

Culturing Great Salt Lake Microbes

Pollutants Challenge

Background

Human activity is introducing pollutants in to Great Salt Lake and the wetland areas that surround it. Salt and brine shrimp harvesting, wastewater treatment, by-products from nearby mining operations and runoff from urban and agricultural areas are adding foreign contaminants to the ecosystem. Some microbes actually process pollutants in to harmless products, while others are unaffected, and some are unable to thrive in the presence of pollutants. How do Great Salt Lake microbes respond to pollution?

Your challenge: Design an experiment that tests the effect of one or more pollutants on the growth of Great Salt Lake microbes.

1. Review the Culturing Great Salt Lake Microbes lab protocol as a place to start.
2. Use the questions below to help you think about how to expand or alter the protocol to test pollutants.

Research or obtain a list of the pollutants found in Great Salt Lake from your teacher. Which pollutant or pollutants will you test?

What will be your source of the pollutant for the lab?

You can introduce the pollutant you are testing in one of two ways. Place a checkmark next to your method of choice.

- Add pollutant to water sample, then culture the water sample.
 - Place 2-3 small drops of the pollutant on to an agar plate, then add sample.
3. Describe how you will design your experiment. Include how you will observe and record microbial growth each day. You may write it out or make a labeled drawing..