Environmental Gazebo

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The growth of population has created problems like increase of fCO2, food shortage and contamination to our water resources. Would it be possible to create a self-sustaining small portable 7x6x6 feet gazebo made of reused and natural materials with a green roof that helps reduce CO2 in the atmosphere, where water can be made potable and a hydroponic system can be used to grow plants for food? The objective is to create a gazebo that is cost effective and environmental friendly. The hypothesis is: if the creation of a self-sustaining gazebo is proven to be successful, it will be a new approach to help reduce the levels of CO2 in the atmosphere, a more cost effective way of producing potable water and an efficient way of growing plants for food. Two (3x3x4ft) gazebo models were built to test CO2 changes in the air, and to test the hydroponic system, and the water filter system. Reusable and natural materials such as plastic water bottles were used, as well as bamboo stems because of their strength and abundance in nature. Results evidence that plants in the hydroponic system grew larger in a difference of .98cm, the filtered water met the EPA drinking water standards, and the CO2 measured in the green roof gazebo was 130 ppm less than in the control group. The gazebo was built with less than $10.00 and in a short amount of time. The hypothesis was accepted because this self-sustaining gazebo can take care of some worldwide problems.

Awards Won: