



**CALIFORNIA SCIENCE & ENGINEERING FAIR  
2018 PROJECT SUMMARY**

<b>Name(s)</b> <b>Jennifer Cruz; Jenifer Najera</b>	<b>Project Number</b> <b>S1305</b>
<b>Project Title</b> <b>Impact Force of Martial Arts</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> The objective of this study is to measure the force of Taekwondo strikes between one experienced and one inexperienced person with similar body mass.</p> <p><b>Methods/Materials</b> Two wood cutting boards, hot glue gun, glue sticks, ruler, five springs (3.2in), slow-motion camera and a 1.5kg weight. Build a board with all these materials to measure out the force of each Martial Art strike.</p> <p><b>Results</b> The trained person in Taekwondo has more force in each strike that the untrained person.</p> <p><b>Conclusions/Discussion</b> The trained person in Taekwondo had more force in each strike even though both female test subjects had similar body mass.</p>	
<b>Summary Statement</b> A board was created to measure the force of Taekwondo strikes.	
<b>Help Received</b> Our science teacher gave us ideas of some different types of boards to build.	