



**CALIFORNIA STATE SCIENCE FAIR
2012 PROJECT SUMMARY**

Name(s) Shivani Gupta	Project Number J2008
Project Title Curdle It Up!	
Abstract Objectives/Goals The objective was to determine the best type of milk to be used for milk coagulation. It was hypothesized that whole milk would be best for coagulation because it had the highest fat content out of three milks being tested: skim milk, reduced fat milk, and whole milk. Methods/Materials Milk was heated to eighty-two degrees Celsius on the stove using a thermometer. Once reaching this temperature, the milk was removed from the heat, and while gently stirring, eight milliliters of vinegar was added. The heated milk turned to curdled milk, and the curdles were drained by the use of a cheesecloth and a colander. Curdles were judged on yield and texture. Results Whole milk yielded in more cheese compared to reduced fat milk and skim milk. Based on texture of curdles, whole milk's curdles were creamy, moist, and soft. Reduced fat milk's curdles were dense and spongy. Meanwhile, skim milk curdled the least and its curdles had a pasty consistency and were sticky. Conclusions/Discussion The hypothesis was correct as whole milk curdled the best, having the highest curdle yield and best texture of curdles as compared to reduced fat milk and skim milk. Whole milk would be best recommended for the production of fresh cheeses. Also, while making milk-based sauces, skim milk would be recommended for the recipe to result in the least amount of curdling problems. Furthermore, skim milk coagulated the slowest as compared to reduced fat milk and whole milk.	
Summary Statement The best type of milk to be used for milk coagulation.	
Help Received My father helped me by taking pictures while I was conducting the experiment.	