

SATURDAY NOVEMBER 14

ABBREVIATION KEY
E: Elementary School
MS: Middle School
HS: High School
2Y: Two-Year College
4Y: Four-Year College
GA: General Audience
AP® is a registered trademark.



7:00AM – 8:15AM**NABT Past President's Breakfast**Centro, Omni Hotel • Special Event
Invitation Only**Four-Year Section Executive Meeting**

Blackstone • Committee Meeting

8:30AM – 9:45AM**#826 Taking the Chemical Mystery out of Biology**551A • AP Biology • Hands-on Workshop
(75 min) • HS

Understanding basic chemistry makes us better biology instructors. Join two veteran AP Biology teachers and learn strategies that will help your students visualize the chemistry of biological systems. Emphasis will be on bonding and bioenergetics.

Patricia Weethee, Grove City High School, Grove City, OH and Ryan Reardon, Jefferson County International Baccalaureate School, Irondale, AL

#930 Enhancing Biology Teaching Though Lesson Analysis

551B • Instructional Strategies & Technologies • Demonstration (75 min) • ES, MS, HS

In this session, we will share our current lesson analysis work with elementary and middle school teachers, and ask your ideas and perspectives concerning lesson analysis work with high school biology teachers.

Jody Bintz, BSCS, Colorado Springs, CO

#762 Integrated Learning for a Changing Planet

552A • Ecology / Environmental Science / Sustainability • Hands-on Workshop (75 min) • MS, HS

Participate in hands-on activities that apply math and science skills to tackle major global challenges, including human population pressures, finite natural resources and climate change. Receive lesson plans on CD-ROM.

Comfort Ateh, Providence College, Providence, RI

#814 Create. Curate. Connect.

552B • Instructional Strategies & Technologies • Hands-on Workshop (75 min) • GA

What skills and abilities do we want our students to own when they leave our course? Bring your laptop•tablet and dive into educational technology tools, ideas, and projects. Let's talk about our students as makers, collaborators, and producers.

Robin Heyden, Heyden Ty, Alameda, CA and David Knuffke, Deer Park High School, Deer Park, NY

#828 Biotechnology 101: Model the Most Crucial Biotech Skills and Techniques with Confidence554A • Biotechnology • Hands-on Workshop
(75 min) • MS, HS

Learn how to train students on the use of micropipettes and other critical biotechnology skills. Facilitate student learning of concepts like microvolumes, dilution factors, electrophoresis, and PCR. Virtual and hands-on resources will be provided.

Liss O'Connell, Diman Regional Vocational Technical High School, Fall River, MA

#870 Using Modeling and Student Generated Videos as a Mechanism to Teach Systems Thinking

554B • Instructional Strategies & Technologies • Hands-on Workshop (75 min) • MS, HS, 2Y

Modeling offers a way for students to visually or kinesthetically represent biological processes. Creating video can challenge students to explore and communicate the links between these processes. Come learn to help students produce quality videos.

Rachel Sanders, Rivendell Academy, Orford, NH and Meghan Wilson, Hartford High School, White River Junction, VT

#711 Using Yeast-Sodium Alginate Spheres to Investigate Enzyme Kinetics and Respiration555A • AP Biology • Hands-on Workshop
(75 min) • HS, 2Y, 4Y

Participants will make yeast spheres to investigate effects of substrate concentration and temperature on an enzymatic reaction and how different sugars and sugar substitutes affect respiration. Also discussion of use of statistical analysis.

Pam Bryer, Bowdoin College, Brunswick, ME

#808 Emphasizing Biological Core Concepts Using Modeling Activities in an Introductory Cell and Molecular Biology Course

556A • Instructional Strategies & Technologies • Hands-on Workshop (75 min) • HS, 2Y, 4Y

Participants will learn how Vision & Change impacted a large introductory biology course for majors by completing a modeling exercise similar to one used in the course, reviewing associated assessments, and analyzing examples of student work.

Jon Stoltzfus, Teresa McElhinny, and Andrea Biere-ma, Michigan State University, East Lansing, MI

#784 Science Writing Using an Explanation Tool556B • General Biology • Hands-on Workshop
(75 min) • ES, MS, HS

The goal of this workshop is to provide science teachers with a practical example on how to use a Science Explanation Tool. This tool helps students to link evidence to their science claim. Teachers will practice using the tool from a student lense.

Diana Siliezar-Shields and Sonalya Jayasuriya, Barrington High School, Barrington, RI and Chi Klein, Saint Stephen's Episcopal School, Bradenton, FL

8:30AM – 9:45AM *continued***#908 Birds, Meet Your Inner Dino**

Ballroom B • Evolution • Hands-on Workshop (75 min) • HS, 2Y, 4Y

Did birds really evolve from dinosaurs? What is the evidence? Find out with our hands on activities, videos, and interactives. Walk away with classroom resources tied to the NGSS science practices and a turkey dissection activity for Thanksgiving.

Valerie May, Woodstock Academy, Woodstock, CT;
Mark Eberhard, St. Clair High School, St. Clair, MI;
Laura Bonetta, HHMI BioInteractive, Chevy Chase, MD

#900 A Practical Guide to Aligning Existing Materials to the NGSS

Providence Ballroom I & IV • Curriculum Development • Hands-on Workshop (75 min) • HS, 2Y, GA

Want to better align your curriculum to the NGSS? Gain experience and advice on using the EQUIP rubric to evaluate an example lesson, while developers and teachers share their approach to revising and implementing lessons and units for the NGSS.

Hillary Lauren, Barbara Hug, and Chandana Jasti,
University of Illinois at Urbana - Champaign,
Champaign, IL

#771 Genetics Projects that are More Than Skin Deep

Providence Ballroom II & III • General Biology • Hands-on Workshop (75 min) • MS, HS

Go below the surface, use common and rare genetic disorders to engage an understanding of human genetics, beyond Mendelian single-gene disorders. Get students thinking beyond what does an affected person look like to grapple with real inheritance.

Kelly East and Madelene Loftin, HudsonAlpha
Institute for Biotechnology, Huntsville, AL

#710 BioCONNECT (Biology and Cancer Online Education Connecting Teens)

Washington • General Biology • Hands-on Workshop (75 min) • MS, HS

BioCONNECT, an innovative curriculum for biology and science courses, is designed to increase cancer AWARENESS and empower students to take ACTION. Students develop problem-solving and decision making skills with real-life CONNECTIONS.

Casandra Gabriele, Rutgers School of Public Health,
New Brunswick, NJ

#734 Using Data and Graphics to Stimulate Student Learning

Newport • Ecology / Environmental Science / Sustainability • Hands-on Workshop (75 min) • HS, 2Y, 4Y

Learn how to use available data and graphics to generate activities that require students to observe, ask questions and generate conclusions. Examples will include population growth, ozone depletion, global climate change, and energy use.

Linda Sigismondi, University of Rio Grande, Rio
Grande, OH

#783 Conservation and Captive Breeding: How is Population Genetics used to Manage the Captive Animal Population?

Kent • Ecology / Environmental Science / Sustainability • Hands-on Workshop (75 min) • MS, HS

Teachers will discover the ways in which Zoos in North America manage their captive animal populations. Investigate how animals are cared for and how genetic diversity is maintained in captive populations. Come discuss data and play the Mating Game!

Marley O'Neil, Zoo New England, Boston, MA

NABT Committee Meeting: Professional Development Committee

Executive Board Room • Committee (75 min) • GA

Catherine Ambros, Somerville Middle School,
Somerville, NJ

8:30AM – 10:30AM**GPC Workshop: Citizen Science – Teaching Conservation**

557 • Special Program • Symposium (120 min) • GA

Key projects for the GPC Poster sessions will be highlighted to illustrate how citizen science programs engage communities and teach conservation locally, regionally, nationally, and globally.

Emma Greig, Project Feeder Watch, Cornell Lab of
Ornithology, Ithaca, NY; Chelle King, Patricia and
Phillip Frost Museum of Science, Miami, FL; and
Karen Oberhauser, University of Minnesota,
St. Paul, MN

Introductory Biology Task Force Workshop

Ballroom E • Invitation Only

10:00AM – 10:30AM**#820 Moving Students Toward Authentic Research – Building an Extended-inquiry First-Year Laboratory that Emphasizes Mentoring, Feedback, and Authoring**

551A • Curriculum Development • Paper (30 min) • 4Y

Come see how we provide a more realistic research experience in introductory biology by extending time for redesign and replication; employing instructors as mentors who do not grade their students; and having students publish in a course journal.

Donald French, John Stewart, and Michael Moore,
Oklahoma State University, Stillwater, OK

#798 Moving Active Learning from College to High School Classrooms: A Case of POGIL and PI in Biology

551B • Instructional Strategies & Technologies • Paper (30 min) • HS, GA
Presentation will describe efforts to assist teachers in moving the university-based teaching strategies—Process-Oriented Guided Inquiry Learning (POGIL) and Peer Instruction (PI)—into the high school biology classroom; including initial curriculum design and early data collected for an efficacy study.

Grant Gardner, Jennifer Parrish, Tom Cheatham and Leigh Gostowski, Middle Tennessee State University, Murfreesboro, TN

#752 Generating Student-Focused Active Learning Environments in Lecture Settings

552A • Instructional Strategies & Technologies • Hands-on Workshop (30 min) • 2Y, 4Y
Facilitate engagement and active-learning in large-lecture courses by shifting responsibility of learning on students through the use of “flipped” style scenario-based collaborative activities and group exams assessing individual knowledge.

Kristy Daniel, Texas State University, San Marcos, TX

#810 Student Research: Strategies and Tools to Successfully Implement in the Classroom

552B • Science Practices • Hands-on Workshop (30 min) • MS, HS
Interested in engaging your students in original research projects but not sure how to begin? Join us as we interactively step you through the process of taking novice researchers through a research project from start to finish.

Jennifer Dye, Pope John Paul II High School, Hendersonville, TN; Rachel Lytle, Brentwood High School, Brentwood, TN; Kim Sadler, Middle Tennessee State University, Murfreesboro, TN

#714 Anatomy and Physiology Outside of the Box

554A • Anatomy & Physiology • Paper (30 min) • HS, GA
Break away from PowerPoints and multiple choice... a high school Anatomy/Physiology elective becomes hands-on, active, creative, and inspiring. We will present activities, posters, videos, case studies, and much more.

Cate Hibbitt, Lincoln School, Providence, RI

#837 Utilizing Models in Biology

554B • General Biology • Hands-on Workshop (30 min) • HS
Explore engagement strategies that incorporate models and enable students to gain a deeper understanding of biological concepts. Experience creative approaches to instruction that clarify complex processes while making the learning process enjoyable.

Rebecca Brewer, Troy High School, Troy, MI

#869 The Peer Mentor Program of IBIS (Integrating Biology with Inquiry Skills)

555B • Instructional Strategies & Technologies • Hands-on Workshop (30 min) • HS, 2Y, 4Y
We'll discuss how we've incorporated a peer mentor program into our inquiry-based, mixed major introductory biology course. We'll demonstrate how peer mentors are trained and how they serve our students in and out of the classroom.

Rachel Pigg, Troy Nash and Suann Yang, Presbyterian College, Clinton, SC and Tarren Shaw, The University of Oklahoma, Norman, OK

#935 Award Winning Strategies at the Four-Year Level

556A • Instructional Strategies & Technologies • Demonstration (30 min) • GA
Join the winner of this year's Four-Year Section Biology Teaching Award as he discusses successful strategies that help students get the foundational information and structure they need to begin to working through deeper questions and real-world problems.

Kevin Drace, Mercer University, Macon, GA

Enhance Your Skills with NYC's Online Master of Science Degree in Human Anatomy and Physiology Instruction

NYCC's **Master of Science in Human Anatomy and Physiology Instruction (MSHAPI)** program is uniquely designed for those with science education, biology and professional healthcare degrees. The course of study builds on an existing anatomy and physiology knowledge base, transforming the student into an exceptional A&P instructor for the undergraduate level of higher education.

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10:45AM – 11:45AM**GENERAL SESSION SPEAKER****Christopher T. Martine**

See page 9 for biography.

Plants are Cool, Too: Wily Nightshades and the Glossy Age of Biodiversity**Ballroom A • Special Speaker • GA**

The wild bush tomatoes of Australia have been described as “gender-bending” plants with a penchant for manipulating bee visitors. Putting this system into an ecology and evolution framework has resulted in novel understandings of plant reproductive biology and led to the discovery of new species. It has also helped to generate the sort of dynamic stories that the teaching of botany often requires — including the use of new/social media to enhance the storytelling. At a time when botanical education and interest in plants each appear to be in decline, Dr. Martine finds good stories and embraces new ways of sharing them, critical steps in the “rebranding” of Botany. Likewise, he illustrates how a willingness among scientists to engage the public in new and dynamic ways can result in a rebirth of interest in biodiversity science — and a recognition that the Earth is still full of organisms and phenomena waiting to be discovered. Perhaps more importantly, Dr. Martine will show how interaction of scientists and non-scientists in informal public e-spaces reinforces the fact that scientists are human — and that anyone, with the right passion and training, can become a scientist themselves.

10:00AM – 10:30AM *continued***#805 Using Rubrics in Undergraduate Biology Courses to Advance Understanding of Complex Biological Concepts****556B • Instructional Strategies & Technologies • Paper (30 min) • 2Y, 4Y**

In this session, we will present research findings and discuss strategies for how undergraduate instructors can use rubrics as teaching tools to encourage students to use metacognitive reflection to improve understanding of complex concepts.

Jaime Sabel, University of Nebraska-Lincoln, Lincoln, NE

#739 Apply for an NABT Award!**Newport • General Biology • Paper (30 min) • GA**

Curious about the NABT Awards? Want to learn more about specific awards, how to apply, or what judges are really looking for? Come for a brief presentation and Q&A with award committee members.

Priya DasSarma, University of Maryland, Baltimore, MD; Jason Crean, Lyons Township High School, La Grange, IL; Kirstin Milks, Bloomington High School South, Bloomington, IN

#881 Pairing Content and Skills for Instruction and Assessment**Kent • AP Biology • Hands-on Workshop (30 min) • HS**

This session will focus on strategies for writing high-quality assessment questions that align with AP Biology Learning Objectives and NGSS Performance Expectations

Mitch Price, Educational Testing Services, Princeton, NJ

10:30AM – 10:45AM**NABT Coffee Break****Ballroom A • Special Program**

Get a local treat and grab your seat as conference draws to a close with a presentation by our final general session speaker.

12:00PM – 1:00PM**NABT Honors Luncheon****Rotunda • Special Event (Tickets Required)**

The grand finale of the NABT Conference, this celebration honors exceptional biology teachers. Join us as we recognize the accomplishments and professional contributions of all of the 2015 NABT Award recipients, including the Outstanding Biology Teacher Award (OBTA) honorees. Everyone is welcome to attend!

2:00PM – 6:00PM**B2 Scholars Workshop****Blackstone • Invitation Only**



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excellent
teaching...

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do
we!

Nominate
a teacher
for a 2016
NABT Award.

Award Nominations
must be received by
March 15, 2016.

Submit your nomination at
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