

Saturday, Nov. 14

7:15 AM - 8:15 AM

Retired Members Section Breakfast

Retired? RENEW, REENERGIZE and REVITALIZE at our 5th Annual Retired Members Section Breakfast. WE value your experience. Come discover how you can help NABT and NABT can help you.

8:00 AM - 9:15 AM

General Session

Mario Capecchi

*Howard Hughes Medical Institute
Salt Lake City, UT*

Inquiry-based Biology with Vernier

Governor's Square 12 • Capacity: 100

Exhibitor Demonstration • General Biology • HS 4C

Do you want to move from traditional, structured labs to true inquiry-based labs using Vernier technology? In this hands-on workshop, you will conduct one of the labs from Biology with Vernier, but in true inquiry style. Time will also be provided for participants to share their own ideas for making Vernier labs more inquiry-based.

Mike Collins, Vernier Software & Technology, Beaverton, OR

9:00 AM - 1:00 PM

4Y Strand

Utilizing Scientific Teaching with Inquiry Instruction in Biology

Tower Court A • Capacity: 36

Special Workshop # 15 • HS 4C

Scientific Teaching in Biology describes instructing students by challenging them to discover information (as real science is done) rather than memorizing it (as science teaching is often done).

The teaching methods utilized in this workshop focus on student-centered inquiry and not teacher-centered lecture.

Thomas Lord, Indiana University of PA, Indiana, PA; Teddie Phillipson Mower, University of Louisville, Louisville, KY; Kerry Cheesman, Capital University, Columbus, OH

9:30 AM - 10:00 AM

Laboratories and Distance Education

Denver • Capacity: 100

Paper 30 • General Biology • GA

Science lab options in Distance Education; how do we determine what is right for our university?

Carol Sanders, Park University, Parkville, MO

Debating Rachel Carson's *Silent Spring* (1963)

Governor's Square 10 • Capacity: 100

Paper 30 • Environment/Ecology • HS GA

Explore the dawn of environmentalism in politics by involving students in historical discussion of pesticides: "How to" teach history and nature of science. Free resource CDs.

Douglas Allchin, University of Minnesota, St. Paul, MN

Connecting Classrooms to Community

Governor's Square 11 • Capacity: 100

Paper 30 • Environment/Ecology • JH HS

This session will explain a process whereby teachers can contextualize student knowledge and skills. Specific examples and curriculum materials for this community-based approach will be provided. Free materials!

Jon Yoder, Salem-Keizer School District, Salem, OR

Teacher Education Online—Evolution Resources for Science Teachers

Governor's Square 12 • Capacity: 100

Paper 30+ Evolution • 4C GA

This grad-level course provides curriculum-based activities that focus on national teaching standards to deepen understandings of evolution, provide effective strategies, and address student-learning obstacles.

Carol Wake, South Dakota State University, Brookings, SD

Building the Knowledgeable and Creative Student: The Hypothetical Planet Project

Governor's Square 15 • Capacity: 120

Paper 30+ General Biology • 2C 4C

Many students retain content better when they reassemble acquired information into new patterns. See how our students have reinforced their learning in ecology, evolution and systems biology by designing organisms adapted to a non-Earth environment.

Georgia Lind, Kingsborough Community College-CUNY, Brooklyn, NY

Blood Samples, and Fingerprints, and Hairs- Oh, My!: Using Forensics to Generate Student Interest in Biology

Governor's Square 16 • Capacity: 120

Demonstration 30+ General Biology • E JH

This presentation will provide educators forensics-based lessons and activities they can use as a vehicle for cultivating student interest in biology.

Jocelyn Knight, Johns Hopkins University Center for Talented Youth, Baltimore, MD

The Spicy Story of Plant Evolution

Governor's Square 17 • Capacity: 120

Paper 30+ General Biology • 2C 4C

Digitalin. Taxol. Nicotine. Caffeine. Cocaine. Plants produce lifesaving medicines, deadly poisons and addictive drugs. Why? Come learn the basics of plant secondary metabolites.

Jennifer Katcher, Pima Community College, Tucson, AZ

4Y Strand

Some Assembly Required: Evo-Devo in the Classroom

Plaza Court 1 • Capacity: 75

Paper 30+ Evolution • 2C 4C

Can teaching Evo-Devo in the classroom help improve student understanding of evolutionary biology? How do students respond to this new field?

Donald French and Anna Hiatt, Oklahoma State University, Stillwater, OK

4Y Strand

Bling My Research!

Plaza Court 2 • Capacity: 75

Paper 30+ General Biology • 2C 4C

Students investigate funding by sitting on mock granting panels. An appreciation for the importance of basic research is instilled.

Celeste Leander, University of British Columbia, Vancouver, BC

What Biology Questions Do Teenagers Ask Most Often?

Plaza Court 3 • Capacity: 75

Paper 30+ General Biology • HS

A survey of US teenagers reveals some surprising, even shocking, questions in biology. Find out what they are and what are some answers.

William Leonard, Clemson University, Clemson, SC

Genes, Health, and Society - An Accredited Course in Genetics and Genomics

Plaza Court 4 • Capacity: 75

Demonstration 30+ Genetics • 2C 4C

Preview an accredited, interactive, web-based course in the field of genetics and genomics that provides college or professional

development credit.

Ron McNeel, Baylor College of Medicine, Houston, TX

Zoo Visits for Students as a Key to Biological Education

Plaza Court 5 • Capacity: 75

Paper 30+ Zoology • E GA

Research evidence of features which attract students, link with existing knowledge, and can be identified and used by educators to increase biology understanding and skills.

Sue Dale Tunnicliffe, Institute of Education, London University, London, UK; Annette Scheersoij, Goethe-Universitat, Frankfurt, GER

B(io)logs!

Plaza Court 6 • Capacity: 60

Paper 30+ Instr.Strategies & Technologies • JH HS

Learn how to use blogs in the biology classroom from the winner of the 2008 Edublog Award for Best Class Blog.

Stacy Baker, The Calverton School, Huntingtown, MD

4Y Strand

GTAs on STS: Biology Graduate Teaching Assistants' Perspectives and Practice

Plaza Court 7 • Capacity: 32

Paper 30+ Biotechnology • 2C 4C

This paper presents results from a case study of biology graduate teaching assistants' perspectives on the teaching of societal issues in science and technology.

Grant Gardner and M. Gail Jones, North Carolina State University, Raleigh, NC

4Y Strand

Blended Lab Science Courses: Combining the Best of Online and Traditional Teaching Methods

Plaza Court 8 • Capacity: 32

Paper 30+ Instr.Strategies & Technologies • 2C 4C

This session will cover strategies for designing hybrid lab science courses that effectively utilize hands-on labs, as well as the flexibility of asynchronous online work.

Gail Krovitz, University of Colorado-Denver, Denver, CO

Yes We CAN! Teaching Biology Through Inquiry

Tower Court B • Capacity: 50

Paper 30+ General Biology • HS GA

By re-evaluating the way we think about inquiry-based science, biology teachers can approach their lesson plans with this crucial science standard in mind. See several examples of how it is done.

Brant Reif, Jeff Dyer, and Terri Pond, Valley HS, West Des Moines, IA

10:00 AM - 11:15 AM

There's Not Enough Time!

Colorado • Capacity: 32

Paper 75+ Instr.Strategies & Technologies • HS 2C

Techniques used to successfully teach AP Biology on an extremely limited schedule.

Lisa Ellis, Marlborough School, Los Angeles, CA

Pharmacogenetics: The Future of Medicine

Denver • Capacity: 100

Hands-On Workshop • Genetics • HS 2C

Medical treatments can now be tailored to individual genetic profiles. Come explore a classroom-ready case study lesson that focuses on the treatment of childhood leukemia.

Jeanne Chowning, NW Association for Biomedical Research, Seattle, WA

Using a Digital Camera to Change How You Teach and How They Learn

Gold • Capacity: 90

Demonstration 75+ Instr.Strategies & Technologies • JH HS

Technology in the classroom is often expensive and out of the reach of many teachers. We have found a \$99 digital camera to be one of the most transformative instructional technologies. With the use a projection device and a single camera see how we involve students in the instruction and teach them to begin to self assess and take charge of their own learning. (Developed with the support of the Delaware GK-12 NSF Grant)

Brian Gross and Brian Heeney, Delcastle Technical HS, Wilmington, DE; Mike Kittel, St. George's Technical HS, Middletown, DE; Amy Quillen, NCCVT School District, Wilmington, DE; Kate Scantlebury, University of Delaware, Newark, DE

Flower Forensics

Governor's Square 10 • Capacity: 120

Hands-On Workshop • General Biology • HS 2C

Has a patented black orchid been illegally cloned? Use a "lab in a bag" kit to observe plant structure, separate plant pigments, analyze enzyme activity, run a paper "DNA gel electrophoresis", and compare protein amino acid sequences. Take home a sample kit.

Dina Markowitz and Susan Holt, University of Rochester, Rochester, NY

Investigating Mitochondrial Genetics, A Novel

Approach to AP Biology Lab 6

Governor's Square 11 • Capacity: 100

Hands-On Workshop • Genetics • HS 4C

Take part in an inquiry-based investigation of mitochondrial genetics that fuses modern molecular biology and traditional pedigree analysis. Workshop will focus on laboratory activities, interactive pedigree analysis, and connections between mitochondrial DNA, the electron transport chain, and human health and disease.

Ryan Reardon, Alabama School of Fine Arts, Birmingham, AL

Incorporating Kinesthetic Learning in the Biology Classroom

Governor's Square 14 • Capacity: 120

Hands-On Workshop • General Biology • HS

Learn strategies for getting students up and out of their seats while learning biology!

Gretel von Barga, Skyline HS, Sammamish, WA

DNA Sequencing: A Paper Activity

Governor's Square 15 • Capacity: 120

Hands-On Workshop • Genetics • HS 2C

This session will allow teachers to have a teaching aid in order guide students in learning about DNA sequencing technology. With this paper activity the power of Genomic sequencing comes to life!

Rose Seltzer, FOTODYNE, Inc., Hartland, WI

The Seagrass Story

Governor's Square 16 • Capacity: 120

Hands-On Workshop • Environment/Ecology • JH HS

This presentation will introduce teachers to a module created by the Centers for Ocean Science Education Excellence that incorporates cutting-edge research about seagrass and coastal trends with scientific design, ecological process and practical applications for your local community.

Kelly Ksiazek, Fairview HS, Boulder, CO

Epigenetics: Beyond the Central Dogma

Governor's Square 17 • Capacity: 120

Hands-On Workshop • Genetics • HS 2C

The environment interacts with the epigenome to control gene expression. Interactive activities explore epigenetics, and how it confounds conventional notions of inheritance. Free at <http://learn.genetics.utah.edu>.

Molly Malone, University of Utah Genetic Science Learning Center, Portland, OR

BIOZONE Showcases Its Biology Workbooks and Presentation Media (Grades 10-12)

Governor's Square 9 • Capacity: 60

Exhibitor Demonstration • General Biology • HS 2C

Biozones critically acclaimed biology workbooks and presentation media provide cutting-edge, current, and state-of-the-art content. Ideal supplemental resources, the workbooks' highly visual content and write-on format make a winning formula to engage students, facilitating differential learning. FREE samples of 2009 Editions will be provided to each attendee. See us also at Booth # 502

Richard Allan, Biozone, Hamilton, NZ

Tropical Forests and the New Climate Change Agreement

Plaza Ballroom F

Invited Speaker

The fate of tropical forests is being decided this year. If they are protected in the new climate change agreement under an initiative called REDD (Reducing Emissions from Deforestation and forest Degradation in Developing countries), deforestation in the tropics will decelerate. If they are not protected, most tropical forests will be gone by the end of the century. Mr. Calhoun will talk about REDD, why it might be part of the new climate change agreement, and how it will save rainforests. He will also explain how teachers and students can help shape the new climate change agreement and make sure that REDD is adopted by the UN Framework Convention on Climate Change in Copenhagen this December.

Bruce Calhoun, Save the Rainforest, Inc., Las Cruces, NM

Views on the Compatibility of Evolution and Christian Faith Among Faculty and Students at Institutions Within the Council for Christian Colleges and Universities (CCCU)

Plaza Court 1 • Capacity: 75

Paper 30 • Evolution • 4C GA

A 2007 survey of more than 1900 faculty and 2400 students from Christian universities will be explored to discover nuances in viewpoints on the compatibility between evolution and Christian faith.

Thomas Chesnes and Samuel Joeckel, Palm Beach Atlantic University, West Palm Beach, FL

Help Your Students Succeed in AP Biology

Plaza Court 2 • Capacity: 75

Symposium • General Biology • HS

Join two experienced AP teachers for a hints and strategies session. We will give you ideas to help students improve their organization, write better essays, and get more from the required labs.

Theresa Holtzclaw and Fred Holtzclaw, Webb School of Knoxville, Knoxville, TN

4Y Strand

Teaching Genetics via University-High School Partnerships

Plaza Court 3 • Capacity: 75

Paper 75 • Genetics • 2C 4C

K-12 outreach is generally not encouraged by college science departments. An NSF partnership project demonstrates that everyone wins when genetics is taught by two experts.

Michael Dougherty, American Society of Human Genetics, Bethesda, MD

Great Beginnings: Start Your Life Science Class Year With A Bang!

Plaza Court 4 • Capacity: 75

Demonstration 75 • Instr.Strategies & Technologies • JH HS

Receive and review a free complete life science introductory unit (+ 15 activities/assessments) designed by a multiple national

awardee to amaze, captivate, and motivate any student.
Mark Krotec, Pittsburgh Central Catholic HS, Pittsburgh, PA

What A Difference A Herp Makes!

Plaza Court 5 • Capacity: 75

Paper 75• Zoology • JH HS

Learn how to care for herps in the classroom, where to obtain specimens, how to use them in teaching, and the benefits of maintaining them.

George Sellers, Ware Shoals HS, Ware Shoals, SC; Judy Jones, East Chapel Hill HS, Chapel Hill, NC

Discover the Microbes Within! The Wolbachia Project

Plaza Court 6 • Capacity: 60

Demonstration 75• Botany & Microbiology • HS 2C

Advanced Placement Biology students partner with the Marine Biological Laboratory in Woods Hole, Massachusetts to unravel an ecological epidemic using modern molecular techniques.

Brian Dempsey, Acton-Boxborough Regional HS, Acton, MA

Teaching for Understanding in Biology

Plaza Court 7 • Capacity: 32

Paper 75• Curr. Development/Supervision • HS GA

Teaching biology for understanding starts with the big ideas and plans for student understanding by considering the most appropriate assessment and the learning activities.

Seonaid Davis, Havergal College School, Toronto, ON

Picture THIS: Taking Human Impact Seriously

Plaza Court 8 • Capacity: 32

Demonstration 75• Environment/Ecology • JH GA

Use art, science, writing and technology (digital storytelling) to involve students in environmental science. Students become citizen scientists and share their data with researchers.

Patricia Patrick, Bennett College, Greensboro, NC; Dee McNeal, Mendenhall Middle School, Greensboro, NC; Tammy Patrick, Cape Fear Middle School, Rocky Point, NC; Sayrd Price, South Davie Middle School, Mocksville, NC

Using Hot-off-the-Press Scientific Literature to

Advance Biology Education

Silver • Capacity: 100

Hands-On Workshop• Instr.Strategies & Technologies • HS 2C

Connect students to published scientific research through free, skills- and standards-driven lessons based upon the world's leading peer-reviewed environmental health research journal Environmental Health Perspectives.

Stefani Hines, University of New Mexico, Albuquerque, NM

Using Skulls and Skeletons to Teach Evolutionary

Concepts

Spruce • Capacity: 40

Demonstration 75• Evolution • HS GA

This demonstration will show how vertebrate skulls and skeletons can be used to teach the evolutionary concepts of homology, adaptation, and convergence.

James Platt and Patricia Palko, University of Denver, Denver, CO

Using Hardy-Weinberg Equilibrium to Illustrate

Evolutionary Change

Tower Court B • Capacity: 50

Hands-On Workshop• Evolution • HS

Engage in a mathematical and calculator population genetics activity using a single trait among the participants that realistically illustrates evolutionary change through Founder Effect and natural selection.

William Leonard, Clemson University, Clemson, SC; John Penick, North Carolina State University, Raleigh, NC

WOW Biology XI

Tower Court C • Capacity: 75

Hands-On Workshop• General Biology • HS

Looking for ways to engage students on a budget, join teachers

from the Jackson Public School District as we share some of our favorite activities.

Sheila Smith, Jackson Public Schools, Jackson, MS; Jammy Hemphill, Forest Hill HS, Jackson, MS; Chasity Buckner, Murrah HS, Jackson, MS; Tammy Cox, Provine HS, Jackson, MS

How Might Life Evolve on Other Worlds? for Grades 5-6

Tower Court D • Capacity: 75

Hands-On Workshop• General Biology • JH

Explore the evolution of life on Earth and search for clues to the possible evolution of life on an unknown planet beyond our solar system.

Pamela Harman, SETI Institute, Mountain View, CA

Biotechnology and Spectroscopy with Vernier

Governor's Square 12 • Capacity: 100

Exhibitor Demonstration• Biotechnology • HS 4C

During this hands-on workshop you will learn how to photo-document and analyze gel results using our Digital Bioimaging Systems and our award-winning Logger Pro software. The session will also acquaint you with SpectroVis, our low-cost spectrophotometer capable of producing an absorbance spectrum of important biological compounds such as chlorophyll.

Mike Collins, Vernier Software & Technology,

11:30 AM - 12:30 PM

NABT Town Meeting and President's Coffee

Now is your chance to INTERACT with the NABT Board of Directors. Now is the time to raise your questions and concerns and to hear those of your colleagues. Ideas are also welcome.

