



Colorado Science and Engineering Fair

2024 Team Project Abstract Form

Please print 2 copies of the completed form. Sign both copies, keep 1 for your notebook and submit 1 copy to your Regional Fair Director with your other paperwork.

Title of Project: Sustainable Synergy: A Greenhouse Revolution Towards Self-Sufficiency

Team Leader's Name: Abby Mirsky

Team Member 1: Sasha Trask

Team Member 2: Dylan Greco

School and City: Centaurus High School, Lafayette

Sponsor's Name: Nicholas Cady

Category: Plant Sciences (PLNT)

Division: Senior (9th - 12th grades)

Abstract (250 words or less):

Our goal, in one sentence, is to make at-home produce gardening more accessible to everyone. We want to accomplish this by lessening the time, space, and experience required by conventional gardening. But why does this matter? Growing at-home produce yields many benefits: it reduces an individual's carbon footprint, minimizes pesticide and fertilizer use, and saves people money on their grocery bills. It is noted that growing at-home produce can also positively influence one's mental health. This being said, it has its downsides.

Gardening often requires ample time, space, and supervision. Without experience, many prospective gardeners struggle to grow a sizable amount of produce in a reasonable amount of space. Hence, many shy away from taking on this experience all around the globe.

To design a final prototype, each group member tackled a different element of growing produce. Our three components - the Heat Greenhouse, the Shelf Storage, and the PMFC Battery - each tested different aspects of growing at-home produce sustainably and efficiently. Together, using the data and conclusions from each component, our final design seeks to be a fully naturally sufficient greenhouse, compact enough to fit into most households, and simple enough to make produce gardening available to everyone.

We hereby certify that the above statements are correct and the information provided in the Abstract is the result of one year's research. We also attest that the above properly reflects our own work.

Team Leader's Signature: *Abby Mirsky*

Date: 2/28/24

Team Member 1's Signature: *Sasha Trask*

Date: 2/28/24

Team Member 2's Signature: *Dylan Greco*

Date: 2/28/2024

In addition, all students must complete the ISEF Student Checklist (1A), Research Plan, Approval Form (1B), and Checklist for Adult Sponsor (1), and any other ISEF forms required for this type of project. See the International Rules and Guidelines for form requirements. Return COPIES of all of these forms to your Regional Fair Director with your Finalist Verification/Permission Form. A signed copy of this form must be included in your notebook.