



Student Engagement Tips for Grades K-12

Because students' needs vary as they learn and grow, you'll want to design and implement your program according to students' ages and grade levels. Use this tool for engaging youth in tailored citizen science experiences.

Elementary: Grades K-5

Staff should be prepared to provide lots of support:

- Provide extra background information and explanations along the way.
- Use very detailed graphic organizers and other data collection documents to help students keep track of information and document their progress on projects. Spend extra time to make sure students understand how to use them.
- If applicable, assign specific roles to members of a group (e.g. researchers, data collectors, etc.) and designate clear responsibilities.
- Set concrete objectives and due dates so students know what they will be responsible for completing.
- Use demonstration and direct instruction when needed to teach how to collect or analyze the data.
- Suggest ways to share what has been learned at the end of the citizen science project and help them plan it out.

Middle School: Grades 6-8

Staff should provide quite a bit of support, while also making room for some independence:

- Offer some background information and explanations along the way, and provide guidance to help the youth find additional information on their own.
- Demonstrate how to develop documents to help students keep track of information, but with less structure than for elementary-age students.
- Provide opportunities for youth to choose what to investigate or make decisions about the structure of the project.
- If applicable, assign specific roles to members of a group (e.g. researchers, data entry clerks, fieldwork supervisors, etc.) and designate clear responsibilities.
- Collaborate with students to analyze the data.
- Provide guidance to help students choose how they will share what they've learned at the end of the citizen science project through a culminating event such as a presentation or report.

High School: Grades 9-12

Staff can allow a great deal of independence, while paying attention to when support is needed:

- Provide guidance to point students in the right directions to find background information and explanations on their own.





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- Demonstrate how to develop or customize documents to help students to collect and analyze data for the project. These can include Excel spreadsheets, databases, graphs, charts, etc.
- Suggest roles for students to assume when working in a group (e.g. researchers, data entry clerks, fieldwork supervisors, etc.) and designate clear responsibilities.
- Guide students as they figure out how to analyze the data by applying the skills they have learned.
- Give students freedom to choose and develop their own ways of sharing what they've learned at the end of the citizen science project.
- Encourage students to engage in discussions about the project with potential partners, the scientists running the initiative or local stakeholders.

