



**CALIFORNIA STATE SCIENCE FAIR  
2011 PROJECT SUMMARY**

<b>Name(s)</b> <b>Brittany A.D. St. Clair</b>	<b>Project Number</b>  31472
<b>Project Title</b> <b>Wood Finishes</b>	
<b>Objectives/Goals</b> My objective is to determine the best type of wood finish that is most sealant against water -- Shellac, Lacquer, Polycrylic, or Polyurethane. <b>Abstract</b> <b>Methods/Materials</b> A long strip of pine wood was cut into ten block pieces using a power miter saw. I used a triple beam balance to weigh the wood blocks after each step. An outdoor barbecue grill was used as kiln for the wood for 24 hours. When I tested the wood blocks with water, I placed all blocks into one bucket with room temperature water and soaked them for 42 hours. I put two weights on top to keep the wood from floating up. <b>Results</b> The Shellac finish was the most sealant against water, but clouds. Polyurethane was second best but yellows. Polycrylic was third best and kept a very good natural color. Lacquer was the least sealant and smeared the number I wrote on the piece of wood. <b>Conclusions/Discussion</b> This project can help expand our knowledge by helping us to know how the different types wood finishes will affect the wood that it is applied on. For example, if you had a piece of painted wood, you would not use lacquer because lacquer smears. If you had a work table and didn't care how pretty it was, or that it clouded, and need a finish that was durable and sealant against water, you would use shellac. Another example would be if you had a nice coffee table that got spilled on frequently and cared if there were cloudy spots, then you would use polycrylic.	
<b>Summary Statement</b> My project was to determine the most sealant type of wood finish against water.	
<b>Help Received</b> My step-father helped cut the wood and supervised me.	