



**CALIFORNIA STATE SCIENCE FAIR
2012 PROJECT SUMMARY**

Name(s) Zack S. Silverman	Project Number J1514
Project Title Hidden Bacteria: Are Your Cutting Boards Really Safe?	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals My objective was to find out which type of cutting board resisted bacteria the best.</p> <p>Methods/Materials The materials I used are: six agar petri dishes, six disinfected swabs, one bottle of distilled water, one used wooden cutting board, one used plastic cutting board, one used antimicrobial cutting board, six pieces of raw chicken, and tap water. I poured the agar into three petri dishes. Then I placed a piece of raw chicken on each of the three cutting boards and chopped it into small pieces. I washed each cutting board with running tap water and let them air dry. Once they were dry, I rubbed a sterilized swab onto each of the different cutting boards. I carefully lifted the lid of the appropriately labeled agar plate and then streaked the swab onto the agar solution in the petri dish. I quickly replaced the lid after making each streak. I repeated this procedure for each of the remaining two cutting boards. Then I taped the three petri dishes closed. The three petri dishes were stored in a cool, dark location for a month. I recorded daily observations in my project journal.</p> <p>Results I learned the antimicrobial cutting board resists bacteria the best. I believe it resists bacteria because it is coated with Silver Ion. I also believe the plastic cutting board had the second least bacteria because when you cut on it, it leaves grooves for bacteria to grow in. The wooden cutting board, being porous had the most bacteria due to the fact that bacteria can penetrate deeper into the wood and reproduce.</p> <p>Conclusions/Discussion My hypothesis did support my results. I learned bacteria is everywhere and there's nothing you can do to stop all of it. I also learned the antimicrobial is what type of cutting board to use. You should wash it in the dishwasher since that removes most of the germs.</p>	
Summary Statement In my experiment I tested 3 types of cutting boards to see which resisted bacteria the best.	
Help Received Mother helped put board together, Father helped pour the agar into petri dishes	