



**CALIFORNIA STATE SCIENCE FAIR
2011 PROJECT SUMMARY**

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Project Title Eggshells: Let's Go Defense, Let's Go	
Objectives/Goals The objective is to determine which eggs have the highest resiliency to bacteria, and which common bacterial environments harbor the most potentially harmful bacteria. Abstract Methods/Materials Three different types of eggs were used- store bought white grade AA eggs, store bought brown cage free eggs, and home grown Bantam eggs. Each of the eggs were placed together in five different bacterial environments- chicken coop soil, oat hay, used kitchen sponges, used kitchen paper towels, and the refrigerator. Each environment was in a sealed and sterile container in the refrigerator. After two weeks, the yolk and albumen were tested for bacteria, and identified. Results We found that the Bantam egg consistently had the highest bacterial count. Between the cage free and grade AA eggs, the cage free eggs were slightly more resilient to bacteria. The used paper towel environment harbored the most bacteria, and the refrigerator had the least. Conclusions/Discussion Although eggs naturally harbor bacteria, our experiment shows the importance of proper storage and cooking of eggs. The most common storage for eggs is the kitchen, which harbors the most bacteria. Because the Bantam eggs did not go through a factory sanitation process, this proves that sanitation makes a difference in the safety of eggs.	
Summary Statement Our project tests the bacterial resiliency of three different eggs in five bacterial environments.	
Help Received	