



Colorado Science and Engineering Fair

2025 Individual 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: The Role of Green Roofs in Urban Sustainability

Finalist's Name: Ali Abostate

School and City: Lotus School for Excellence, Aurora CO

Sponsor's Name: Alexandre Scott

Category: Environmental Engineering

Division: Senior (grades 9 - 12)

Abstract (250 words or less):

This study investigated the potential of green roofs to reduce urban heat island effects by examining the temperature reduction capabilities of a vegetated roof system compared to a conventional roof in a controlled urban environment. Furthermore, this study aimed to research the efficiency of rain harvesting through the green roof system. Results demonstrated significant decreases in surface temperatures on the green roof, contributing to reduced interior cooling demands and improved thermal comfort. It was also found that rain water could be recycled and used to further cool the building and utilize the excess rain water to flush toilets.

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

Finalist's Signature:

Date:

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 you Finalist Verification/Permission Form. **A signed copy of this form must be included in your notebook.**