



# 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: Equine Heart Rate

Finalist's Name: Jessa Wilson

School and City: Wiggins Middle School, Wiggins

Sponsor's Name: Regan Wilson

Category: Animal Sciences (ANIM)

Division: Junior (6th - 8th grades)

Abstract (250 words or less):

### Abstract:

#### Equine Recovery Heart Rate

Jessa Wilson

The purpose of Equine Recovery Heart Rate was to determine how brushing affects horses' recovery heart rate after exercising. I hypothesized that brushing horses after exercise would lower their recovery heart rates faster than resting alone (not brushing).

This project involved testing three different American Quarter horses. Their resting heart rate was found and then they were exercised by walking for one minute, trotting for three and then loping for three. Their active heart rate was then found. Finally, they were allowed a three minute resting time and then a recovery heart was taken. The variable was brushing or not brushing them during the rest period. Each horse was tested three times each for. After recording all the data collected, the average heart rate was found for each horse and then averaged together to determine if brushing them after exercise lowered their heart rate more than rest alone.

The data collected did support my hypothesis. Brushing horses after exercise did lower their heart rate more than not brushing them. The average difference of active heart rate to recovery heart rate was 19 beats per minute when not brushed and was 22 beats per minute when brushed. This proved my hypothesis to be true because the heart rate decreased by 3 more beats per minute when brushed. These findings lead me to believe that horse owners should be brushing their horses after any kind of exercise in order to calm them down more quickly.

*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: *Jessa Wilson*

Date: *3/1/24*

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.