



# CALIFORNIA STATE SCIENCE FAIR 2015 PROJECT SUMMARY

<b>Name(s)</b> <b>Andrew W. Brawders</b>	<b>Project Number</b> <b>J2005</b>
<b>Project Title</b> <b>TEC Peltier Tile Efficiency for Cooling and Heating</b>	
<div><div><b>Objectives/Goals</b> My science fair project tests my hypothesis on whether the Peltier tile is more efficient in cooling or heating. Also to see if it can be used in daily life.</div><div><b>Methods/Materials</b> A platform made of some metal and wood, heatsinks, a Peltier tile, an adapter for the power source/peltier tile interface, and a power source .</div><div><b>Results</b> Opposite of what I expected in my hypothesis. The heating was more efficient than the cooling, bigger heatsinks were needed. I also calculated the efficiency of both sides of Peltier tiles.</div><div><b>Conclusions/Discussion</b> In conclusion, its efficiency is too low and is not energy efficient. Although it is small , you need a large heatsink to counteract the large amount of heat it produces to keep it from burning out.</div></div>	
<b>Summary Statement</b> My project is to see if a Peltier tile is efficient and practical enough to be used in heating or cooling applications .	
<b>Help Received</b> Parents and teachers	