



**CALIFORNIA STATE SCIENCE FAIR
2017 PROJECT SUMMARY**

Name(s) Madeleine C. Arundale	Project Number J0703
Project Title Animotion: How Animation Frame Rate Affects Memory Retention	
Abstract Objectives/Goals The objective of this study is to observe how an animation played at different frame rates affects how test subjects remember what happens within it. Methods/Materials Tv paint animation software, 3 frames-per-second animation, 24 frames-per-second animation, 2 groups of test subjects, large television screen, custom memory test. Results The test results showed a 25% improvement in test scores for the subjects watching the 24 frames-per-second animation. This shows that a higher, smoother framerate animation is easier to retain memory from. Conclusions/Discussion The test results of the frame rate and memory test concluded that higher frame rate(24 FPS) animated films are easier to retain information from, compared to lower frame rate (3 FPS) animated films. Because of this information, it can be determined that educational or classroom videos can use a higher frame rate film to increase efficiency in remembering it and learning from it.	
Summary Statement I created an animated film, running at 2 different frame per second speeds, to test how animation frame rate affects memory and memory retention.	
Help Received I created the test, film, and original idea myself. My science teacher assisted me with organizing test groups and the test space.	