



**CALIFORNIA STATE SCIENCE FAIR
2013 PROJECT SUMMARY**

Name(s) Jonathan Shaklan; Julian Tayarah	Project Number J2121
Project Title Comparing Cooling and Heating of Athletic Shirts	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The purpose of this experiment is to test what athletic shirt companies claim their shirts do, which is to keep you warmer or cooler in different conditions. We compared athletic shirt performance to the standard t-shirt.</p> <p>Methods/Materials We tested with steamy water and used dry heat from a hair dryer on single shirt and layered shirts. We used an infrared thermometer to measure the temperature of the shirt for a few minutes after adding heat.</p> <p>Results Measurements showed that with dry heat there is almost no difference on the sport and cotton shirt. With wet heat we could see the sports shirt cooling off faster.</p> <p>Conclusions/Discussion The t-shirt gets the warmest, stay the warmest longer, therefore our hypothesis was correct, and the claims of these shirts working better are true. If you are sweating it would be better to wear the modern sports shirts. If hot air is blowing on you, the standard t-shirt won't get as much hot air in the inside. If you need to wear two shirts and you were sweating you should wear the UA heat gear under the cotton shirt, because it will let the moist heat out faster. It will depend on how much you are sweating, and how hot it is outside, to determine which kind of shirt keeps you cooler.</p>	
Summary Statement We are testing athletic shirts to see if the claims made by companies that the shirts keep you cooler are true.	
Help Received Father helped with idea, usage of thermometer and formatting of graphs.	