



**CALIFORNIA STATE SCIENCE FAIR
2003 PROJECT SUMMARY**

Name(s) Stacey Mulligan; Nonafaye Williams	Project Number S0316
Project Title Flying Factors: The Study of Women in Aviation and the General Flying Capabilities of Males vs. Females	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals As students of a school located on an Air Force base as prestigious as ours, catching a glimpse of military pilots numerous times a day is common. After visiting NASA for the first time and testing out the flight simulators, we brainstormed and decided to research female pilots in the military. We found that females' acceptance into pilot training school is still some what rare, so we decided to form an experiment which would test the flying aptitude of males versus females. Due to present information that is in the male's favor, and generally greater video game experience, we predict that males will excel in this experiment.</p> <p>Methods/Materials After receiving permission from the NASA security, we were able to test fifteen males and fifteen females on the F-18 Flight Simulator at NASA Headquarters on Edwards Air Force Base. After having each participant fly on the simulators five times each (each try is two minutes long), we took a careful analysis of their flying abilities, including landing (which is most difficult). The testing also included a short survey of the test subject's flying/video game experience.</p> <p>Results After ending our vigorous experiments of fifteen test subjects from each sex (thirty in all), males have shown to excel on the flight simulators. Each male participant showed more consistency during each flight; while each female participant had shown great improvement throughout the testing. We noticed that each sex did share one trait-they showed the ability to learn from their previous mistakes and clean them up during the subsequent tests. After reviewing each survey (taken before testing) and comparing them to their overall performance, we had noticed that video game experience was not a variable factor in the experiment. Also, having previously flown on flight simulators did not make much of a difference on their flying capabilities.</p> <p>Conclusions/Discussion Today, we realize, although, males have shown superior performance; females have shown a great deal of improvement compared to males. After careful research, factors that had once held back female pilots are no longer an aspect because in the end (due to enhanced training), females prove to show somewhat equal performances compared to males.</p>	
Summary Statement Testing the flying aptitude of males versus females by using flight simulators and carefully analyzing their flying abilities, including landing (which is most difficult).	
Help Received Mr. Donald Logan chaperoned at NASA and provided instructions on the usage of flight simulators; Mr. Barr took Mr. Logan's place when he was absent.	