



CALIFORNIA STATE SCIENCE FAIR

2004 PROJECT SUMMARY

Name(s) Aaron M. Pearson	Project Number J1529
Project Title The Most Efficient Automobile Sunshade	
Objectives/Goals The objective was to find out which type of sunshade material is most efficient for insulating your automobile when parked in the hot sun.	Abstract Take a cardboard box, cut a hole at the top, cover the hole with plexi glass, and suspend a 250 watt heat lamp above the plexi glass. Place the insulating material to be tested inside the box, 18 cm. below the plexi glass. Insert heat thermometer centered near the bottom of the box through a hole in the side so that the temperature can be read without opening the box. Turn the heat lamp on and record the temperature readings at 3 minute intervals for 15 minutes. Do six repetitions for the control group and each material tested. Open box and cool down with fan to approximately the same temperature in between each repetition.
Results The thin reflective bubble material was the most efficient sunshade.	
Conclusions/Discussion I concluded that my hypothesis was correct. The reflective bubble material was the most effective at keeping the box cooler. I also have discovered that the reflective foam was almost as effective, but starts to gradually let more heat in between about 6-9 minutes. This proves that it would be less effective for a vehicle that is parked in the sun for a long time. Also I figured out that cardboard is not the worst sunshade. The overall results indicated that all of the materials tested are useful because without even the least effective one, the control group results show that temperatures would reach much higher levels.	
Summary Statement My project is about determining what is the best automobile window sunshade for keeping a car parked in the sun cool.	
Help Received Dad helped me to format data collection sheets and assemble/purchase materials.	