



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: It's not Mike Tyson but its Still a Siphon

Finalist's Name: Madison Gunnels

School and City: Brush Secondary Campus

Sponsor's Name: Brandie Bellefeuille

Category: Physics & Astronomy

Division: Senior (grades 9 - 12)

Abstract (250 words or less):

This project is being done, based on research, due to the acidity that affects siphons. This project explores the idea that acidity can affect siphon function, and the experimentation can help with efficiency with projects involving siphons in the future. Since siphons are affected by different liquids, it is a matter of how much. Paper siphons were tested for the flow rate and flux. This was tested using grade 4 filter paper, with hydrochloric acid, carbonated water, and distilled water and two trials for each. Two trials of the same liquid were tested at a time. This was completed in a container to limit the amount of evaporation happening in each trial. Ultimately, it showed that the distilled water was the slowest moving one as the mass was 1.19 averaged out. Meanwhile, the fastest moving one was the carbonated water as it had an average mass of 3.08. This showed that the middle one was hydrochloric acid, with an average mass of 1.92 at the end. The hypothesis that the carbonated water would have the highest flow rate was correct, as it was the fastest-moving one. Whereas, the hypothesis with the hydrochloric acid was not supported as it was not the slowest fluid. Those are the findings and they can contribute to the world by providing information and an estimate of how long their siphon should take if they are trying something with a paper siphon.

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.**