



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: Rootin' Rivals

Finalist's Name: Gabriel Ferguson

School and City: Craver Middle School, Colorado City

Sponsor's Name: Bethany Bak

Category: Plant Sciences

Division: Junior (grades 6 - 8)

Abstract (250 words or less):

Different stimulators can affect root growth in plants. But which types of root stimulators can aid in root growth the most? And which type of plant is affected the most by the stimulators between Pathos and Monstera. My project attempts to find the best type of root stimulator for root growth. My project uses 5 types of stimulator and 2 different plants. My stimulators included a control (tap water), an organic blend, a synthetic stimulator, an Apple Cider Vinegar recipe, a Honey recipe, and a Pathos root for the Monstera only. My plants included a Pathos and a Monstera. One clipping from each plant was placed in a small bottle, which was then filled to the neck with a water base, then the stimulator itself. Results were measured in a 5 week period, then an additional 5 weeks were taken off to be measured again on the tenth week of the project. All measurements were done in centimeters (CM). By measuring the longest root of each clipping, I hoped I could find the best stimulator for root growth. My hypothesis was that the Organic Blend would do the best for pathos, I also believed that Honey would do good due to its many enzymes that theoretically should support root growth. For the Monstera I believed that the synthetic stimulant would do the best, with the Pathos Clipping behind it. I also believed that the Organic blend would do well in the Monstera due to the sea kelp inside of the blend which helps in photosynthesis. Many parts were incorrect, such as the Honey which died early on from mold. As well as the Control actually doing better than all other options.

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.**