



**CALIFORNIA STATE SCIENCE FAIR  
2016 PROJECT SUMMARY**

<b>Name(s)</b> <b>Ellie M. Knight</b>	<b>Project Number</b> <b>J1216</b>
<b>Project Title</b> <b>How Do Tones of Voice Affect a Horse's Heart Rate and Reaction?</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> The objective of this study is to find out if a humans tone of voice can affect a horse's heart rate.</p> <p><b>Methods/Materials</b> Took each horse's resting heart rate. Talked to each horse in calming tone. Took heart rate and recorded data. Repeated 6 trials. Repeated 6 trials with 3 different audio tones. 5 horses, stethoscope, 4-5 people including me, measured horse's heart rates to different audio tones.</p> <p><b>Results</b> Yes, tones of voice do affect a horse's heart rate and reaction, but there is another variable that comes in to play. That variable is trust. If a horse is familiar or trusts a person then the difference in the heart rate and reaction is small compared to when they do not trust a person.</p> <p><b>Conclusions/Discussion</b> Repeated trials with multiple horses revealed that if the horse trusts you there will not be as much of a difference in heart rate or reaction as a horse that does not trust you.</p>	
<b>Summary Statement</b> If a horse does not trust a person, when the horse is talked to by that person the horse's heart rate and reaction will be higher than a horse that does not trust a person.	
<b>Help Received</b> My grandfather showed me how to take a horse's heart rate.	