



**CALIFORNIA STATE SCIENCE FAIR
2017 PROJECT SUMMARY**

Name(s) Rachel D. Lin	Project Number J1811
Project Title Determining Speed of Light in Corn Syrup Solutions	
Abstract Objectives/Goals This experiment studied the rate at which the speed of light decreased as the concentration of corn syrup in water increased. Methods/Materials Method 1: Rotating circular platform with degree units on sides, protractor, laser pointer, corn syrup, water, container, graduated cylinder. Measured change in angle of laser beam for each concentration. Method 2: Rotating circular platform with degree units on sides, laser pointer, corn syrup, water, container, graduated cylinder. Found critical angle. Method 3: Rotating circular platform, laser pointer, corn syrup, water, hollow prism, graduated cylinder, tape measure, tape/marker, wall. Found minimum deviation angle. Results The speed of light decreased by 4.35×10^6 m/s every 20% increase in the concentration of corn syrup. Conclusions/Discussion This experiment compared the methods used and found that the minimum deviation method was the most accurate. The results of this experiment showed a regular decrease in speed of light as the concentration of corn syrup increased.	
Summary Statement My research showed a constant decrease in speed of light as the concentration of corn syrup increased.	
Help Received My science teacher Mr. James Jackson and another science teacher Mrs. Kim Miller read over my results and data analysis. I constructed and executed my experiment myself.	