Colorado Science and Engineering Fair

2025 Individual Project Abstract Form

Please print 2 copies of the completed form. Sign both copies, keep 1 for your notebook and submit 1 copy to your Regional Fair Director with your other paperwork.

Title of Project: Monitoring Apis Mellifera Linaeus for Winter Survival (Year two)

Finalist's Name: Priya Mayjoy

School and City: Lamar High School Lamar

Sponsor's Name: Staker Robin

Category: Animal Sciences

Division: Senior (grades 9 - 12)

Abstract (250 words or less):

This project is about bee life and how winter affects them. My project started over a year ago and I focused on observing them throughout the summer. Then last winter I monitored each hive's temperature for eight weeks. My hypothesis this year was if I successfully monitor the heat and behavior in hives during the winter, then I can predict hive survival through the winter months. This year I decided to monitor their temperatures again but I wanted to figure out another way they might be dying, so throughout the summer I observed each hive and their behaviors. This year I did three different tests. First I did the Varroa test at the end of the summer. This test showed me whether or not any of the hives had mites. Both locations had at least one mite in each hive. This test was very helpful for each beekeeper and they tested for mites afterwards. Then I also did a FABIS test. This second test was to show me whether or not the bees had an Africanized or European gene. However, this test was very hard to show exact results. I also decided to continue my test from last year and use the FLIR device again. The Varroa test was very helpful in showing me how mites could be affecting the hive's survival. Since I have already monitored the bees heat signature while using the FLIR device. I predicted it would be successful again this year, and it was. It was helpful to see each new way of how the bees could be affected. I would love to continue this project and explore more options for future testing. These findings from my experiment show how it is possible to monitor bees without disrupting them during the winter months

I hereby certify that the above statements are correct and the information provided in the Abstract is the result of one year's research. I also attest that the above properly reflects my own work.

Finalist's Signature: Date:

In addition, all students must complete the ISEF Student Checklist (1A), Research Plan, Approval Form (1B), and Checklist for Adult Sponsor (1), and any other ISEF forms required for this type of project. See the International Rules and Guidelines for form requirements. Return COPIES of all of these forms to your Regional Fair Director with you Finalist Verification/Permission Form. **A signed copy of this form must be included in your notebook.**