



**CALIFORNIA SCIENCE & ENGINEERING FAIR
2019 PROJECT SUMMARY**

Name(s) Hattie Ugoretz	Project Number J0717
Project Title The Music of Memory: How Singing Affects the Ability to Learn	
<p style="text-align: center;">Abstract</p> <p>Objectives This study examined if music would help junior high students memorize. It compared how singing information as opposed to speaking it affected how well the information could be learned. I hypothesized that the singing participants would remember more of a passage than those who learned by speaking.</p> <p>Methods Each participant was asked to memorize a passage from Shakespeare's Hamlet. Every other participant was taught the information in one of two ways: Speaking or Singing. Speaking participants read along with a spoken recording and singing participants sang along with a version of the passage from the musical Hair. After learning the passage participants were tested to determine how much of the passage they were able to recite correctly.</p> <p>Results On average, singing learners remembered nearly twice as many words (17.5) than speaking learners (9.7). The results from boys and girls were compared as well, to see if there was any gender difference. Boys who learned by speaking remembered 8.8 words on average compared to 10.6 words for girls. Boys who learned by singing remembered 20.7 words on average compared to 14.3 words for girls. While there was a strongly significant difference between singing and speaking learners overall, the differences between boys and girls were only slightly significant for singing participants and not significant for speakers.</p> <p>Conclusions The study's results support the hypothesis that singing information will help you learn it. Students who learned by singing remembered 1.8 times as many words on average than students who learned by speaking. These results are consistent with previous research.</p>	
Summary Statement This study examined if singing information as opposed to speaking it affected how well the information could be learned.	
Help Received My science teacher provided support throughout the project. Mr. Tommy Kan of UCSB's Music Cognition Laboratory reviewed my methods and provided suggestions on ways to improve them.	