Name(s)	Project Number
Hannah K. Hessler	**J1113**

Project Title

Declining Bee Populations: How to Pollinate if They Disappear

Abstract

Objectives/Goals
Bee populations are declining rapidly. In the last year we had a bee loss of over 32%! Because bees pollinate every 1 in 3 bites we eat, I set out to find a method of efficient mass pollination without bees.

Methods/Materials
Pansies were pollinated three different ways: hand pollination, which is a form of pollination in which a small paintbrush is used to maneuver the pollen off the stigma and onto the stamen. Wind pollination, which is my own method of pollination where you take a blow dryer on low speed and temperature, and blow the flower at different angles, trying to get pollen off the stigma and onto the stamen. And finally, natural pollination, leaving the flower outside to pollinate naturally using insects, wind, and animals. Containers were used to prevent alternate variables from disrupting the project.

Results
My experimental results prove my hypothesis to be incorrect, as both, hand pollination and natural pollination, pollinated the pansies better than my experimental manually applied wind pollination.

Conclusions/Discussion
My results help me to further understand a bee's importance to the pollination process, because of how difficult it is to develop new ways to replace them. I have also discovered that my results may be inconclusive, because the plant used for wind pollination testing did not produce enough flowers to get accurate results. With further research, I believe an alternative mass pollination method could be developed.

Summary Statement

This project compares natural bee pollination on pansies to two alternative methods of flower pollination.

Help Received