**Critical Thinking in the Microbiology Lab**.

William Staddon

Department of Biological Sciences, Eastern Kentucky University, Richmond KY 40475

Many traditional microbiology labs that have been used for decades present little opportunity for critical thinking. After much trial and error, I have developed three projects that allow student groups to generate unique data and inferences. Two address antibiotic resistance, one using culture techniques, the other molecular. The third assess the impact of inputs on the activity of soil enzyme activities. After students present their results, they critique the inferences made each group including their own. In this presentation, I will go over this approach and discuss issues.