BioQ Collaborative for High School Biology

Improve biology learning with this Office of Math and Science-endorsed program
Funded by the National Institutes of Health – National Heart, Lung, and Blood Institute

BioQ Collaborative cultivates a community of Chicago Public School biology teachers and Northwestern University biological scientists and education researchers working on the best instructional strategies for increasing student learning and interest in biology.

1. A proven, inquiry-based biology curriculum
   ♦ Teach Northwestern’s Disease Detectives high school biology curriculum with its Village Park Mystery software (both free to participants). Addressing CPS standards, this curriculum has been evaluated for content learning in 16 high schools.
   ♦ While solving a medical mystery about Coronary Artery Disease and analyzing data from virtual heart cell experiments and “patient” medical images, students learn about cellular functions, energy processes, and the chemistry of biological processes.

2. Hands-on inquiry research laboratories
   ♦ Experience first hand during two weeks of summer laboratories the inquiry methods you’ll later use with your students.
   ♦ Design and conduct experiments with living heart cells in Northwestern’s biology teaching labs to learn about homeostasis and cellular respiration.
   ♦ Inquire into the basic biology behind echocardiograms, nuclear stress tests, and angiography at Northwestern medical school.

3. A graduate course to support your teaching
   ♦ Plan and reflect with your fellow teachers and professor during “Learning and Teaching Human Biology” as you teach the 10-week-long curriculum in your classroom.
   ♦ Use your course readings about biology content, student thinking, and inquiry pedagogy to create more meaningful learning experiences for your students.

4. Increased insight into your classroom
   ♦ Participate in action research in your own classroom.
   ♦ Receive a personalized report of your students’ changes in science knowledge and attitudes.

Participate in this top-notch professional development program and receive …
• 1 quarter graduate credit for $250
• $1,500 stipend
• 12 CEUs
• 3 Lane credits

Apply now! (Deadline May 5, 2006)
For information and application materials, visit www.letus.org/bioq.
Dr. David Kanter, Northwestern University BioQ Project Director
Kimberly Tester, Northwestern University BioQ Project Manager
Phone 847.491.5967, E-mail k-tester2@northwestern.edu
What Chicago Public School Teachers Say about the BioQ Collaborative

Teaching *Disease Detectives*

"I think this may have been the first time my students understood some key concepts. My students also felt important because they were solving a problem. Great curriculum materials and I think that this challenge re-energized my teaching."

"Ban boredom! Do you want to see your students engaged while you all learn together? Teach *Disease Detectives!*"

"After teaching biology for five years the 'traditional' way, I was enlightened and motivated by a fantastic new way to teach biochemistry, cell biology and anatomy, and physiology of the heart."

"At last! A quality inquiry teaching curriculum that uses technology as a teaching tool and provides staff development that facilitates teacher implementation!"

"Kids in my class were 100% engaged. Lots of hands up."

"The resources and support services were second to none. One of the best PD opportunities I've taken part in — way to go!"

*Disease Detectives* Summer Laboratories

"I had a wonderful two weeks and learned so much. I am so excited to use this knowledge and curriculum in my classroom! I am glad it was a small group because we got to do more."

"I learned a lot of biology in this program and was forced to think. … It was great to use and see inquiry and critical thinking."

'I enjoyed performing hands-on investigations and reflecting on the thought process, on solving investigations and what it meant. My brain was 'picked,' and I enjoyed the challenge."

"Excellent approach to inquiry. I look forward to implementation in the fall."

The above comments are from high school biology teachers from these Chicago Public Schools:

Best Practice High School
Charles P. Steinmetz Academic Center
Chicago Vocational Career Academy
Dr. Martin Luther King, Jr. College Preparatory High School
George Westinghouse Career Academy High School
Hubbard High School
Hyde Park Academy
John Marshall Metropolitan High School
Jones College Prep High School
Julian High School

Kenwood Academy High School
Lindblom Math/Science Academy
Moses Vines Prep Academy
Roberto Clemente Community Acad. H.S.
School of Entrepreneurship High School
Schurz High School
Walter Payton College Preparatory High School
Wells Community Academy
Whitney Young Magnet High School

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