Engaging Students Through Citizen Science

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01.

What is Citizen Science?

Citizen Science is

When the general public; contributes to science by collecting data, collaborates by helping analyze or interpret data, or co-creates by working with scientists to create a project, develop research questions, gather data, and analyze the data to draw conclusions.

Why is Citizen Science Important?

Improves Science Literacy

People who participate in Citizen Science have a better understanding of scientific content and skills

It can Help Locally as well as Globally

The results can inform local policies, enhance educational opportunities, aid natural conservancy, and support environmental sustainability.

Helps Scientist Efficiency

Analyzing data helps scientists with resource and time constraints.

Helps Scientist Gather Data from Around the World

The more data that is available for analysis the more reliable the conclusions.

02.

Integrating Across the Curriculum

Literacy and ELA

Paraphrasing

Allows students to pay attention to their comprehension as they read informational text.

Summarizing

Helps to make meaning of material, skills, and content.

Vocabulary Building

Vocabulary strategies helps students remember and apply vocabulary.

Research Skills

Helps students research primary and secondary sources.

Exposure to multiple types of text

Gives students exposure to information text through articles, text books, and research papers.

Communication

Students can communicate their conclusions in multiple formats.

Math

Gathering Data

Students need an understanding of how to collect reliable data.

Authenticy

Science can give an authenticity to math.

Measurement

Accurately measuring to collect reliable data is imperative.

Analyzing Data

Knowing how to organize, interpret, and draw conclusions from data is essential.

Communication

Students use different graphs to communicate their data.

Computational Thinking

Using logic and sequential thinking can help analyze data and build models.

Social Studies

Text Features

Helps students understand table of contents, index, appendix, maps, photos, charts, timelines, etc.

Using Evidence

Students need to support their claims with verifiable evidence.

Current Events

Looking at current events where citizen science could help.

Geography

Students need an understanding of latitude, longitude and geographic limits of collecting data.

Informational Text

Practice reading and comprehending text to learn new information.

Economics and Civics

Helps student understand impacts of science on the community.

Allied Arts

Art

Understanding the visual aspects of communication.

Health

Helps students understanding of how a changing world impacts the human body.

Physical Education

Students need physical fitness, dexterity, and body awareness to gather data.

SEL

Helps students develop empathy for people.

Technology

Coding to create models of scientific phenomenon.

Music

Can teach students how to listen to what is around them.

03.

Getting Started

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Earn a badge

Scistarter offers a free getting started badge program.

Start Small

Add data to an already established citizen science program.

Assign Jobs

Give students jobs in the small groups so everyone can contribute.

Consider Student Privacy

Are students given individual accounts or do you use one classroom account?

What's next

Start Your Own

If there is an issue around the community work with students to develop an answer.

Work with local organizations

Local lake, environmental, soil and water organizations may have programs that students can participate in or ideas for a future project.

Communicate with scientists and experts

Scientists and experts love to talk about their projects.

04.

Resources

- The Lost Ladybug Project
- Great Backyard Bird Count
- Globe at Night
- BudBurst
- Project Noah
- Project Squirrel
- Imapinvasives (with helpful resource)
- The Great Sunflower
- SciStarter project finder
- Maine Citizen Science
- Citizenscience.gov
- National Geographic Citizen Science
- PBSkids scigirls
- iNaturalist
- Gorgonosa Webcam
- Beespotter
- Ebird
- Butterflies and Moths of North America
- Nature's Notebook
- Fold it
- Zooniverse
- Journey North
- Globe at night
- The GLOBE cloud project

Thanks!

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