



**CALIFORNIA STATE SCIENCE FAIR
2010 PROJECT SUMMARY**

Name(s) Cole W. Henriksen	Project Number J1309
Project Title Stressed Out?	
Objectives/Goals I predict that heart rate (HR) and systolic blood pressure (BP) will show a greater increase while diastolic blood pressure (BP) and oxygen saturation level (O2sat.) will show a greater decrease while playing the Mature (M) rated video game versus the Teen (T) rated video game.	
Abstract	
Methods/Materials <ol style="list-style-type: none">1. Record physiological measurements for pre-game teen "T" rated video game.2. Have subject play teen rated game for five minutes.3. Record physiological changes for teen "T" rated video games.4. Have Subject rest for 15 minutes.5. Record physiological measurements for pre-game mature "M" rate video game.6. Have subject play mature "M" rated video game for five minutes.7. Record physiological changes for mature rated video game.	
Results <p>Playing Mature "M" rated video games produced a higher heart rate and blood pressure response than when playing the Teen "T" rated video games, while there was no significant difference in oxygen saturation level between the Teen rated video games and the Mature rated video games (both showed a moderate decrease in oxygen saturation level, normalizing after 5 minutes of rest).</p>	
Conclusions/Discussion <p>My results showed that there is a significant difference between playing a Mature "M" rated video game opposed to playing a Teen "T" rated video game. The Mature rated video game produced more stress in the test subjects measured by blood pressure and heart rate response.</p>	
Summary Statement <p>My project studied the physiological effects of playing Mature rate video games versus Teen rated video games.</p>	
Help Received <p>My Mother helped me by taking my subject's blood pressure while I monitored their heart rate and oxygen saturation levels.</p>	