



## 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: Which glucose monitor is most accurate?

Finalist's Name: Elizabeth Lauren George

School and City: West Grand Elementary and Middle School, Kremmling

Sponsor's Name: Katie DeBell

Category: Biomedical & Health Sciences

Division: Junior (grades 6 - 8)

Abstract (250 words or less):

The purpose of this project was to find out which (continuous glucose monitor) CGM is most accurate while using a finger stick glucose monitor as the control. The experiment involved a participant, two CGMs, and one finger stick.

The data I collected did support my original hypothesis. So the most accurate CGM between the Dexcom G7 and the Freestyle Libre 3 was the Dexcom G7. My procedure involved my participant coming into school four times a day so that we can measure his glucose levels. We did this for five days.

The results of my experiment were very fascinating. While the Dexcom G7 was the most accurate when using the finger prick as the control, it was very interesting to find out that when we when we went to a lab to get my participants blood drawn, because out of the Dexcom G7, Freestyle Libre 3, and finger prick the Dexcom G7 had the closest level of glucose to the blood draw, in fact the finger stick had a glucose score that was farthest away from the results of the blood draw and these result were shocking.

Therefore if I were to do this experiment again I would use the Dexcom G7 as the control and compare the finger prick and the Freestyle Libre 3. These findings lead me to believe that out of all three glucose tracking devices the Dexcom G7 is overall the most accurate no matter how you compare it to the other devices.

*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.**