

CREA RIVER WATER QUALITY

By: Abby Parker and Eloise Melcher

Purpose: To find out how abiotic factors like rainfall and water temperature affect the water quality of the Cathance River.

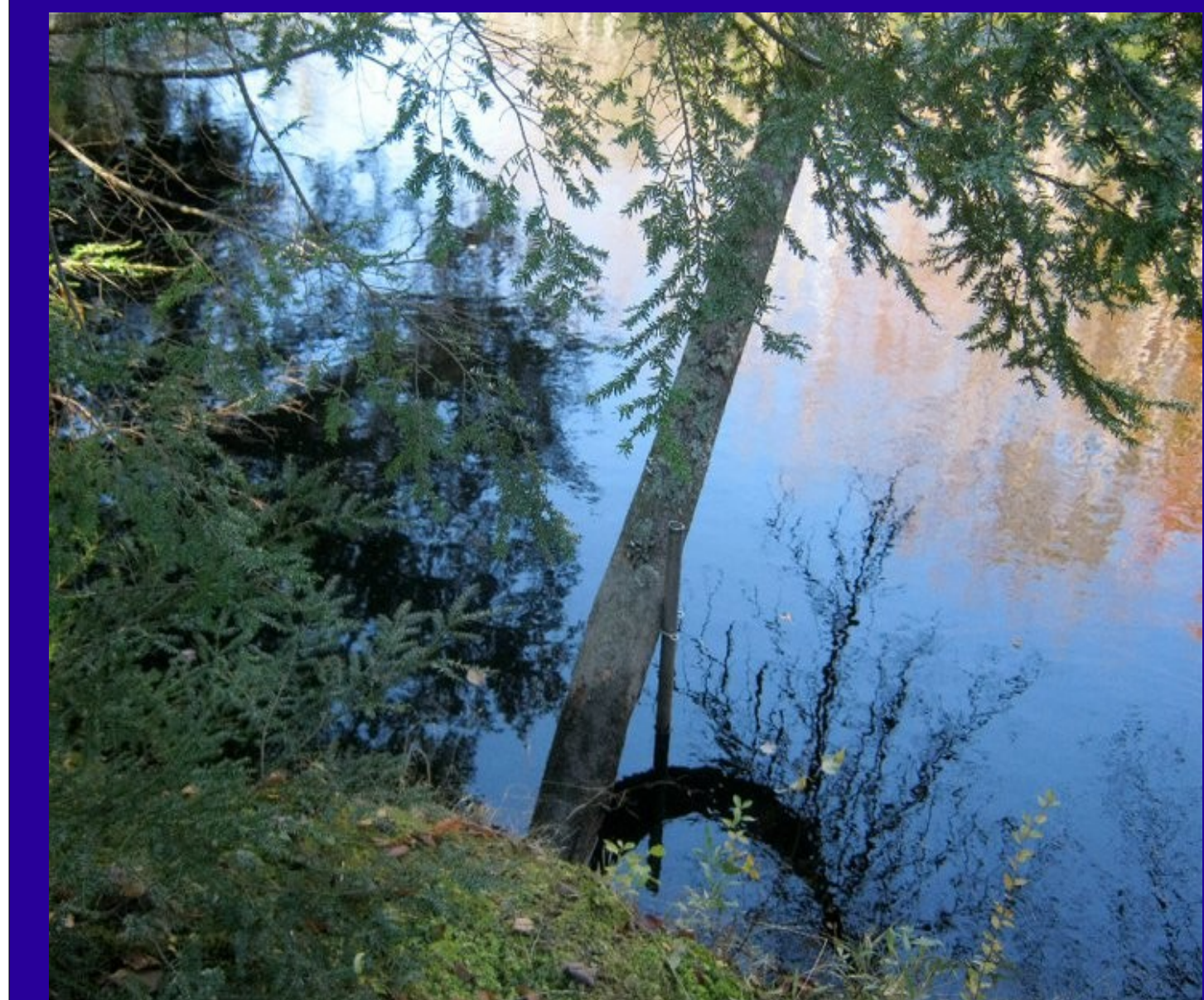
Hypothesis: With changes in rainfall and water temperature, the water quality will also change.

Procedure: The researchers traveled to the testing site on the Cathance Riverbank, upstream from Barnes Leap. They then performed the following tests: water temperature, water speed, pH, dissolved oxygen, color, silica, turbidity, conductivity, nitrate/ nitrite, and alkalinity. The tests were performed from September to October 2010.

Results: During the experiment, nitrate and nitrite stayed constant at 0 ppm. The water speed increased in unison with the increase in water level from 34cm- 53cm. Dissolved oxygen followed no specific pattern, it seemed that none of the other abiotic factors influenced it. The range was 4.2 ppm- 5.6 ppm. Conductivity experienced an almost constant decrease from 120mmho/cm- 70 mmho/cm, going down when water level went up. The pH stayed relatively constant the entire time from 5.5-6.5. Alkalinity was another abiotic test that stayed relatively constant hovering around 40 mEq/L. Turbidity ended up dropping over the course of the experiment from 15 NTU- 5 NTU. Silica followed no specific pattern, ranging from 10 to 3 PMU throughout the weeks. All of these results are within the acceptable range for the river.

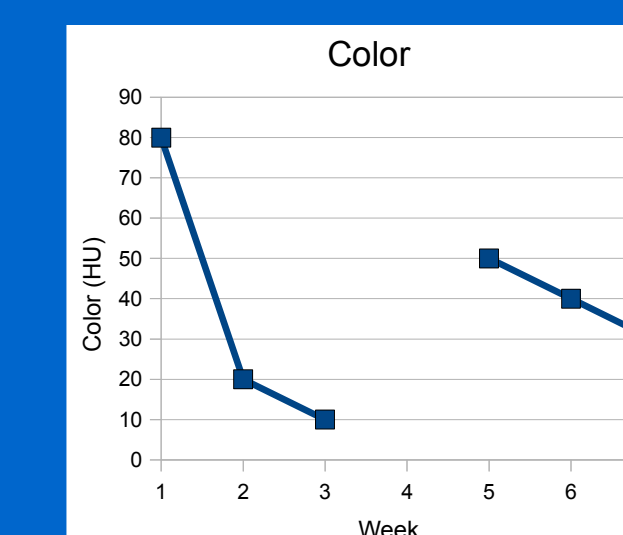
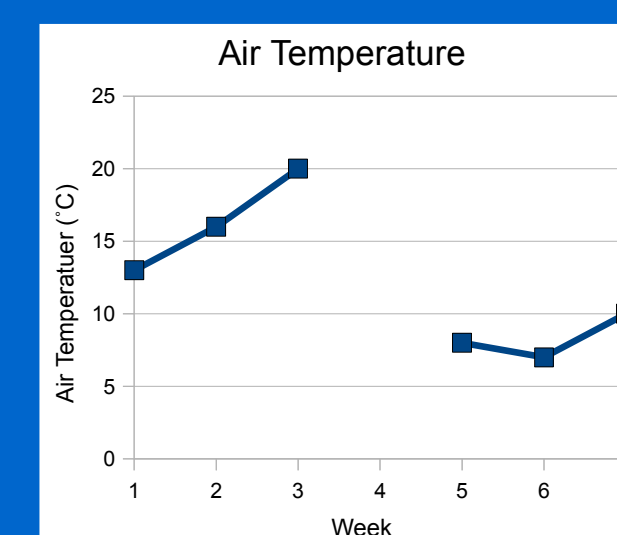
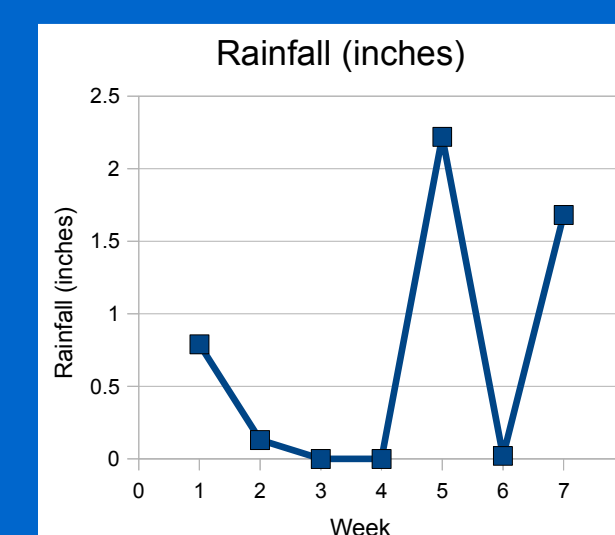
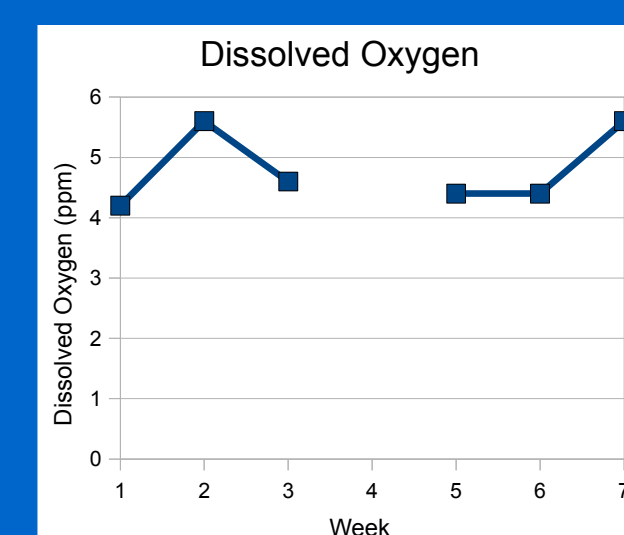
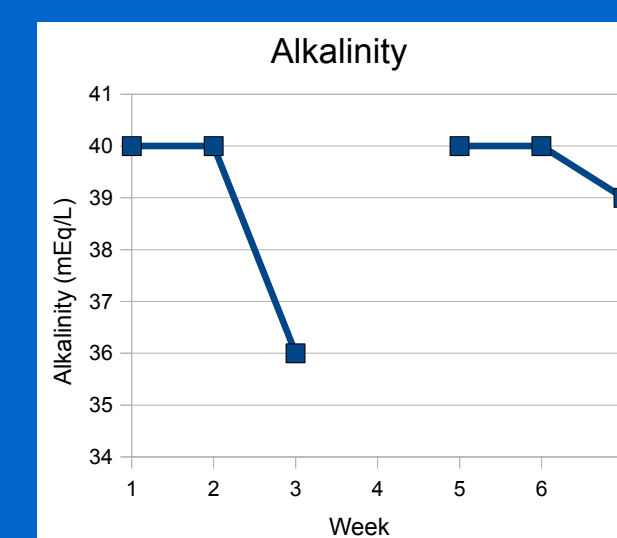
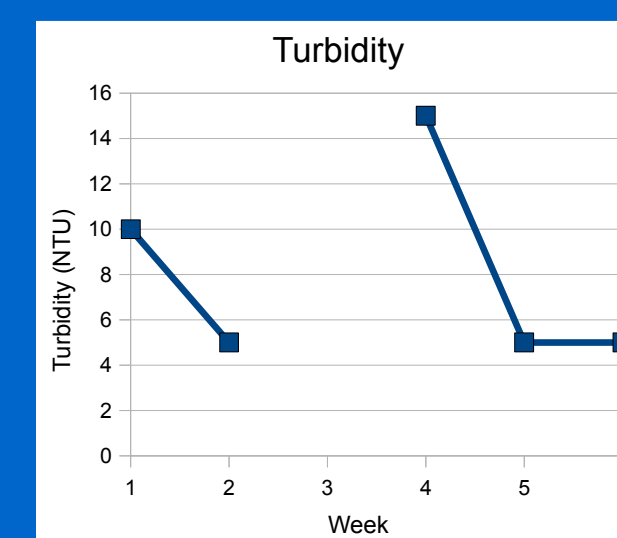
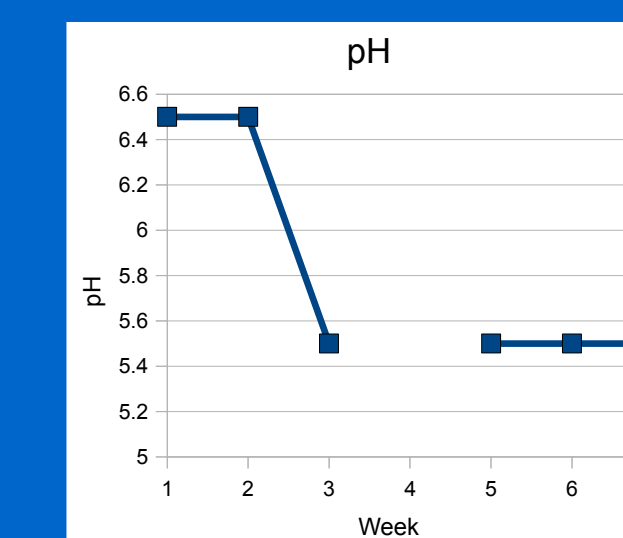
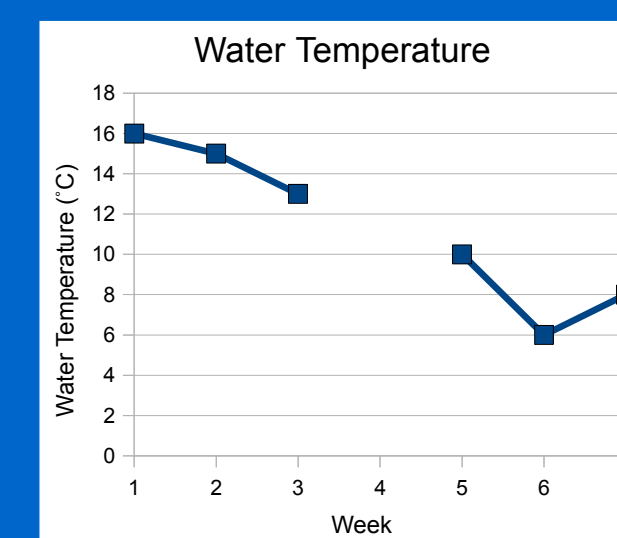
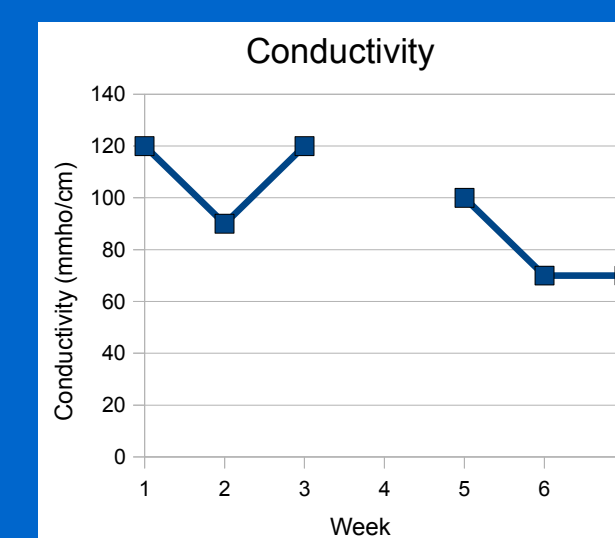
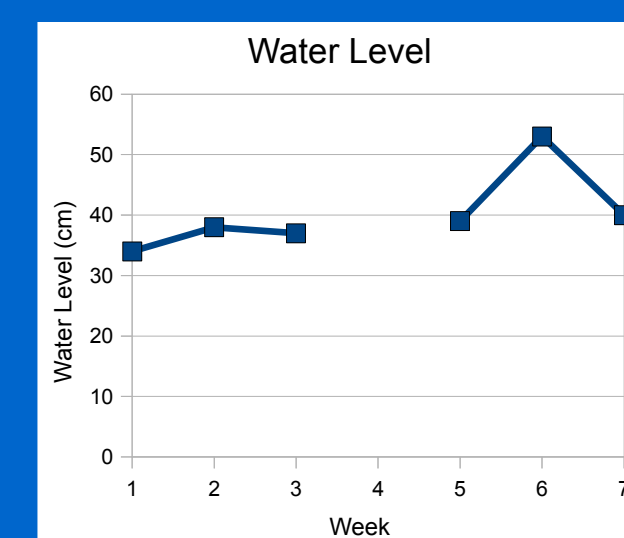


Abby performing a test



Testing site on the Cathance River

Data



Thank you Cheryl Sleeper and CREA for providing us with the testing site for our experiments