

# CALIFORNIA STATE SCIENCE FAIR 2004 PROJECT SUMMARY

Name(s)

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**Project Number** 

**J1428** 

#### **Project Title**

# **Don't Let the Bed-Bugs Bite**

# Objectives/Goals

#### **Abstract**

My goal was to find out, of the following what is the best way to get rid of dust mites found on a pillowcase?

- # Soak in hot water, dry in dryer
- # Soak in hot water, dry in sun
- # Place directly in the sun
- # Soak in cold water, dry in sun
- # Soak in cold water, dry in dryer
- # Wash in washer (Hot water), dry in sun
- # Wash in washer (Hot water), dry in dryer

I believed soaking the pillowcase in hot water then drying it out in the sun would be the most successful method in removing dust mites.

### Methods/Materials

The materials I usd in my experiment were: #Microscope; #Pillowcase; #Pair of Scissors; #Pencil; #Notebook; #Washer; #Dryer; #11x8x6 Pot; #Gas Stove; #11x8x6 Bowl; #Thermometer; #½ Pot filled with water (100%); #½ Bowl filled with water (55%); #12 Inch ruler; #Surgical Gloves

#### Results

The results I found was that the remaining dust mites found on the Hot Soak and Sun method was an average of 10.76%, the Hot Soak and dryer method was 11.47%, the Sun method was 22.49% the Cold Soak and Dryer method was 11.59%, the Cold Soak and Sun method was 11.16%, the Washer (Hot Water) and Sun method was 10.92%, and the Washer (Hot Water) and Dryer method was 11%. From this we can tell that the method that did the greatest in our experiment was the Hot Soak and Sun method, we can also tell that the method that did the worst was placing the cloth directly in the Sun without being washed.

#### **Conclusions/Discussion**

After calculating the results, I can safely say my hypothesis was correct. The Hot Soak and Sun method got rid of the greatest number of dust mites in a 1½-hour time span. This method was slightly more successful than washing and drying the pillowcase by machines. This proves to us that even a method as simple as using hot water and the sun is still a successful and useful method. Although dust mites aren't the biggest problem in the world today, we can learn that with a little work and perseverance all problems can be solved.

#### **Summary Statement**

My project is about finding the best method in removing dust mites.

## **Help Received**

My father helped me create the question and my teacher helped supply the microscope.