



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

Name(s) Talha Mala	Project Number J0318
Project Title Follow That Sun! How Does the Output of a Solar Tracker Vary from the Output of a Solar Panel?	
Abstract Objectives Objective/Goals: This project was designed to discover if solar panels output could be improved. Methods Materials and Methods: I programmed the code for my Arduino and installed a power shield on Arduino. Then I installed servo motors so they could turn. Then I connected the four resistors and four photoresistors with the terminal block. Then I placed all the wires onto the breadboard. Then finally I connected the wires to the solar panel so I can fire it up. In the end, my solar panel and solar tracker were finally built, and they were ready so I could do my experiment. I programmed the codes for the two of my Arduino. The codes were written in C++ format. Results Results: My study showed that solar trackers are about 35% more efficient than solar trackers. The average amount of milliwatt hour generated by my solar tracker was 10,212 milliwatt hours. The average for my solar panel itself was 6697 milliwatts hour. Conclusions Conclusion: My study is important because it helps us understand the dynamics of solar panels and improve their efficiency. The use of solar energy is growing rapidly, and we must further our research in this area to meet the demands of consumers.	
Summary Statement My project is to see if solar trackers produce more energy than static solar panels.	
Help Received None. I designed, built, and performed the experiments myself.	