



**CALIFORNIA STATE SCIENCE FAIR
2003 PROJECT SUMMARY**

Name(s) Dhruv K. Gopinath	Project Number J0911
Project Title Does Man-Made Pollution Affect the Hydrological Cycle?	
Abstract Objectives/Goals The objective was to determine if water evaporates more in a polluted atmosphere or a non-polluted one. Methods/Materials Experiments were carried out to determine whether water evaporates more in a non-polluted atmosphere or a polluted one. In this experiment two aquariums were used. One was a clear tank which we designate the non- polluted tank. The other aquarium had a simulated haze of man made pollutants, which was obtained by soaking a cotton ball in 2.5 ml of unleaded gasoline and burning it in a Pyrex dish within the aquarium. The burning produced a sooty slightly cloudy haze similar to a polluted environment. The burning took place 2 hours prior to testing. Both tanks were placed outside at the same times and stayed out in the sun for exactly the same time. Based on prior research on the topic, the experimenter hypothesized that the water in the non-polluted tank would evaporate more than the water in the polluted tank. Results Water in the non-polluted tank evaporated more than the water in the polluted tank. In all phases of the experiment, the experimentation supported the hypothesis that man made pollution could impact the hydrological cycle by blocking the sunlight needed for evaporation. Also temperature readings in the aquariums during different times of the day supported the hypothesis that pollutants have both a warming and cooling effect. Conclusions/Discussion To conclude this experiment the experimenter found out that his hypothesis was correct as the non-polluted tank evaporated 31% more than the polluted tank did.	
Summary Statement It is about the effects of pollution on the hydrological cycle	
Help Received Mother helped record data, Father helped correct graphs, Neighbor advised on decorating the board.	