



**CALIFORNIA STATE SCIENCE FAIR  
2002 PROJECT SUMMARY**

<b>Name(s)</b> <b>Jaye M. Kasper</b>	<b>Project Number</b> <b>J1013</b>
<b>Project Title</b> <b>Does A Simple Stretching Program Increase Flexibility in the V-Sit Reach?</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> I wanted to find out if a simple 5 minute stretching program to be done daily over 3 weeks would significantly increase a person's flexibility in the V-Sit Reach. The V-Sit Reach is a flexibility test that is performed sitting down. The subject bends forward as far as possible, with arms outstretched. The V-Sit score is how many centimeters the middle fingertip extends past the feet.</p> <p><b>Methods/Materials</b> Thirty six middle school students were divided into two groups, consisting of 17 subjects in a Training group (daily stretchers over 3 weeks) and 19 subjects in a Non-Training group (who only participated in the initial and final V-Sit Tests). I measured their flexibility 3 weeks apart to obtain 2 different V-Sit scores using a 74.5 cm wide exercise mat and measuring tape with centimeters. The Training group did a 5 minute daily stretching routine that I designed. It contained 5 stretching exercises.</p> <p><b>Results</b> The Training group's average initial V-Sit score was 9.4 cm and decreased 0.6 cm to make 8.8 cm for their average final V-Sit score. The Non-Training group's average initial score was 6.5 cm and decreased 2.3 cm to get 4.2 cm average final score.</p> <p><b>Conclusions/Discussion</b> There were many variables that may have affected my results. Some of the questions I wondered about were: were my subjects honest in performing the daily stretching, did the weather contribute to how well subjects performed, how much physical activity did they do that included stretching before I tested them, and did my subjects in my Training group like to exercise? I would take these questions into consideration were I to redo my project. In conclusion, my results along with a T-Test showed that stretching for 5 minutes per day for 3 weeks did not significantly improve V-Sit Reach scores.</p>	
<b>Summary Statement</b> I wanted to see if a 3 week stretching program would significantly increase V-Sit Reach scores, but my results did not show a significant increase.	
<b>Help Received</b> PE teacher helped find kinesiology information	