



**CALIFORNIA STATE SCIENCE FAIR  
2012 PROJECT SUMMARY**

<b>Name(s)</b> <b>Julie S. Chung</b>	<b>Project Number</b> <b>J2111</b>
<b>Project Title</b> <b>Which Soil Amendment Retains the Most Water?</b>	
<b>Abstract</b> <b>Objectives/Goals</b> My objective was to find out which soil amendment retained the most water. I tested sphagnum peat moss, newspaper, hair, coir (coconut fibers), and perlite. My hypothesis was that sphagnum peat moss would retain the most water. <b>Methods/Materials</b> I tested the soil amendments sphagnum peat moss, newspaper, hair, coir (coconut fibers), and perlite for their water retention properties. I also tested highly water retentive potting soil as a control to compare my other variables to. The mass of 1000 cm <sup>3</sup> of soil was recorded and placed into a container. A mesh lining was then placed over the soil to create a bowl-like shape and 300 cm <sup>3</sup> of a soil amendment was placed into the mesh lining. 500 milliliters of water was steadily poured over the soil amendment. Then, the container was covered with plastic wrap to eliminate evaporation from occurring. Exactly three hours after the water was poured, the mesh lining and soil amendment were taken out of the container and the new mass of the soil was recorded. The experiment was repeated 5 times for each soil amendment. <b>Results</b> Peat moss retained an average of 83.8 grams of water, newspaper retained an average of 87.2 grams of water, hair retained an average of 33 grams of water, coir retained an average of 17.2 grams, perlite retained an average of 85.4 grams, and the control potting soil retained an average of 95.2 grams of water. <b>Conclusions/Discussion</b> My hypothesis was false. Newspaper by far did the best out of all of the soil amendments. My experiment also shows that materials that are not commercially sold as soil amendments (such as hair and newspaper) can do better than the commercially sold materials.	
<b>Summary Statement</b> My project tested the water retention capacity of soil amendments: sphagnum peat moss, hair, newspaper, coir (coconut fibers), and perlite.	
<b>Help Received</b> Mother helped cut and paste; Father gave inspiration	