

Challenge 5: Million Orchid Project - Habitat Hotspots


YOUR CHALLENGE:

The Million Orchid Project (MOP) is the largest botanical citizen science program in South Florida that focuses on restoring rare, native orchids. This year we're bringing our biggest conservation project yet to Challenge schools! As the global climate warms, geographic ranges of tropical plants can expand to areas that were once too cold for them. For this Challenge, we want you to design and run a survivorship experiment that tests how a critically endangered ground orchid species grows in two different environments in your schoolyard. These two environments can be chosen by you and your teacher — it could be a sunny space, a shady space, in an existing pollinator garden, under a tree, or somewhere else you have in mind. After receiving 10 Florida-native orchids from Fairchild, plant half of them in one of your chosen environments and half in another. Along with monitoring and taking care of the orchids, we want you to document your experience.

The data you collect will be put into a shared document with other schools. Use the collective data of your own school and others to create a short documentary style video interpreting the effect of your treatments on orchid survivorship. The presentation should include why you are conducting your survivorship experiment, graphs of the data collected, and information about the different microhabitats you selected. These interpretations will be shared with our orchid biologist for them to understand the data you collected and any findings you describe in your interpretations.

MANDATORY TEACHER WORKSHOP: September 27, 2025

SUBMISSIONS AND DATA SHEETS DUE: March 20, 2026

 Digital Entry Form for each submission required

Participants per submission:
Student Group

POINT SYSTEM:

Maximum Points	100 points per submission <u>2 submissions per school</u> = 200 max points
Bonus Points	50 pts for completed datasheet



SUBMISSION REQUIREMENTS:

Mandatory Teacher Workshop and plant/material pick up on September 27, 2025

Original short documentary style video (1-2min) Your video should contain some brief background information contextualizing the experiment, depict the communally collected data and must contain at least two images (can be photos taken by students, public domain images, clip art, and/or icons), one graph and a title. Graphic design software can be used but please do not use AI generation.

Credits include student first name(s) and last initial(s), school name, "Million Orchid Project" and "2025-2026"

Data sheet completed by March 20, 2026

Digital Entry Form.

- Video link should be added to digital entry form
- Video can be uploaded to Google Drive, YouTube, or school video sharing program and then link provided

Two submissions per school.

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Prior Knowledge:

To be successful, students should be familiar with these concepts:

- Best methods to effectively conduct research from reliable resources
- Understand the scientific method and the process of developing a hypothesis

Standards/Learning Targets:

Subject	Strand	Standard
English Language Arts	Communication	ELA.10.C.5.1 - Create digital presentations to improve understanding of findings, reasoning, and evidence.
Science	Basic Application of Skills & Concepts	SC.912.L.17.4 - Describe changes in ecosystems resulting from seasonal variations, climate change and succession.
	Strategic Thinking & Complex Reasoning	SC.912.L.17.8 - Recognize the consequences of the losses of biodiversity due to catastrophic events, climate changes, human activity, and the introduction of invasive, non-native species.
		SC.912.L.17.13 - Discuss the need for adequate monitoring of environmental parameters when making policy decisions.
		SC.912.L.17.17 - Assess the effectiveness of innovative methods of protecting the environment.
		SC.912.L.17.20 - Predict the impact of individuals on environmental systems and examine how human lifestyles affect sustainability.
	Recall	SC.912.N.1.7 - Recognize the role of creativity in constructing scientific questions, methods and explanations.

For more detailed information and resources, please visit the High School Challenge 5 webpage.

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Learning Goals/Objectives:

By the end of this Challenge, students will be able to:

- Articulate** findings of a scientific process
- Devise** a scientific experiment with different variables
- Analyze** data from scientific experimentation
- Summarize** conclusions from a scientific experiment using multimedia

Differentiation:

ESOL students are allowed to complete this assignment in their first language.

Access to video editing and graphic design software may vary. Video content will be weighted more heavily in judging than aesthetic to balance this.

We strive to be inclusive of all learners. Please contact us at challenge@fairchildgarden.org if you have questions about accommodations specific to your students' needs.

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