PROMOTING CONCEPT-DRIVEN TEACHING STRATEGIES IN BMB THROUGH CONCEPT ASSESSMENTS

• 9:55  Project update. E. Bell. Univ. of Richmond.

• 10:05  329.1  Will this be on the test? Characterizing the cognitive levels of undergraduate biology courses. J. Momsen, L. Montplaisir and E. Anderson. North Dakota State Univ.

• 10:30  329.2  Problem solving in biochemistry: assessment, learning strategies, and preconceptions. C.A. Sensibaugh and M.P. Osgood. Univ. of New Mexico.

• 10:55  329.3  Biochemistry students’ misconceptions regarding enzyme-substrate interactions. K.J. Linenberger and S.L. Bretz. Iowa State Univ. and Miami Univ.

• 11:20  329.4  Assessing student development of scientific thinking skills using the EDAT and ADAT: the experimental design and analysis of data ability tests. K. Sirum, A. Majorczyk and A. Andrews. Bowling Green State Univ.

• 11:45  Discussion.
PROJECT MISSION

By developing the BMB Concept Inventory, our goal is to broadly impact biochemistry and molecular biology education across the U.S. at the program, departmental, course and faculty levels.

Additionally, this project aims to serve as a hub to connect biochemistry and molecular biology faculty from diverse communities, institutions and backgrounds.
2013 Workshops

Assessment of Students’ Reasoning with Core Concepts and Visualizations in Biochemistry and Molecular Biology
January 12, 2013
Marymount Manhattan College

Led by Hal White, Professor of Chemistry and Biochemistry; Section Editor of Biochemistry and Molecular Biology Education, University of Delaware. Workshop co-leaders were Brian White, Member of the BioQuest Consortium; Professor of Biology, University of Massachusetts-Boston and Alin Aghamali, Associate Professor of Biology, ASEMB LUE Committee NE Regional Director, Marymount Manhattan College.

Meeting Program

Effectively Assessing Laboratory and Research Skills
Saturday, February 23, 2013
University of Alabama, Tuscaloosa, AL

Hosted and facilitated by Margaret Johnson, Associate Professor of Biological Sciences, University of Alabama.

Presenters: Ellis Bell, Professor of Chemistry, University of Richmond, Marcy Osgood, Associate Professor & Vice Chair of Education, University of New Mexico and Len Caldwell, Professor of Chemistry and Dean of Graduate School, Missouri Western State University.

Meeting Program
Introduction and project overview
Assessing Group vs. Individual Problem-Solving Strategies - Marcy Osgood
What does a good assessment of laboratory skills look like?
Wrap-up and planning for the future

Effectively Assessing Core Concepts in the Molecular Life Sciences
Saturday, March 2, 2013
St. Mary’s College of Maryland, St. Mary’s City, MD

Hosted and facilitated by Pamela Mertz, Associate Professor of Chemistry and Biochemistry, St. Mary’s College of Maryland.

Presenters: Ellis Bell, Professor of Chemistry, University of Richmond, Jennifer Knight, Senior Instructor, University of Colorado - Boulder, Sam Elliott, Associate Professor of Biology, St. Mary’s College of Maryland, and Kathy Fram, Pappilion Education Services, LLC.

Meeting Program
Successful completion of Assessing Student Learning Series

March 8, 2013 – We have successfully wrapped-up the last of our Assessing Student Learning workshop series so far for 2013. We have posted workshop materials online and they can be accessed here. Future workshops will be announced this summer.

Below is a map of all the colleges and universities that have participated in the ASBMB project since 2011.
White Papers:

• Essential Concepts & Underlying Theories from Physics, Chemistry, and Mathematics for the Molecular Life Sciences
  Ann Wright, Joseph Provost, Jennifer A. Roecklein-Canfield, and Ellis Bell

• What Skills Should Graduates of Undergraduate Biochemistry and Molecular Biology Programs Have Upon graduation?
  Harold B. White, Marilee A. Benore, Takita F. Sumter, Benjamin D. Caldwell and Ellis Bell

• Foundational Concepts & Underlying Theories for the Molecular Life Sciences
  John T. Tansey, Teaster Baird Jr., Michael Cox, Kristin Fox, Jennifer Knight, Duane Sears, & Ellis Bell.
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PRELIMINARY PROGRAM
AUGUST 4 – 7, 2013

Last updated: February 13, 2013

SUNDAY, AUGUST 4

PLENARY 1: Teaching for Knowledge and Skills Development
• Student Research in Molecular Biology at Salish Kootenai College – Libby Rutledge

Concurrent Workshops 1: Teaching for Knowledge and Skills Development
• “Developing Coherent Knowledge Frameworks and Transferrable Skills” – Mike Klymkowsky, University of Colorado, Boulder and Melanie Cooper, Clemson University
• “Visualization in BMB Education” – Paul Craig, Rochester Institute of Technology

KEYNOTE LECTURE
• “Implementing Promising Practices in Undergraduate Science and Engineering Education” – Susan Singer
Get Involved!

• Host a regional Meeting in 2013-14: contact Ellis Bell (jbell2@richmond.edu) or Weiyi Zhao (wzhao@asbmb.org)
  If you are interested: upto 6 meetings will be held.

• Attend a regional meeting in 2013-14: The schedule of Fall 13 and Spring 14 meetings will be up on the web site soon

• Submit your favorite question or assessment tool to the upcoming ASBMB repository