



**CALIFORNIA STATE SCIENCE FAIR
2014 PROJECT SUMMARY**

Name(s) Sierra H. Evans	Project Number 34270
Project Title Determine Which Gloves Give Protection from the Cold and Still Allow for the Best Dexterity and Sensation of the Hands	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals To determine which type of outdoor work gloves provide protection from the cold but allow the best dexterity and sensation of the hands.</p> <p>Methods/Materials During this study I used the 9 hole peg test to test dexterity and the Semmes Weinstein Monofilaments to test sensation. These tests are standardized tests. I also used an infrared thermometer to measure the temperature of the hand.</p> <p>I first obtained a baseline temperature of the hand with the infrared thermometer. Then I applied cold to the hand for 10 minutes and measured the temperature of the hand again. I obtained 10 measurements for each glove.</p> <p>I then obtained a baseline score for each individual on the 9 hole peg test and the Semmes Weinstein Monofilaments. I then retested each individual while wearing the different gloves. Using the data I obtained from these tests I compared and contrasted the different work gloves.</p> <p>Results The results of my investigation on determining which gloves give protection from the cold and allow the best sensation and dexterity indicate that the Neoprene gloves provide the best protection from the cold but the Leather gloves allow the best score on sensation and dexterity tests.</p> <p>Conclusions/Discussion My investigation showed that Neoprene gloves are the best type of gloves to use in the cold but you shouldn't use them if you need good manual dexterity or sensation for your job. Leather gloves weren't the best to wear in the cold but they were good if you need sensation and dexterity. Fabric gloves should not be worn if you work in the cold.</p>	
Summary Statement Determining which gloves give protection from the cold but still allow for the best dexterity and sensation of the hands.	
Help Received My mother helped type the report and taught me how to give the standardized tests, Dad helped me center the title on the board.	