Citizen Science

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What is Citizen Science?

Science needs more eyes, brains, ears and perspectives than any scientist possesses. Many great discoveries are the result of a collaboration between scientists and the

community including the discovery of the Wollemi pine, a giant shark tooth, the giant Gippsland earthworm as well as new planets and a lost space craft. Projects that are currently active discover new species of insects and fungi and contribute to our understanding and protection of the environment.

Public participation in research has occurred for hundreds of years but global connectivity and the internet in particular has led to a surge of projects in various areas. Citizen science involves public participation and collaboration in scientific research with the aim to increase and translate scientific knowledge. It's a great way to harness community skills and passion to fuel our ability to understand how the world works and how to protect it.

The Competition

This category is aimed at involving whole classes or school groups in meaningful citizen science projects.

Two prizes of \$500 each will be awarded to the winning entry from a Primary (R-6) group and a Secondary (7-12) group.

The project can be one that you have designed yourself or an existing citizen science project that you take part in. Think about not only what type of citizen science project your students would like to try, but also what types of projects are feasible for them to do, based on where the school is located and what you're able to do in your classroom or your school environment, what equipment you will need and reseachers you could collaborate with.

Getting started:

- Start with a question linked to a real world problem or issue where having the students collect data / sharing information from their local area would help. It could be a specific local problem or a wider issue that is having a local impact.
- Design a project linked with an existing one or a completely new one. Look into what existing projects you could partner with or build on, what technology is available that could help, would students need to be trained, would they need equipment?
- Think about who is going to use the data. Just your school or is it part of a larger citizen science project? Is there an expert or agency that might be interested in it? How are they going to use the data? How will you connect with them? (There is a list of projects and experts available.)
- With the limited timeframe you may wish to only run a small scale project (pilot study) just to generate enough data for the students to examine and evaluate how it went.

- Plan how you will present your findings to the participants, the data-users and other people who can take action? For older students there might be some other publicly available data that could be incorporated as well.
- As an optional exercise for older students, you could plan how you could engage the wider community in data collection to expand the project's reach.

Want to find out about current citizen science projects running in South Australia?

Browse the Citizen Science Project Finder.

You can also search for projects in your local council area using this <u>interactive widget</u> as featured by Guardian Australia. As well as the following platforms:

- iNaturalist Australia
- <u>BioBlitz</u>

Here are some links to Citizen Science projects happening in South Australia:

- Echidna CSI
- FrogWatch SA
- FungiMap
- Wild Orchid Watch
- Sea lion Spotter!
- Insect Investigators
- <u>Waterwatch</u>

Experts available for help:

- <u>Dr Erinn Fagan-Jeffries</u>, The University of Adelaide
- Dr Sylvia Clarke, Landscape SA Board
- Dr Frank Grutzner, The University of Adelaide



Why choose a citizen science project?

A Citizen Science Project can inspire students to learn about a topic you are already planning to teach. It should be part of a purposeful plan to develop an aspect of the Nature of Science that also connects strongly to the science concepts being taught. Participation in a citizen science project will guide your students through the full scientific inquiry process and enable them to experience the thrill and importance but also challenges of the scientific endeavour.

A Citizen Science Project enables teachers to:

- focus on developing science inquiry skills in context– gathering, interpreting or categorising data or critiquing evidence
- highlight the relevance and value of the science learning, with students contributing to a real-world science project
- create opportunities for working with real and relevant datasets that often have been cocreated
- support students to take ownership and learn about how science works – considering how to collect and use data and the importance of data quality, making sense of data and exploring what it means to behave scientifically
- help students 'take action' by contributing data or analysis that informs a science-related issue.

A successful SASTA Oliphant Science Awards Citizen Science entry:

- Will effectively communicate the process of citizen science project design to gather data on a real world problem.
- Will run a small scale project (pilot study) or participate in a defined way in an existing project
- Provide a report of the findings and demonstrate how and by whom the data could be used to help solve the problem. If the timeframe isn't long enough to gather enough data, a plan of how it would be reported is sufficient.

Key Dates:

• Friday 7 June - 28 June: entry submitted online

Cost per entry: \$24 (no discounts apply)

Criteria for Entry:

The entry must include a project journal.

The journal should include:

- Background information on the citizen science project, including what questions are being asked and why you thought citizen science could help answer the question.
- Why you chose that particular project.
- What steps you followed to participate in the project. For example, did you contact any science professionals to help?
- What type(s) of data you were collecting and how they will help answer the research questions being asked. (Include data summary)
- Anything interesting you saw in the data you were collecting
- Your findings/conclusions from participating in a citizen science project
- Discuss relevance and impact of the results or project (e.g. for existing policy).
- Future directions and potential of this area of research?

In presenting your Citizen Science entry (online submission ONLY):

The following documents will need to be uploaded for your project:

- Cover sheet with your Project ID details (your Coordinator will give you this)
- Electronic copy of your Citizen Science journal entry.
- Entries will be accepted as PDF or Word documents only. We cannot guarantee judges will be able to access any other file types.

For full details on electronic submission, see: <u>https://bit.ly/OSAOnlineSubmission</u>

