



## AP & the Greater Community



## From the President

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Perhaps you are as amazed as I am to see this issue. My amazement starts with the date – it is already May and a time of year I greet with mixed emotions. Another academic year has ended (how did that happen so fast?) and I find myself reviewing my accomplishments (a list that always seems too short) and brooding about my failures (a list that always seems too long). I reflect on my students and what we did together and quickly begin to plan what I will do (so much better!) next time. It is the beginning of summer “break” (perhaps yours is a little further off) and I am sure I will accomplish all the tasks on my list that is far too long.

This is a time for rejuvenation, restoration, reflection, and revision. It also time to start thinking about the changes I want to make in the fall. As I review the *ABT* looking for ideas, I am impressed by the scope of articles that address the need for more inquiry-based options for our teaching repertoires, including investigations on biofilms, seed germination, phylogenetics, and hydrogen bonding. There are countless opportunities to infuse simulations, mathematics, and statistics into biology class in new ways. My list keeps getting longer.

Many others are thinking about change for the fall as well. One big change that is in store for biology teachers is the implementation of the new AP Biology curriculum. While that change will be experienced most by AP students and teachers, it will affect every teacher who will be preparing students for AP classes and all the college faculty who will be teaching the students who have been prepared by the AP courses or courses influenced by the AP curriculum.

So, for what should we all be preparing? The shift in the new curriculum should be a welcome one. Organized around four “Big Ideas” (evolution leads to unity and diversity; organisms use free energy and matter; storage, retrieval, transmission of, and response to information; and interactions among biological systems lead to complex and emergent properties), the curriculum emphasizes depth of understanding and application of concepts over breadth of memorization. Within each Big Idea, teachers will find sets of “Enduring Understandings,” which are the concepts to be targeted. Associated with each of these are the learning objectives that clearly articulate the tasks that students should be able to accomplish if they have mastered the concepts and skills. To help teachers avoid what I might label “knowledge creep,” the AP Biology Curriculum Framework ([http://media.collegeboard.com/digitalServices/pdf/ap/2012advances/AP-Biology\\_CED\\_Fall2012.pdf](http://media.collegeboard.com/digitalServices/pdf/ap/2012advances/AP-Biology_CED_Fall2012.pdf)) also includes “exclusion statements” that describe details that teachers should leave out of their lessons (however tempting they might be as traditional, model examples for turning the abstract into the concrete). Within

AP courses, students are expected to develop competencies in using models and mathematics, formulating questions, designing experiments, analyzing data, and providing and evaluating evidence-based claims and explanations. To aid them in doing so, AP courses are expected to include 8 labs (encompassing 25% of class time) selected from 13 labs found in the AP Biology Lab Manual (<http://advancesinap.collegeboard.org/science/biology/lab>). The labs are investigative in nature, each focused on developing answers to a broad question.

The changes in the AP Biology Curriculum Framework reflect a larger effort to transform biology education as a whole. The shift from emphasis on breadth of knowledge to an approach based on core content knowledge, understanding of science as a process, and inquiry-based learning is not unique to the AP course, but reflects the core concepts as outlined by both the *Next Generation of Science Standards* currently being developed by Achieve, Inc., and the *Vision & Change in Undergraduate Biology* report released by AAAS. Taken together, these works span all educational levels from elementary through college and provide us with guidelines for implementing change.

As they prepare for the upcoming year, AP Biology teachers will be at the forefront of reforms for 21st-century biology education. Equipped with a framework and a tool to evaluate the progress of their students, AP teachers should find changing their teaching practices manageable and rewarding. Their revised AP Biology course will better prepare students for more advanced courses at the college level that embody the *Vision & Change* initiative. As AP Biology teachers construct a personal conceptual framework involving the big ideas/core concepts and hone their skills at facilitating inquiry-based learning, they will be able to assist their AP and non-AP teacher colleagues alike, as well as adopting and adapting these changes to other courses.

The NABT offers much to help AP Biology teachers with these changes and will continue to develop supportive resources in the upcoming year. As you have seen, the *ABT* contains articles highlighted for AP teachers – this issue features a bioinformatics module – as well as more publishing opportunities in the *ABT*. The NABT provides an updated resources page on its website for AP Teachers. The NABT acknowledges the contributions of outstanding AP Biology teachers through the newest addition to our award offerings – the Kim Folglia AP Biology Service Award. The NABT is partnering with the College Board to offer an AP Bio Symposium at the 2012 NABT Professional Development Conference in Dallas and will be offering NABT professional development and leadership opportunities throughout the 2012–2013 academic year. The NABT also has plans

to offer an online networking site (more news about this exciting new feature to come later).

So, as the summer begins – and I that hope you, like me, are looking forward to the change of focus that it provides – the shift from practice to planning, from implementing to designing. Even though I will never finish all that is on my list, I am already excited to think about what my class may look like in the fall. Enjoy this issue, take time to renew, and send me an e-mail (dfrench@okstate.edu) if you have ideas on how the NABT can support you in your efforts to

change. You will hear from me in a couple of months. In the meantime, enjoy biology.



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DOI: 10.1525/abt.2012.74.5.1

save the date!

## AP Biology Leadership Academy

BSCS and NABT are excited to launch the first AP Biology Leadership Academy. Continue your work as a leader in AP Biology as you develop expertise with the new AP Biology Curriculum Framework.

### Option 1

Summer Academy		NABT Professional Development Conference
June 25 – 29	+	October 31 – November 3
Colorado Springs, CO		Dallas, TX

### Option 2

Summer Academy		NABT Professional Development Conference
July 9 – 13	+	October 31 – November 3
Colorado Springs, CO		Dallas, TX

Enrollment is limited. Priority will be given to NABT members.  
Visit [APBioLeaderAcademy.org](http://APBioLeaderAcademy.org) and complete the online form for more information!

