



## 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: Thermoregulation in Horses

Finalist's Name: Jaelie Jaminet

School and City: Sanford Middle School, Sanford, CO

Sponsor's Name: Jenni Miller

Category: Animal Sciences (ANIM)

Division: Junior (6th - 8th grades)

Abstract (250 words or less):

I want to research whether or not a blanket actually helps horses to regulate their temperatures within the normal temperature range. Are horses able to thermoregulate their internal body temperature without the use of a heat source if the outside surrounding temperature decreases below freezing?

I suspect horses can thermoregulate their internal body temperature with only their hair coat and without another heat source such as a blanket when the outside air temperature decreases. The horses will be able to thermoregulate and their internal body temperature will not decrease significantly, but they will maintain a higher temperature and be warmer with a heat source such as a blanket.

The horses' temperatures were taken twice a day for seven days with two different thermometers while the horses were not wearing a thermometer. The temperatures were averaged and then the seven days were also averaged. The same process was repeated while the horses were wearing a blanket.

According to my research, horses are able to thermoregulate. They can maintain their body temperature even when the outside temperature decreases with just their skin and hair coat.

In conclusion, all the horses were able to thermoregulate within a couple degrees of a normal range.

*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: *Jaelie Jaminet*

Date: *2/3/24*

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 your Finalist Verification/Permission Form. A signed copy of this form must be included in your notebook.