Modular Microbiology

Sarah Salm and Jessica Goldstein

BMCC/ CUNY, Department of Science 199 Chambers St., New York NY 10028 USA (ssalm@bmcc.cuny.edu)

Many microbiology laboratory classes involve a series of unrelated exercises, teaching students basic staining methods and biochemical tests used for bacterial identification. After performing these techniques, students are then given an "unknown" organism to identify using the array of techniques they have learned. In this poster, we present a modular approach in which students learn these same techniques in a real-world context. Instead of being provided with samples on which to practice techniques, students collect their own samples from an environment of their choosing. They then learn basic traditional and molecular microbiology techniques while carrying out an investigative project on their unknown sample, culminating in the identification of at least one truly unknown microbe from their environment.

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Citing This Article

Salm, S. and Goldstein, J. 2016. Modular Microbiology. Article 86 in *Tested Studies for Laboratory Teaching*, Volume 37 (K. McMahon, Editor). Proceedings of the 37th Conference of the Association for Biology Laboratory Education (ABLE). http://www.ableweb.org/volumes/vol-37/?art=86

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