Is Solar Energy a Viable Option for the Future?

Groff, Bryn

The purpose of my scientific research is to determine if active and/or passive solar energy would be a viable option to use as an alternative energy source to heat materials. I believe through prior scientific research that solar energy is a viable alternative energy to use to heat materials. 1. I started my testing by placing three thermometers in and out of the box. * One outside the box on the glass to get the outside air temperature * One suspended inside the box to get the inside air temperature * One placed under the copper pipe to get the metal temperature 2. 2 heat lamps (100watts) were placed above and in front of the testing box. 3. The lights were hooked up to a timer and turned on for a period of 12 hours and then turned off for 12 hours. 4. The digital thermometers were setup on a computer program to be read for a period of 72 hours. 5. Test 1: Passive Solar Energy-Light no water (Control Test) Test 2: Active Solar Energy-Light and water flow Test 3: Active Solar Energy-Light, water flow, no corrugated aluminum metal The results show that running water through water pipes and using the black corrugated aluminum metal sheet will also attract more heat. The combination of using both proved to be the best for heat gain. My scientific research showed that my hypothesis was correct. Solar energy, both active and passive, is a viable alternative to heat materials. The active solar energy using the water pump and circulating water through the solar box gained the highest temperatures while the lights were on. The water pipe temperatures were the highest followed by the dead air space inside the solar box.

Awards Won: