



**CALIFORNIA SCIENCE & ENGINEERING FAIR  
2019 PROJECT SUMMARY**

<b>Name(s)</b> <b>Joseph Pelz</b>	<b>Project Number</b> <b>J0324</b>
<b>Project Title</b> <b>The Effect of Suspension on Jumping a Mountain Bike</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives</b> The goal of this project is to find what pressure I should have in my rear shock on my mountain bike that will allow more hang time and distance traveled.</p> <p><b>Methods</b> Full suspension mountain bike 4 ft jump. A camera that was able to record well. I used a Garmin Virb Ultra 30. A computer with software that can view your camera's files.</p> <p><b>Results</b> These results show a connection between the stiffness of the rear shock and airtime on a bike jump. The average airtime with a stiff rear suspension (135 PSI) was 3.3 seconds. That was longer than the lower pressures (130 PSI = 3 seconds and 125 PSI = 2.6 seconds). The squishier suspension definitely helped cushion the landing, but it lowered the airtime and distance traveled for the bike jump.</p> <p><b>Conclusions</b> I think I have enough data to make a strong conclusion. I did ten tests for each pressure per square inch (PSI). However I only tested three different pressures (125, 130 and 135). If I had tested a wider range of pressures, or tested on different jumps, and I would have more data and could make a stronger conclusion.</p>	
<b>Summary Statement</b> Its about how changing the pressure in you rear shock affects the airtime and distance traveled while jumping your mountain bike	
<b>Help Received</b>	