CALIFORNIA STATE SCIENCE FAIR
2017 PROJECT SUMMARY

Name(s)

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Project Number

J1113

Project Title

Fog Catchers

Abstract

Objectives/Goals

The objective was to find out which material, out of 3, collected the most amount of water tested by our interpretation of fog catchers.

Methods/Materials

6 Wood Planks(45 cm by 2.54 cm),3 wood planks(30 cm by 2.54 cm), Hinged gutter guard, Plastic wrap, plastic mesh, 3 plastic window box liners, 170-liter plastic box, humidifier, drill bits, staples, graduated cylinder. Tested the 3 fog catchers for 30 minutes in a 170-liter plastic box with the humidifier 12 times.

Results

For plastic mesh(material 1), we collected an average of 11.92 mL. For plastic wrap(material 2), we collected an average of 10.4167 mL. And for metal mesh(material 3), we collected an average of 9.75 mL. Maybe the reason plastic mesh accumulated the highest amount of water was because the holes were not too big like the metal ones, but they also were something that allowed the water to cling onto.

Conclusions/Discussion

During our experiment our final conclusion was that the plastic mesh collected the most water. Our hypothesis may not have been correct, but we learned that using plastic mesh collects more. The lack of water accumulated in the metal mesh may be due to the fact that the holes may have been too big. The plastic mesh had smaller holes which may be the reason it caught more water than the metal. Although the plastic wrap didn't have any holes at all, the small ones may have given the water droplets something to cling to. All in all, it makes sense that our experiment concluded with plastic mesh as the most, since that is the material that fog catchers all over the world already use. Also, it is a more cost effective option over metal.

Summary Statement

My partner and I tested three different materials to see which one would accumualte the most amount of water with plastic mesh being the material that won.

Help Received

My partner and I designed, built, and performed the experiments ourselves.