



**CALIFORNIA SCIENCE & ENGINEERING FAIR  
2018 PROJECT SUMMARY**

<b>Name(s)</b> <b>Aditi Singh</b>	<b>Project Number</b> <b>S0416</b>
<b>Project Title</b> <b>Testing Von Restorff Effect in Long-Term Free Memory Recall</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> The objective is to determine if a time gap between when information is learned and when the information needs to be recalled affects the human brain's ability to recall an isolated word (also known as the isolation effect). My hypothesis is that a time gap will not affect the human brain's ability to recall as isolated word because studies show that isolated words presented within a list of words have a higher probability of recall in a free recall test, so it's safe to predict that the isolation effect will also be successful in long-term memory.</p> <p><b>Methods/Materials</b> The materials used in this experiment were a computer, a projector, paper, and pens/pencils. I tested a total of 90 participants during the experiment, in six different groups of 15 participants each. All groups were asked to look at a list of 20 words, watch a video (except the first/control group), and then try to write down as many words as they can remember after they've watched the video. The video presented had differing time lengths depending on the group (two to ten minutes among five groups). The list of words presented to the latter five groups had the eleventh word "story" presented in red font, to test the Von Restorff/isolation effect.</p> <p><b>Results</b> After analyzing the data, only 27 percent of participants wrote down the isolated word in the control group. Groups 2, 4, and 6 had about 67 percent of participants write down the isolated word, while group 3 had about 73 percent of participants write down the isolated word and group 5 had about 87 percent of participants write it. The percentage of participants who wrote down the isolated word in all experimental groups was greater than the control group, and so we can conclude that a time gap (time of video) does not affect the brain's ability to recall an isolated word.</p> <p><b>Conclusions/Discussion</b> My results from the experiment supported my hypothesis, as a time gap does not affect the brain's ability to recall an isolated word. Since we know the Von Restorff effect is actively used in long-term memory, this effect can be used to our advantage, especially for students in school in order to help them memorize certain pieces of information in order to better remember it.</p>	
<b>Summary Statement</b> I tested the ability of the human memory to recall a certain piece of information based on physical stimuli present with the information, which in this case was words, in long-term memory.	
<b>Help Received</b> This experiment was conducted at my school, under my math teacher, Nora Beamon.	