

A Teaching Toolbox for Understanding Urban Wetlands

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There are many good reasons to use locally available urban wetlands to teach our students about important ecological processes as well as to expose them to real world issues. Wetlands are an extremely valuable ecosystem, housing extensive biodiversity, and also particularly in urban areas, important nutrient sinks. This 'three-step teaching toolbox' takes our non-majors environmental biology students through a series of labs to better understand the importance of wetlands, especially in regard to nutrient removal. We started with a SimBio™ virtual reality lab on nutrient pollution in aquatic ecosystems. Next, they performed an in-lab experiment on the effects of the addition of nutrients on algal growth using water collected from an oligotrophic lake and a eutrophic lake, to test their hypotheses on limiting nutrients. Lastly, in the third phase of this study we went out to the wetlands for extensive abiotic and biotic sampling and then back into the lab for analysis of the data and samples. Through a partnership with the City of Kamloops Nature Parks department, the data collected by our students is extremely valuable in an on-going monitoring program for the wetlands.

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