CALIFORNIA SCIENCE & ENGINEERING FAIR
2018 PROJECT SUMMARY

Name(s)

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Project Number

J1201

Project Title

Testing Local Water Sources for Contaminants

Abstract

Objectives/Goals

The objective of this project is to test water samples from a well, a spring, and city pumped water to determine which results had the most contaminants. We are testing each sample for lead, pesticides, bacteria, copper, iron, nitrites, nitrates, pH, hardness, alkalinity, and total chlorine. The result that stood out most was that city pumped water and well water both tested positive for lead. Another interesting result was that spring water tested for 1.3 ppm of copper, which is the limit of the safe zone for human consumption. In conclusion, this project taught us about local water pollution and that it is important to test our drinking water.

Methods/Materials

For materials, we used 3 water testing kits, a timer, water samples, and water tight containers. We collected water samples then tested each water based on the instructions in the test kits.

Results

The well water and the city pumped water tested positive for lead. iron, nitrites, nitrates and chlorine all tested at 0 ppm. For spring water copper tested at 1.3 ppm, which is the limit of the safe zone. Spring water had much less hardness and alkalinity the the other two sources. pH tested at 9 for all three for the samples.

Conclusions/Discussion

Our results supported our hypothesis that well water would have the most contaminants out of the three sources of water. The purpose was to test local water so the community gains awareness the water they are consuming. Further testing would be needed to determine the impact of the contaminants in these sources.

Summary Statement

The objective of this project is to test water samples from a well, a spring, and city pumped water to determine which results had the most contaminants.

Help Received

My science teacher, Ms. Mayne, provided the materials, a printer, and a board.