



**CALIFORNIA STATE SCIENCE FAIR  
2007 PROJECT SUMMARY**

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| <b>Name(s)</b><br><b>Kristina Davis; Jenny Delucchi</b>   | <b>Project Number</b><br><b>J0705</b> |
| <b>Project Title</b><br><b>Soil Science</b>   |                                       |
| <b>Objectives/Goals</b><br>We want to know if the soil on our property has the right amount of nutrients in it for our new lilac tree to grow healthy and strong. Our goal is to find the best spot by testing for nutrients.   |                                       |
| <b>Abstract</b><br><b>Methods/Materials</b><br>Step 1&2.Dig up soil 4"deep,put on paper plate to dry naturally. Step 3.Sift soil until fine. pH test only: Step 4&5.After removing cap from pH tester, fill with soil to soil mark. Step 6.Holding pH capsule over test chamber,break in half releasing powder into chamber.Step 7&8.Fill the test chamber with distilled water to the mark. Replace cap tightly on the tester and shake well.Step 9&10.Wait 1 minute, compare the color of the mixture to the pH color chart on the tester. Step 11. Record the results in notebook. N,P,&K tests only: Step 4.Fill a clear plastic container with 1 part soil and 5 parts distilled water.(1/4 cup soil and 1 1/4 cup distilled water). Step 5&6. Shake well, allow soil to settle for 1-24 hours, until the water is mostly clear. Step 7. Select your tester,N=nitrogen(purple), P=phosphorous(blue),K=potash (orange) Step 8.Fill the dropper from the settled plastic container with water from the top. Step 9.Break the matching colored capsule in half over the tester pouring all the powder in.Step 10&11. Put the cap tightly on the tester and shake well, wait 10 minutes for the color to appear. Step 12. Match the color of the mixture to the color chart on the tester. Step 13. Record your results in notebook. Materials used:small hand shovel, distilled water, measuring tape, plastic spoons, Rapitest soil test kit, paper plates, sifter, newspapers, clear plastic containers. soil and measuring cups. |                                       |
| <b>Results</b><br>Our results showed that all 6 testing areas had the same level of pH, 6.0, just adequate for our lilac tree. In testing for potash we found that all 6 areas were sufficient to surplus, phosphorus was only adequate in 1 area and depleted or deficient in the other 5 areas. Nitrogen only showed up in 1 area and that was deficient.   |                                       |
| <b>Conclusions/Discussion</b><br>We found our area #4 to be the best suited for planting our lilac tree. This area has the highest amount of nutrients.Also good drainage & exposure to extreme temperature changes, two additional things we learned in our research that are good for lilacs. We will be adding some organic fertilizer to bring up the pH a little and increase the nitrogen and phosphorus before planting. Our tree is in the ground and is already showing new growth.  |                                       |
| <b>Summary Statement</b><br>To find the area on our property with the best nutrient value for our new lilac tree to be planted..  |                                       |
| <b>Help Received</b><br>Mothers helped with editing report(no spell check) and learning to make graphs.John Murrah(San Lorenzo Lumber Garden Center) answering questions.   |                                       |