



**CALIFORNIA STATE SCIENCE FAIR
2009 PROJECT SUMMARY**

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Project Title Got Mold?	
Abstract Objectives/Goals In my project, I wanted to find out which kind of primer is the best to prevent mold on painted drywall and if a commercial mold prevention paint additive is an effective and worthwhile way of preventing mold growth. Methods/Materials I had five combinations of paint and mold prevention additives with three of each including: oil-based primer, oil-based primer with a mold prevention additive, water-based primer, water-based primer with a mold prevention additive, and then no primer. I then painted all fifteen samples over with the same kind of water-based finish coat. Next, all of the samples were placed in a home-made mold incubator that was kept warm by a lamp and had standing water in the bottom. Almost all of the samples had large mold colonies growing on their unpainted side by the end of the first week. However, after about three weeks still no mold had grown on the fronts. So, in order to obtain accurate results, I placed one of each sample in a plastic bag with a piece of bread on it. After four days, mold grew on those samples. I then measured the depth of the mold on the bread, which varied from 1mm to 10mm. Results In the end, I discovered that in order from most effective to least in preventing mold the order was: oil-based primer with mold prevention, water-based primer with mold prevention, oil based primer, no primer, and lastly, water based primer. In fact, the sample with the water based primer developed ten times as much mold as the sample with oil-based primer and mold prevention. Conclusions/Discussion In the end, I discovered that the best way to prevent mold is to keep drywall painted and dry. However, if water exposure is unpreventable, then the best thing to do is use an oil-based primer with a mold prevention paint additive.	
Summary Statement I wanted to find the best way to prevent mold growth on drywall.	
Help Received Father provided some advice.	