



**CALIFORNIA STATE SCIENCE FAIR  
2002 PROJECT SUMMARY**

<b>Name(s)</b> <b>Jennifer C. So</b>	<b>Project Number</b> <b>J0822</b>
---	---------------------------------------

**Project Title**  
**How Do the Electrical Charge Plates Improve the Process of Separation of Dirt from Dirty Water?**

**Abstract**

**Objectives/Goals**  
The goal is to see if applying electrical charge plates helps in improving the process of dirt from dirty water.

**Methods/Materials**  
2 glass jars,wires,12 volt battery,aluminum foil,tap water,filter water,pond water,rain water,salt water,tape,multi-teste,clock/timer,ruler,pencil/pen,data forms,labels

**Results**  
The results indicated that electrical charged plates improved the process of separating dirt from dirty water.The water gets cleaner after each trial because the water samples#kU resistance was higher.In trials #1-4, the water resistance(after test)for test jars all increased after being tested with the electrical charged plates.

**Conclusions/Discussion**  
My hypothesis for my project was that using electrical charge plates would produce cleaner water than without using electrical charge plates. It is found to be 75% effective.The improvement of the average tap water resistance for the reference jar is 3.5kU. The improvement of tap water resistance for test jar is 2.7kU.The improvement of the average filter water resistance for the reference jar is 0.65kU.The improvement of the average filter water resistance for test jar is 3.65kU.The improvement of the average pond water resistance for the reference jar is 0.925kU.The improvement of the average pond water resistance for test jar is 1.05kU.The improvement of the average rain water resistance for reference jar is 3.6kU.The improvement of the average rain water resistance for test jar is 6KU.The improvement of the average salt water resistance for the reference jar is .65kU.The improvement of the average salt water resistance for test jar is .1kU.The process works better with dirty water(more impurity or non-water ions)because more impurity can be separated by the electrical charge plates.For the reference jar, the filter water has the highest resistance compared to rain water.The resistance of the pond water is higher than the tap water.The resistance of the tap water is higher than the pond water; and the resistance of the pond water is higher than the salt water.For the test jar, the filter water has the highest resistance compared to rain water.The resistance of the pond water is higher than the tap water.The resistance of the tap water is higher than the pond water, and the resistance of the pond water is higher than the salt water.Obviously, the filter water has less impurity than the rain water. It means the filter water is cleaner than the pond water.

**Summary Statement**  
This project is about improving separation of impurity from impure water by applying electrical charge plates.

**Help Received**  
First of all, I would like to acknowledge my dad for recommending me to this project. Secondly, I would acknowledge my sister for telling me where to find information.