Activity name: Toxicity Testing

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, which have been identified by the ATEEC Fellows as necessary preparation for environmental technology occupations.

Appropriate for which course(s)? Environmental Biology/Science; Safety and Health

Concept/skill learned: Explain the impact of pollutants on ecosystem. Define basic routes of entry and the toxicological effects of chemicals on the body, including acids, bases, solvents, carcinogens, etc.

Approximate time to complete activity: 50 minute set-up; 15 minute observations on two subsequent days.

Source of idea or activity: Enger, Smith; Environmental Science; Wm. C. Brown; 1992.

*Materials/resources needed:*Brine shrimp, putter dishes; varying solutions of copper sulfate; other household materials (e.g., vinegar, aspirin, alcohol, coffee, nicotine, peroxide, tea, soft drinks, cleaning solutions)

Description of activity: Using 10%, 1%, .1%, .01% and 0% solutions of copper sulfate (or other additional test materials suggested), students place 10 brine shrimp in each solution and examine for dead shrimp at 24 and 48 hours to find the lethal dose that kills 50% (LD50) of the brine shrimp.

Activity submitted by: Babe Willey

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