

# CALIFORNIA SCIENCE & ENGINEERING FAIR 2019 PROJECT SUMMARY

Name(s)
Simone Rothaupt

J2118

# **Project Title**

## The Annihilation of Nature

#### **Abstract**

#### **Objectives**

The objective of this project is to study the impact of environmental changes on the survival of brine shrimp.

#### Methods

18 petri dishes, 180 brine shrimp. Recorded survival rates of 10 brine shrimp in each petri dish over 7 days by varying the temperature, pH, salinity and pollution with refrigeration, a heat light, lemon juice, baking soda, salt, oil and distilled water.

#### Results

Temperature decreases and increases cause brine shrimp to die prematurely. When pH and salinity levels increase, there is a higher brine shrimp survival rate than when these levels decrease. Although water pollution slightly decreases the survival rate of brine shrimp, it does not significantly influence the survival rate in comparison to clean water.

#### **Conclusions**

When the climate changes in a brine shrimp environment, the survival rate of brine shrimp decreases, thus lowering the overall brine shrimp population. As the base of the food web, this decreasing population of brine shrimp could eventually result in the future collapse of the food chain.

### **Summary Statement**

When the climate changes in a brine shrimp environment, the survival rate of brine shrimp decreases, thus lowering the overall brine shrimp population and potentially destroying the food web.

### **Help Received**

None