1 min)**

- Reveal the list of amazing discoveries made possible by citizen science. ●

- **Slides 12 & 13 - Who can do citizen science? (2 min)**

- Ask the rhetorical question *"Who can do citizen science?"*
- Then describe that *"Citizen scientists are typically people without specialized training who participate in scientific research to help answer questions that cannot be answered without their help."*

- **Slide 14 - Anyone can do citizen science (2 min)**

- Reveal that anyone can do citizen science including 1) retired people 2) busy working adults 3) community groups and 4) youth groups.

How to get started? - 12 min (Slides 15-21)

- **Slides 15 & 16 - Intro to SciStarter.org** (2 min)

- Transition by saying “How can you get started on citizen science today? Well,



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we've made it really easy for you!"

- Describe SciStarter.org: SciStarter.org is a globally acclaimed, online citizen science hub where more than 3,000 projects from all over the internet have been organized and made searchable!

- **Slide 17 - Create an account** (2 min)

- Show participants the screenshot of how to create an account.

- **Slide 18 - Searching for projects** (2 min)

- Transition by saying, “once you sign up, you can search for projects that interest you. You can search by topic, location, age, etc.”

- **Slide 19 - Project Examples** (2 min)

- Some examples of projects that might interest you are 1) The Great Sunflower Project where you can document pollinators in your community 2) Caterpillars Count! where you can measure seasonal variations by counting arthropods and 3) Globe at Night which allows you to monitor light pollution.

- **Slide 20 - What skills do you need to do citizen science?** (2 min)

- Ask the audience to type their ideas in the chat.
- Highlight comments as they come through the chat.

- **Slide 21 - Present Science Process Skills** (2 min)

- Say “When you do citizen science you are using skills you already have!”
- Describe that these are science process skills like 1) asking questions 2) observing 3) collecting data 4) reporting data 5) analyzing data 6) communicating results.

Taking a Closer Look - 23 min (Slides 22 - 28)

- **Slide 22 - Let's take a closer look** (10 min)

- Go to <https://SciStarter.org/Project-Squirrel>, explain the importance of the project by reviewing the goal & task, and then submit data via the Project Squirrel form

(submit real data that you collect before the session).

- **Slides 23 & 24 - Reflect on Science Process Skills** (4 min)



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- **Slides 25 & 26 - Try Stall Catchers** (5 min)
- **Slide 27 - Libraries as Community Hubs** (2 min)
 - Describe that libraries across the country are becoming hubs for citizen science, where you can find resources like telescopes and books that might help you complete citizen science projects.
- **Slide 28 - Benefits to Science & Society** (2 min)
 - Describe the benefits of participating in citizen science: *"Citizen science enables people from all walks of life to actively learn more about the world and address issues they are curious or concerned about."*
 - Describe the four benefits 1) Broadens the scope of who can contribute to science 2) Enables participants to engage in data collection, analysis and interpretation 3) Enables participants to learn about the nature of science and scientific reasoning 4) Accelerates important research and discovery.

Wrap-up - 10 min (Slides 29 - 30)

- **Slide 29 - Wrap up** (5 min)
 - Present the opportunity to further their knowledge of citizen science by taking the Foundations of Citizen Science Training, where they can earn a badge upon completion.
 - Add the link to the chat: <https://scistarter.org/training>
- **Slide 30 - Questions?** (5 min)
 - Ask participants to add any remaining questions to the chat.
 - If you don't have time to answer all questions, collect them and send a follow-up with answers and additional resources.