



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 Effects of Light Wavelength Treatments Towards the Germination Response and Seedling Growth Rate of Zea mays

Finalist's Name: Ansley DePue

School and City: Wray Junior Senior High School

Sponsor's Name: Eric Oestman

Category: Plant Sciences

Division: Junior (grades 6 - 8)

Abstract (250 words or less):

The purpose of this project is to evaluate how different wavelengths of light affect plant germination, growth and development. The researcher will test different colors of lights in a greenhouse to see which light affects the growth of the corn more or less. The researcher hypothesizes that the red light (660nm), and blue light (468nm) treatment will have an impact on Zea mays seed germination and plant development as compared to seeds with only full spectrum white light (440-800nm) treatment. The researcher will use a red light (660nm), blue light (468nm), and full spectrum white light (440-800nm), to determine the impact of different light wavelengths on germination and growth of Zea mays (corn). Zea mays seeds will be planted and grown hydroponically in a controlled greenhouse environment with an optimal target temperature of 75°F (24°C).

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.**