



**CALIFORNIA SCIENCE & ENGINEERING FAIR
2019 PROJECT SUMMARY**

Name(s) Ali Badawi	Project Number J0103
Project Title AnyFIN Is Possible! Testing Various Flyfishing Structures to Determine Which Fly Structure Has the Best Surface Tension	
<p style="text-align: center;">Abstract</p> <p>Objectives In brief, this project is to learn which of the three main "fly" designs used in targeting top-water fish in fly fishing will have the highest level of stickiness to the water's surface tension while being slowly pulled out of the water.</p> <p>Methods To test this I made three models of "flies", which are hand-tied artificial lures imitating natural insects or bait to entice fish, each composed of a plastic toothpick, modeling clay and eight needles. I also built a balance made of household items. I laid the "model fly," which was attached to one end of the balance by string, onto the water's surface then added grains of rice to a container attached to the other end of the balance until the "model fly" came out of the water. I then recorded the weight of the grains of rice in grams, and compared the results of the three "model flies" I was testing.</p> <p>Results The result was that the "model" of an imitation insect called a "parachute fly," with its even spacing of needles that lay flat on the water's surface, held to the water's surface tension the best.</p> <p>Conclusions In conclusion, the results matched my hypothesis. This knowledge will help fly-fishermen decide which "fly" to use when targeting top-water fish like trout or bass, because they will know which "fly" has the highest probability of staying on the water's surface.</p>	
Summary Statement This project is to learn which of the three main fly-fishing lure designs used in targeting top-water fish will have the highest level of stickiness to the water's surface tension while being slowly pulled out of the water.	
Help Received None, this project was entirely done by me.	