

CALIFORNIA SCIENCE & ENGINEERING FAIR 2019 PROJECT SUMMARY

Name(s) Project Number Eleanor Addison J221C Project Title Sunscreen: Protection or Poison? Objectives Abstract Objectives Over a period of weeks raise Brine shrimp (as a proxy for coral reefs) from eggs in homemade hatch Expose 10 shrimp in a Petri dish to a 1cm square swab of one of 9 sunblock brands, 3 household che or 1 control, and record the health condition every hour over 36 hours for each. Results Matheda Mathed sunblocks were found to be the least harmful to brine shrimp, while sunblocks containing oxybenzone or octinoxate were the most. Surprisingly, shampoo (which has not gotten as much pres found to be even more harmful. In addition, cost was not related to environmental harm. Conclusions All sunscreens tested were found to be harmful to sea life (as represented by Brine shrimp). Zinc-bas sunblocks were less harmful than oxybenzone and octinoxate-based blocks, concurring with recent reports. Interestingly, at equal concentrations, household shampoo proved to be even more of a thre. Brine shrimp, implying sunscreen is not the only danger beach-goers may bring to the world's coral	
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Using Brine shrimp as a proxy for coral, this study explores the harmfulness of sunscreen to sea life.

Help Received

My dad assisted me by recording some of the data in the middle of the night, helping me order the materials, and helping me with the paper-cutter to cut sheets to glue on the project display board.