



Citizen Science Experience Planner

This tool will help you and your staff focus on the areas needed to create a successful citizen science experience.

This planner includes the following sections. Check off each box as you complete the step.

- STEP 1: Understanding Student and Program Needs
- STEP 2: Making Time for Citizen Science
- STEP 3: Choosing a Citizen Science Project
- STEP 4: Mapping Your Resources
- STEP 5: Budgeting
- STEP 6: Integrating With Program Initiatives
- STEP 7: Assessing Learning
- STEP 8: Wrapping Up

Step 1. Understanding Student and Program Needs

Targeted Student Academic Skills

How will you capture data about which academic skills students need to master?

- Teacher Survey of Needs
- Student STEM Interest Survey
- Communicate with teachers/principals/family members
- Key Documents: School report cards, student report cards
- Other: _____

What do data indicate students need to practice, improve or master? Or, what do data indicate that students want to explore?

- Science skills. Specifics: _____
- Technology skills. Specifics: _____
- Engineering skills. Specifics: _____
- Math skills. Specifics: _____
- Students are interested in (use the STEM Interest Survey or other surveys to capture these data): _____





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Goals

Citizen science can help programs meet overall goals. Work with staff and stakeholders to define as many goals you see fit, and make sure everyone understands what the project should achieve. [Use the *Y4Y SMART Goals Podcast* to assist with setting goals.]

Sample Goal: 80 percent of students who attend citizen science regularly (30 days or more) will increase their inquiry skills as measured by rubric scores.

Goal 1:

Goal 2:

Goal 3:

The number of participants and the type and complexity of project(s) will impact program operations and management. Completing the items below will help you plan.

Total number of youth participating: _____

Grades and/or ages: _____

If mixed grades, how will you ensure all youth are challenged?

Geographic Setting

Urban

Suburban

Urban-Suburban

Rural

Population

Special needs students

Students who struggle academically

English learners

Other _____

For any populations selected above, what is your plan for supports before/during/after the project? Will you need to reach out to teachers or parents? Are any special supplies needed?





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Number of Projects

- All participants on one project
- Participants in committees or small groups for subparts of a project
- Each individual on a separate project
- Small groups or committees on separate projects

Step 2. Making Time for Citizen Science

Determine when, how often, and over what period of time citizen science will fit into the program schedule. Be sure to make adjustments as necessary after the project begins. Project stages may include: brainstorming topics, developing a driving question, researching, investigating, planning or holding a culminating event, or doing assessments and reflection, or any others you wish to add.

Directions: Fill out these details and then complete the timeline.

Estimated Start Date: _____ **Estimated End Date:** _____

Estimated Month(s) Available for Citizen Science Activities:

- August
- September
- October
- November
- December
- January
- February
- March
- April
- May
- June
- July

Estimated Time Commitment for Data Collection:

- 15 mins
- 30 mins
- 45 mins
- 1 hour
- 1.5 hours

For

- 5 days
- 10 days
- 15 days
- 20 days
- 35 days
- Other: _____

When will you schedule citizen science activities? Many activities can be worked into these program times:

- Snack
- Homework
- Physical Activity
- Enrichment (1-2 times per week)
- Enrichment (3+ times per week, longer term)
- Other:

How often can you schedule citizen science activities?

Program Time	Monday	Tuesday	Wednesday	Thursday	Friday





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If you are ready to start mapping out your project timeline, please go to Step 5 for the citizen science project timeline.

Step 3. Choosing a Citizen Science Project

Key Characteristics to Consider

Rank the characteristics in order of importance in selecting a citizen science project for your program:

- Time needed to complete the project
- Number of Students involved
- Materials needed
- Resources available
- Potential or Existing Partnerships
- Level of Staff experience or expertise
- Amount of Funding
- Type of Project
- Academic Goals
- Student Interest

Research Project Ideas

Consider exploring several potential citizen science projects. There are many listed in the course and in the Learn More Library for Citizen Science. You can also use a traditional search engine with key terms to find specific local citizen science projects. Plan your research tasks and record the findings below.

Project Ideas	Description	Website Link/Source
Project Idea 1:		
Project Idea 2:		
Project Idea 3:		

How will you get additional staff and student input on the project ideas?

Set the Project Topic

Project Title: _____

Citizen Science Initiative: _____

Description: _____





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Step 4. Mapping Your Resources

Use the *Y4Y Citizen Science Resource Map* tool to brainstorm further.

Location(s): _____

- Most or all of project work at program site.
- Most or all project work off-site.
- Some project work on-site, some off-site.
- Transportation, security, and permissions needed

Type of Designated Space(s): (e.g. attic, gym, classroom, park, forest, waterway)

- Indoor Program Space: _____
- Indoor School Space: _____
- Outdoor Area on-site near School/Program: _____
- Outdoor Area off –site: _____
- Other: _____

Materials: What steps do you need to take to gather materials?

- Take Inventory
- Create Shopping/Ask List
- Purchase Materials/ Collect Donations
- Organize and/or distribute materials
- Provide storage space
- Other: _____

Considering Staff Interest and Experience

Which staff members will be involved in citizen science activities? _____

Will you need to hire more staff or recruit volunteers?

- Yes No

What is the level of Staff interest in implementing citizen science?

- | | |
|--|---|
| <input type="checkbox"/> Very interested | <input type="checkbox"/> Interested |
| <input type="checkbox"/> Somewhat interested | <input type="checkbox"/> Not interested |

What is the level of Staff readiness or experience in implementing citizen science?

- | | |
|---|--|
| <input type="checkbox"/> Ready-to-go! | <input type="checkbox"/> Need guidance |
| <input type="checkbox"/> Somewhat ready | <input type="checkbox"/> Need Training |

Preparing for Training Staff

How will you prepare staff? Answer the questions below and use the Citizen Science Trainings to Go and Training Starters to get started or the Y4Y Training Guide and Template to design and deliver effective trainings that build staff skills.

On which topics do staff need training?

- Introducing Citizen Science
- Facilitating Learning to Practice Inquiry and Science Process Skills





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- Assessing Citizen Science
- Fitting Citizen Science Into Your Program
- Choosing a Citizen Science Project
- Other: _____

How much time is available, and when, for staff training?

- During orientation
- During staff meeting time
- During program breaks
- In conjunction with school-day teacher professional development
- At conferences
- In professional development sessions scheduled during the year
- Other: _____

What training materials, resources or space do you need?

Training Schedule

Date/Time	Potential Topic	Audience	Trainers/Presenters

Partnerships

Use the *Involving Community Partners* tool for brainstorming, and then write your ideas for partnerships below.

Which community partners might be resources for the experience? How?

- Businesses: _____
- Professionals: _____
- Non Profit Organizations: _____
- Government: _____
- Colleges, universities: _____
- Hospitals, clinics: _____
- Local schools: _____
- Other: _____

Are volunteers needed to support the citizen science initiative?

- Yes
- No

If so, where might they be found? _____





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Step 5. Budgeting

Use the *Citizen Science Budget Sheet* tool for estimating the specific details of the budget and then record your estimates here.

Expected Funding/Revenue: _____

Expected Costs/Expenses: _____

Proposed Budget Amount for the Citizen Science Project: _____

Step 6. Integrating With Program Initiatives

What other strategies will you use to engage students in citizen science?

Review Step 6 in the Citizen Science Course and/or explore the Project-Based Learning, Literacy and Family Engagement Courses for more ideas.

- Infuse project-based learning

Strategy 1: _____

Strategy 2: _____

Strategy 3: _____

- Connect to literacy skills and activities

Strategy 1: _____

Strategy 2: _____

Strategy 3: _____

- Involve families

Strategy 1: _____

Strategy 2: _____

Strategy 3: _____

Step 7. Assessing Learning

How will learning be assessed? Choose a few of the options below and make sure they are developed and shared in advance. You may need to consult with teachers.

- Rubric for:
 - Participation during the project
 - Final product
 - Academic and 21st century skills gains

- Observation Checklist

- Lab Notebook

- Pre and post-tests

- Daily or weekly student journal

- Group discussion or reflection activity

- Other: _____





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How frequently will you assess students?

- Daily
- Once or twice a week
- Biweekly
- Monthly
- At the end of the project

What skills, knowledge or behavior are you targeting? (This information should be in your SMART Goals from Step 1)

1. _____
2. _____
3. _____

Step 8. Wrapping Up

How will you end the project and give youth an opportunity to demonstrate what they have learned? Choose a few of the options below and make sure they are developed and shared in advance; giving students a choice of methods to demonstrate their learning supports different learning styles and opens up opportunities for creativity.

- Live Presentation
- Written report
- Oral report
- Digital product (website, video, podcast, etc.)
- Visual art piece (painting, sculpture, etc.)
- Portfolio
- Other: _____

Name and Type of Demonstration	Individual or Group Demonstration?	Deadline	How will it be assessed?
Demonstration 1:			
Demonstration 2:			
Demonstration 3:			

