

Activity name: Eutrophication: Too Much of a 'Good' Thing

This activity is meant to provide a real-world application of the ATEEC Recommended Core Curriculum's math, science, technical, communications, or critical thinking knowledge and skill concepts identified by ATEEC Fellows as necessary preparation for environmental technology occupations.

Appropriate for which course(s)? Environmental Biology

Concept/skill learned: Describe the effect of phosphorus and nitrogen on surface water.

Approximate time to complete activity: 15 minute setup; 3 weeks observation.

Source of idea or activity: Karen Arms; Environmental Science; Holt, Rhinehart and Winston; 1996.

Materials/resources needed: 12 drink bottles, distilled or aged water, pond water, liquid plant fertilizer.

Description of activity: In groups of 3, students set up control, fertilizer and excess fertilizer bottles; at initial setup, they observe, setup and count common pond microorganisms. At subsequent observations, microorganisms are identified and numbers compared. This lab has the potential to add pollutants for study the impact of pollutants in ecosystems (another skill). A third extension of this lab could include the identification of indicator species in pond water. A fourth extension could be developed using one specific organism as an experimental to show the importance of biological diversity.

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