



**CALIFORNIA STATE SCIENCE FAIR
2016 PROJECT SUMMARY**

Name(s) Ben R. Walker-Edwards	Project Number J1728
Project Title Measuring the Speed of Sound	
Abstract Objectives/Goals The objective of this study is to measure the speed of sound in air at different temperatures. Methods/Materials Microphones, computer software, cables, amplifier, mixer, 2 blocks of wood. Used wood blocks to generate sound. Used 2 separated microphones and computer program to record sound. Analyzed sound records to obtain time taken for sound to travel between microphones. Results Sound moves faster in higher temperatures. The experiment was able to measure the speed of sound to within about one percent of the accepted value. Conclusions/Discussion It is possible with quite available materials to obtain a highly accurate estimate of the speed of sound. The largest source of uncertainty was in the separation distance of the two microphones. Such uncertainty could be reduced through the use of longer cables connecting the microphones.	
Summary Statement I measured the speed of sound in air using simple materials and found that it increases with higher temperatures.	
Help Received I designed the experiment, carried out the measurements and analyzed the results.	