



Colorado Science and Engineering Fair

2024 Team 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: The Effect of Microplastics on Neocaridina davidi.

Team Leader's Name: Hansini Mudumala

Team Member 1: Aryana Havash

Team Member 2:

School and City: SkyView Academy

Sponsor's Name: Rajesh Mudumala

Category: Animal Sciences (ANIM)

Division: Senior (9th - 12th grades)

Abstract (250 words or less):

Every year, the ocean contains at least 14 million tons of plastic. Microplastics are one of them. Microplastics are miniature pieces of plastic that are generally smaller than 5 millimeters. Marine animals have been detected to consume this plastic, which is a potential threat to aquatic animals that contaminate fish meals. To conduct our experiment we placed 12 cherry shrimp in each tank. We decided to use cellophane and polypropylene and create a habitat with plastic near the food to test whether the shrimp would mistake the plastic for food. There was one tank that contained shrimp, which grew in a microplastic-induced environment, and one tank where shrimp grew in a clean environment. This setup allowed us to test whether the plastic in the ocean would impact the shrimp's ability to survive. According to our data, at the beginning, the shrimp began to eat the microplastics and it would appear in their feces. But as time went on the experimental group would not eat many of the microplastics, causing specks of microplastics to remain uneaten. We believe this is due to the damage the microplastics were causing them. Our experiment was faced with many challenges, with our shrimp dying before the experiment even began, and the tedious work of collecting the shrimp feces proved to be time-consuming. Overall, the hypothesis of the experiment came true: the microplastic was mistaken for nutrition and was consumed by the shrimp and appeared in the feces and later in their body when dissected.

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

Team Leader's Signature: Hansini Mudumala

Date: 3/4/2024

Team Member 1's Signature: Aryana Havash

Date: 3/4/2024

Team Member 2'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 your Finalist Verification/Permission Form. A signed copy of this form must be included in your notebook.