



Integrating Project-Based Learning Into Citizen Science Activities

Citizen science and project-based learning have a lot in common – for example, they both emphasize hands-on learning, teamwork, real-world applications and more. If you can incorporate project-based learning strategies into your citizen science project, you can enhance your citizen science efforts and strengthen skills in an engaging and academic way. Look at each project-based learning strategy and description, then brainstorm activity ideas for how to implement each strategy in your program.

Project-Based Learning Strategy	Description	How can I implement this strategy in the Citizen Science activities?
Emphasize active learning	Students should learn by doing, through hands-on opportunities to answer the driving question	Sample Activity: Create an opportunity to interview a scientist in the field (face-to-face or virtually) and to collect data outdoors Activity:
Follow a well-established sequence	Projects follow a sequence of planning, active inquiry, and opportunities for students to share and reflect on what they've learned	Sample Activity: Use the 5E's of Learning to help students engage, explore, explain, elaborate and evaluate Activity:
Invite student choice and voice	Invite active student decision making at each stage	Sample Activity: Create a brief survey asking youth to indicate which of four or five citizen science projects they prefer Activity:
Focus on high-interest topics and questions	Your students might choose to explore questions about themselves, their communities and their world	Sample Activity: Facilitate a brainstorming session with students so they can share what is important to them Activity:
Result in a product	Think of a clear and engaging way they can display or share their data for others to see, even if the citizen science project doesn't require it	Sample Activity: Students may choose to design a website, create a museum exhibit or build a mechanical invention Activity:
Include self-reflection	Deliberately incorporate opportunities for students to reflect on how working on a project helps them develop academic and 21st century skills	Sample Activity: Instruct youth to include in their lab notebooks a section for daily or weekly reflection that they can write in among their observation data, then give them writing prompts to help them reflect on their work and learning Activity:

