



**CALIFORNIA STATE SCIENCE FAIR  
2017 PROJECT SUMMARY**

<b>Name(s)</b> <b>Madison L. Bigham</b>	<b>Project Number</b> <b>J1302</b>
<b>Project Title</b> <b>Does Saddle Pad Material Affect a Horse's Core Temperature?</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> The objective of this project was to discover which saddle pad material kept my horse's core temperature the lowest during work to minimize cooling time.</p> <p><b>Methods/Materials</b> Horse, Riding Tack, Wool Saddle Pad, Cotton Saddle Pad, Polyester Saddle Pad, Timer and Digital Thermometer; I rode my horse for thirty minutes using different saddle pads to determine which had the greatest effect on the horse's core temperature. Each test ride occurred on separate days.</p> <p><b>Results</b> After testing my project, I found the cotton saddle pad resulted in the lowest temperature with an average of 100.4 degrees. Wool was the highest with an average of 101.4 degrees, and polyester fell in the middle with an average of 100.9 degrees.</p> <p><b>Conclusions/Discussion</b> As I hypothesized, the cotton saddle pad resulted in the lowest average core temperature. By using the cotton saddle pad during my training, I hope to minimize my cooling time. As further investigation, I would like to time the amount of cooling necessary to return the horse's core temperature back to the baseline temperature.</p>	
<b>Summary Statement</b> My project explores how a horse's core temperature is effected by saddle pad material.	
<b>Help Received</b> My parents trailered the horse to an outdoor arena, where I performed all testing independently. Prior to testing, I discussed the project with my veterinarian Dr. Gayle O'Banion.	