



**CALIFORNIA STATE SCIENCE FAIR  
2010 PROJECT SUMMARY**

<b>Name(s)</b> <b>Andrew J. Poole</b>	<b>Project Number</b> <b>J1516</b>
<b>Project Title</b> <b>Fog Nets: Effectiveness of Spun Bonded Polyester vs. Polypropylene Netting</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> The purpose of this project was to test three types of fog netting materials to see if one material was more effective than the others in collecting water from fog. My research revealed that countries, such as Peru and Chile, use fog nets successfully to produce water for the local villages. San Diego, which is prone to drought, frequently produces low lying clouds. I wanted to see if fog nets could be used in San Diego to help provide a water source for my community.</p> <p><b>Methods/Materials</b> I tested the following materials: 50% shade polypropylene fabric, 80% shade polypropylene, and spun bonded polyester. Polypropylene is the fog net material used in other countries to collect water. I strung 1.8m by 1.8m pieces of each of the three test materials between posts. I placed the posts in a line, due north/south, in order to maximize the amount of fog that would be caught from the prevailing west (on shore) winds. I built trough and pipe systems that collected the water from each of the nets and led the water to collection buckets. I measured and recorded the amount of water collected by the three fog nets twice a day for 28 days. I also recorded the outside humidity and temperature to see if there was a correlation between the amount of water collected and the humidity and temperature.</p> <p><b>Results</b> My experimental fabric, the spun bonded polyester, produced significantly more water than either of the two polypropylene nets. In fact, the spun polyester collected more than five times as much water as the other two types of netting combined.</p> <p><b>Conclusions/Discussion</b> While the research indicated that most fog nets are usually made from polypropylene, the results of my experiment revealed that spun bonded polyester netting may be more effective. I would recommend that spun bonded polyester be tested at locations that currently use fog nets.</p>	
<b>Summary Statement</b> I tested three types of fog netting material to see which was most effective at collecting water from fog.	
<b>Help Received</b> My father helped me to build my fog net devices. My science teacher provided guidance. My mother helped me with my display board.	