



# Colorado Science and Engineering Fair

## 2024 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: Bubble Blst

Finalist's Name: Peighton Arndt

School and City: Weldon Valley, Weldon

Sponsor's Name: Molly Arndt

Category: Biomedical Sciences (BMED)

Division: Junior (6th - 8th grades)

Abstract (250 words or less):

Abstract

By Peighton Arndt

The purpose of the project was to find out which dishwashing method worked best because I thought it would be very interesting. Some people hand wash only, or strictly use the dishwasher. My family does both, meaning we prewash and then use the dishwasher. I wanted to see if going the long way worked. I really liked doing the project and found out that the pre-wash and dishwasher have the most effect on cleaning the dishes.

The experiment involved 9 dishes and washed them all differently in groups of 3, then swabbed onto an agar petri dish. Taped them shut, placed them in a dark cabinet, and waited for the bacteria to grow. After 2 days the bacteria started to grow and we were collecting data. After 8 days we were done with the experiment and had the results.

The data collected shows that if you really want to be safe then you have to take the long way. Which is to prewash and use the dishwasher. Some people only hand wash their dishes and that is the least healthy. The most common bacteria found dirty plates are E. coli and salmonella. These bacteria could potentially be on your dishes if not properly washed.

These findings lead me to learn how to do the dishes when I am older and how to load the dishes properly. To have the safest results, you must prewash, and run the dishwasher.

*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: *Peighton*

Date: *2.29.24*

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.