

## Schedule of Programs –Tuesday October 13, 2009

**Key** (AS) All Sciences (B) Biology (C) Chemistry (ES) Earth Science (ENV) Environmental Science (F) Forensics (GI) General Interest (LS) Life Science (PS) Physical Science (P) Physics (S) Safety (SL) Science Leaders (SUP) Supervision (T) Technology

### Tuesday 8:00 - 9:30

(001) 9-12 P,PS Lecture, Discussion, Demo

#### **Making Physics Fun at All Levels**

Physics teachers experienced and new, add a sparkle to your lessons with handouts, physics toys and web sites - many practical ways to make your classes more engaging for your students.

Presenter(s): Zetta Kamm, West Windsor-Plainsboro HS South

Session Chair: Ken Newell

(002) 9-12 B,LS,T Hands-on

#### **Structure of tRNA**

Learn about the structure, function and importance of t-RNA through hands on activities. Free handouts and resources available from RCSB PDB ([www.pdb.org](http://www.pdb.org))

Presenter(s): Dr. Shuchismita Dutta, Christine Zardecki, Dr. Monica Sekharan, RCSB, Protein Data Bank

Session Chair:

(003) 9-12 PS,P Hands-on

#### **Reflection and Refraction (How does light behave when its path is changed?)**

The presentation will be a hands-on activity utilizing the CPO SCIENCE Light and Optics Kit to trace the incident, reflected and refracted rays on light.

Presenter(s): Louis Fellner, CPO Science

Session Chair: Kip Bollinger

(004) 9-12 AS,GI,Assessment Discussion

#### **Pre-Assessment and Formative Assessment Probes in Secondary Science**

You need to know what your students already know (or think they know) BEFORE you start the unit.

Presenter(s): Rob Richard, West Windsor-Plainsboro Regional School District

Session Chair:

(005) 5-8 ES,LS,PS Hands-on

#### **Middle Level Hands-On Integrated Science Activities**

Hands-on science leads to minds-on learning! Flinn Scientific presents relevant and age-appropriate activities for middle school - integrating life, earth and physical science topics.

Presenter(s): Patti Duncan, Flinn Scientific

Session Chair: Kevin Theesfeld

(006) 9-12 GI,PS,P Film, Discussion, Hands-On

#### **Richard Feynman: The Character Of Physical Law**

Savor the opportunity to view a montage of this famous lecture series delivered at Cornell in 1964, prepared especially for this convention. Interspersed with commentary.

Presenter(s): Dr. Mitch Batoff, Past President, NJSTA; Gordon Clark, Retired; Gerry Telmosse, Retired

Session Chair: Gerry Telmosse

(007) 9-12 C Hands-on

#### **Living By Chemistry: Feeling Under Pressure**

Teach rigorous chemistry with guided inquiry! Explore activities that help students understand gas laws through a weather context. Sample lessons from Living By Chemistry provided.

Presenter(s): Jeffrey Dowling, Key Curriculum Press

Session Chair:

### Tuesday 8:00 - 9:00

(008) K-12 C,GI Hands-on

**National Chemistry Week and Ways to Celebrate**

This year's theme is "Chemistry...It's Elemental". Participate in developing some program ideas for the classroom and gather some useful resources and ideas.

Presenter(s): Bobbi Gorman, Retired; Gail Weeks, Elisabeth Morrow School, Englewood

Session Chair: Bobbi Gorman

(009) K-8 C,ENV,PS Hands-on

**Engaging Experiments on Energy, Electricity and the Environment.**

Hands-on activities related to energy, electricity and the environment for K-8 students will be presented. Activities will involve electricity, heat transfer, alternative energies and more.

Presenter(s): Cathy Lee and Sara Tom, College of St. Elizabeth

Session Chair:

(010) 5-8 LS,PS Hands-on

**Science Kit Presents: New Middle School Teacher Developed Products**

For several years Science Kit has been developing products with teachers for inclusion in our catalog. Come check out these great ideas.

Presenter(s): Lynn Hesse, Science Kit & Boreal Laboratories

Session Chair:

(011) 9-12 B,C,P Lecture

**Microplasma Research and Education at CMST**

The new CMST at St. Peter's College is doing exciting applied research on microplasma and doing outreach to high school teachers and students.

Presenter(s): Daniel O'Brien, Center for Microplasma Science and Technology

Session Chair:

**Tuesday 8:30 - 10:00**

(012) K-8 AS,GI,SL Panel

**Developing a Professional Learning Community through a Building-Based Science Leadership Team**

Members of a school-based team describe changes in their practice of science instruction resulting from participation in the Academy for Leadership in Science Instruction.

Presenter(s): Keyronne Zahir, Linden School #2; Walter Schweikardt and Mary Christie Williams, Linden Public Schools

Session Chair:

(013) K-8 PS,T Hands-on

**The Electric Circuit Circus**

This student-centered investigative unit will challenge and excite students of all abilities. Before long, they'll be building series and parallel circuits without even realizing it!

Presenter(s): Jonathan Nolde, Campbell School

Session Chair:

(014) 5-8 B,ENV,SL Discussion

**Using Wildlife Webcams in the Classroom**

Learn about the New Jersey's EagleCam and PeregrineCam and how to utilize them as a tool for learning in your classroom.

Presenter(s): Maria Grace, Conserve Wildlife Foundation of NJ

Session Chair:

(026) 9-12 B,ENV,GI Demonstration

**Biology Demo Den**

BTANJ presents - Demos, Labs, Activities and more! A session of sharing. Join us and bring your ideas!

Presenter(s): Holly Crochetiere, West Windsor-Plainsboro HS North  
Session Chair:

## Tuesday 8:30 - 9:30

(015) 9-12 B,LS, Animal Behavior Demo

### **Exploring How Animals Construct their World Through Unique Senses**

We will show classroom investigations using inexpensive apparatus and methods to explore the fascinating topics of sensory perception and behavior in animals and humans.

Presenter(s): Warren Marchioni, Liberty Science Center

Session Chair:

(016) K-4 AS Hands-on

### **What's Hop-en-ing in Your Backyard?**

Frogs and toads often receive a bad rap. They are your insect eating knights- in-shining armor. Learn how to create an amphibian-friendly habitat.

Presenter(s): Danni Logue, Jenkinson's Aquarium

Session Chair:

(018) 9-12 AS,T,Ethics Discussion

### **Teaching Nanoethics to High School Students**

Teaching ethical issues that arise in nanoscience and nanotechnology exposes students to science, ethics and critical thinking. I'll describe my experiences in teaching nanoethics.

Presenter(s): Dr. Jeff Buechner, Rutgers University-Newark

Session Chair: Kamaal Bennett

(019) 5-8 AS Lecture

### **The A,B,C's of the ISN (Interactive Science Notebook)**

Help your students stay organized with the ISN. We will show you how to get started and discuss ideas on incorporating effective lessons into the notebook.

Presenter(s): Kimberly Stephens and Kelley DeRosa, Lawton C. Johnson MS, Summit

Session Chair: Pamela Wilson

(020) 5-8 PS,P,T Demo

### **Skateboard Physics**

Come see lessons using video clips and websites that make physics come alive for middle school students!

Presenter(s): Kathy Ernst, Robert R. Lazar MS

Session Chair: Chris Lijoi

(021) 9-12 ES Hands-on

### **Data Puzzles in Earth Science**

Overwhelmed by all the datasets available for use with students? You can reduce data overload by using Data Puzzles which explore small datasets in realistic Earth System problem scenarios.

Presenter(s): Missy Holzer, Chatham HS; Rich Pearson, Bloomfield HS

Session Chair: Barbara Pietrucha

(022) 9-12 C Lecture

### **Triangular Stoichiometry checks in at the Hotel Atom!**

Magic Triangles simplify Stoichiometry and building a strange hotel allows students to comprehend a concrete model of Electron Configuration. Fun and easy to learn.

Presenter(s): Dave Foster and Mike Scoblete, West Morris Mendham HS

Session Chair:

## Tuesday 8:45 - 9:45

(023) 9-12 AS,PS,P Lecture

### **Collaborative Inclusion: Working Together So All Students Can Learn**

Our program intends to explore the dynamics of collaborative instruction and share techniques, strategies and specific lessons that have been developed in an inclusive classroom.

Presenter(s): George Needham, Hopewell Valley Central HS David Wilson, Hopewell Valley Central HS

Session Chair:

(024) 7-12 B,ENV,LS Lecture

### **Two Great Science Field Trips (gr. 7-12): Cape Cod whalewatching & Bermuda BIOS**

PPT presentation illustrating 2 exciting educational field trips available to NJ schools. CTA packages both trips with teachers traveling for free.

Presenter(s): Glen Fulton, Curriculum Travel of America

Session Chair: Bob Thompson, JP Stevens HS, Edison

## Tuesday 9:00 - 10:30

(025) 7-12 AS,S, New and Young Teachers Lecture, Discussion

### **Keeping Your Students (and Your Career) Safe in the Secondary Science Classroom**

What does a safely equipped science classroom look like? Why safety contracts? Why a safety component in every lab activity? Especially for new and young teachers?

Presenter(s): Arnie Serotsky, STANYS President

Session Chair: Nina Visconti-Phillips, NJSTA President

## Tuesday 9:30 – 11:00

(027) 5-8 GI,PS,T Hands-on

### **The Best of STEM from Fisher Science Education with the K’NEX Engineering Marvels Set: Interdisciplinary Activities**

Explore historical and contemporary structures. Learn ways to bring STEM into your classroom with high interest materials. Arc de Triomphe, Big Ben, Flying Buttresses, Windmills

Presenter(s): Robert O. Jesberg, K’NEX Education

Session Chair: Marilyn Patterson, Gibbsboro Schools

## Tuesday 9:30 - 10:30

(028) 5-8 GI Hands-on

### **Developing a Healthy Sense of Skepticism: Madison Avenue Exposed**

Increasing sales through the clever manipulation of data is part of marketing. Attend this workshop and see how this applies to your science classroom.

Presenter(s): Dr. Bill Metz, Retired

Session Chair:

(029) 9-12 B,LS Hands-on

### **HiGene: A Genome Sequencing Project for High Schools**

Bring molecular biology, structural biology and bioinformatics to your high school. Explore activities! Receive a CD with some of our favorites at the session's end.

Presenter(s): Dr. Andrew Vershon and Sue Coletta, Rutgers University, Waksman Institute

Session Chair: Sue Coletta

(030) 9-12 C Lecture, Demo

**Some of my Favorite Explosions**

Bring Chemistry to life for your students. These tried and true demonstrations will have your students begging for more. Handouts will include materials /detailed procedures.

Presenter(s): Dr. George Fox, Montclair HS

Session Chair:

**Tuesday 10:00 – 11:30**

(031) 9-12 C Lecture, Discussion

**Reading and Writing in the Chemistry Curriculum**

Words are the tools we think with. Employ a variety of long and short science-related reading and writing assignments to enhance students' appreciation of chemistry.

Presenter(s): Dr. Elliot Richman, Ramapo HS

Session Chair:

(032) 5-8 AS Hands-on

**Science Activities at Your Fingertips with Earth X-Press**

Come join the fun with Earth X-Press. Activities are simple, hands-on, and require few supplies. Concepts focus on plant, animal, earth science; ecosystems; and conservation.

Presenter(s): Lisa Rothenburger, Rutgers Cooperative Extension of Somerset County

Session Chair:

(033) K-12 AS,SL Hands-on

**Why Does Inquiry Matter? Because That Is What Science Is All About!**

Experience activities that illustrate how science is learned and how science is done. Learn teaching strategies that help your students understand science through inquiry.

Presenter(s): Dr. Wil van der Veen and Theresa Roelofsen Moody, NJACE Science Education Institute at Raritan Valley Community College

Session Chair: Beth Schaefer

(034) 9-12 C Hands-on

**Living By Chemistry: What Shape Is That Smell?**

Teach rigorous chemistry with guided inquiry! Explore activities that help students understand molecular structure through a smell context. Sample lessons from Living By Chemistry provided.

Presenter(s): Jeffrey Dowling, Key Curriculum Press

Session Chair:

**Tuesday 10:00 – 11:00**

**Exhibits Area Special Considerations For Biology**

This time has been scheduled for Biology Teachers to visit the Exhibits area.

(017) 5-8 AS Demonstration

**Get Moving! Kinesthetic Tools for Excellence in Middle School Science**

Learn to use some of the standards-based physical activities and "kinesthetic clue" mnemonic devices used at one of New Jersey's top-performing middle schools.

Presenter(s): Brian J. Ciuffreda and Mark Schlawin, Princeton Charter School

Session Chair: Dan Johnsen

(035) 9-12 P Hands-on

**Introducing the 3-in-1 Digital Probe: Your Video Camera**

Replace your photogates, motion detectors, and smart pulleys with a video camera. Work through sample labs. Door prizes: Ten CD's with sample video and instructions

Presenter(s): Carmine A. Villa, Wayne Hills HS

Session Chair: Linda Bakelmun

(036) 9-12 AS Lecture

**Case-Based Learning**

Cases use realistic situations in which scientific reasoning can be applied. Teachers will use a case and get the tools for developing their own cases.

Presenter(s): Karen Lucci, Hopewell Valley Central HS; Loreen Holstein, Hopewell Valley Regional School District

Session Chair:

(037) 9-12 C Lecture

**Using the Modeling Method of Teaching in the Middle School/High School Science Classroom**

Acquire resources and learn techniques to improve your students' scores on the Advanced Placement Chemistry exam.

Presenter(s): Ed Waterman, Rocky Mountain HS, Retired

Session Chair: Kevin Duffy

(038) 9-12 C,PS,P Lecture, Discussion

**Virtual Labs You Have to See to Believe for Chemistry, Physics, Physical Science, and Now Biology**

In this talk we will give an overview and underlying pedagogy of the sophisticated virtual labs available for high school science curriculums from Pearson Education.

Presenter(s): Brian F. Woodfield, Brigham Young University

Session Chair: Jeanne Piorkowski

(039) K-12 AS,GI Lecture, Discussion

**2010 NJ Science Olympiad**

Find out how Grades 3-12 can compete and succeed. This is an introduction for new coaches and those who want to start a team.

Presenter(s): Jennifer Wirt, NJ Science Olympiad; Jennifer Wirt, NJ Science Olympiad; Sallee Lord, East Amwell ES; Martha Kubik, West Amwell ES; Karen Galley, West Windsor-Plainsboro HS South

Session Chair: Irma Gahan, Retired

(040) K-4 ES,ENV,LS Lecture

**School Gardens and the NJ Science Curriculum**

Find out how to make a school garden part of your classroom. Hear from a garden educator about hands-on projects to make science come alive.

Presenter(s): Amy Jolin, Eat Local, Inc.

Session Chair:

(043) 5-8 C,PS Hands-on

**Introducing Chemistry in the Middle School**

Using non-toxic, safe reactions and models, chemistry becomes understandable with CPO materials. Participants will explore chemical concepts using CPOs NEW Physical Science program.

Presenter(s): Dr. G. Kip Bollinger, CPO Science

Session Chair:

(044) K-12 GI,PS,T Lecture

**Science Aviation and Aerospace Perfect Together**

Aviation and aerospace go hand in hand with science. Hands on workshop will prove math/science and physics are connected to aviation, lesson plans will be provided

Presenter(s): Jerry Iacona, NJ Aviation Ed. Council

Session Chair:

(045) 9-12 P Demo

**Physics Demo Den: 1-D Motion**

Members of NJAAPT will present a series of demonstrations that be performed in the classroom.

Presenter(s): Borislav Bilash II, Pascack Valley HS

Session Chair:

(046) 6-12 AS,LS,SL Discussion, Demo

**Teach Epidemiology**

Learn about epidemiology, the science of public health, epidemiology teaching resources for grades 6-12, student epidemiology competitions, and public health career opportunities.

Presenter(s): Mark Kaelin, Montclair State University; Lynn Tarant, Charles J. Riley MS, Paterson; Marian Passannante, UMDNJ-NJ Medical School and School of Public Health; Wendy Huebner, ExxonMobil Biomedical Sciences, Inc.

Session Chair: Barbara Pietrucha

(047) 9-12 C Hands-on

**Make and Take: "Pop, Bang and Fire"**

Explosions are a "hook" in chemistry classes. At this session we will assemble three devices to illustrate combustion. Cost: \$10.00

Presenter(s): Bettyann Howson, Retired; David Lee, Retired

Session Chair:

**Tuesday 10:15 – 11:15**

(048) K-12 AS,PS, Elementary Science Lecture, Demo

**Cool Tools for Sound and Waves**

This presentation will highlight some cool, hands-on demos for teaching concepts with Sound and Waves. Lessons and innovative demonstration ideas for all grade levels.

Presenter(s): Buzz Putnam, Whitesboro HS

Session Chair:

(049) K-12 ES,ENV,GI Lecture

**Teachers in Geoscience**

An online Master of Science degree can be earned through Mississippi State. A teacher who's been through the program will introduce you to this great program!

Presenter(s): Christopher Schrenk, New Brunswick Public Schools

Session Chair:

**Tuesday 10:30 – 12:00**

(050) 9-12 P,PS,SL Hands-on

**Investigative Science Learning Environment: True Inquiry in a Classroom**

Philosophy and practical implementation of ISLE - a physics curriculum that engages students in learning physics through experiences that mirror those of physicists doing science.

Presenter(s): Eugenia Etkina, Tara Bartiromo and Hector L. Lopez, Graduate School of Education, Rutgers University

Session Chair:

(051) K-8 AS Lecture

**21st Century Science Scavenger Hunts**

Designed to allow students to incorporate 21st century skills like collaboration, problem solving, and technology into a curriculum based lesson.

Presenter(s): Diane McCarthy, Sayreville MS

Session Chair: Barbara DeSantis

**Tuesday 10:30 – 11:30**

(052) 5-8 ENV,F,GI Hands-on

**Mystery Spills and Forensic Fun**

Participants will experience several hands-on environmental/forensic activities. Investigate fingerprints, solve "The Mystery Spill," and get free materials to use tomorrow!

Presenter(s): Dr. Eva M. Ogens, Jersey City Public Schools

Session Chair:

(053) 5-8 AS,SL,T Demo

**Introducing the STEMcart**

Struggling with S.T.E.M? Come see a fun, effective and realistic method for bringing the S.T.E.M. movement into the classroom.

Presenter(s): Barbara Selin, Lab Volt Systems

Session Chair: Barbara Duggan

**Tuesday 11:00 – 12:00**

(055) 9-12 C Demonstration

**Demo Den: Bonding I**

Series of demonstrations illustrate several bonding concepts. Manipulatives will be used to show 3D structures of molecular geometry and bond hybridization.

Presenter(s): Irene Sawchyn, Oak Knoll School; Eve Krupka, Retired; Claire Miller, Madison HS; Kris Bedient, Manalapan HS

Session Chair:

(056) 9-12 C Hands-on

**Make and Take: Light Activated Reactions**

Participants will construct materials that can be used to demonstrate light activated reactions. Concepts: activation energy, endothermic reactions. Cost: \$5.00.

Presenter(s): Diane Krone, Northern Highlands Regional HS; Mita Chaki, Franklin HS

Session Chair:

(057) 9-12 AS,B,T Lecture

**Wikis and Blogs: Ways to Invade the Student Techno World!**

Do you blog? Wiki? Podcast? Spend some time with me and I'll show you how. Anyone can do it with these easy steps!

Presenter(s): Coleen Weiss-Magasic, West Milford Township HS

Session Chair:

**Tuesday 11:30 – 1:00**

(058) 5-8 AS Hands-on, Lecture, Demo

**Interactive Science Notebook**

A useful tool for student thinking while it organizes for inquiry learning. A new way to access/process the learning utilizing different modalities (writing, drawing, opinions).

Presenter(s): Mary Ann Savino, Central School

Session Chair:

(059) K-12 B,LS Hands-on

**Anatomy in Clay I: Components of Movement**

Participants build clay muscles and attach them to a skeletal model. Each person experiences this unique hands-on method of learning and 'seeing' system relationships for movement.

Presenter(s): Starla A. Ewan, Zahourek System, Inc/ Estacado HS

Session Chair: Jim Whitfield, Pascack Hills HS

**Tuesday 11:30 – 12:30**

**Exhibits Area Special Considerations For Chemistry**

This hour has been scheduled for Chemistry Teachers to visit the Exhibits area

(054) K-12 ES,ENV Discussion

**What's New about the NJ Earth System Science Curriculum Standards?**

The old Earth Science Standards are now the new Earth System Science Standards in NJ. Come to this session to learn how to transition to these new standards.

Presenter(s): Margaret Anne Holzer, Chatham HS; Michael Heinz, NJDOE Office of Math and Science Education

Session Chair:

(060) K-12 AS Lecture

**360 Degrees of Learning: Developing and Implementing Global Programs**

This presentation will review how to develop global collaborative science projects and how to enhance your program with technology.

Presenter(s): Eric A. Walters, NSELA Region B Director, Marymount School, New York

Session Chair: Vince Parisi

(061) 9-12 AS, C Lecture

**Inquiry in Chemistry: Not as Hard as It Seems**

Small-scale and virtual chemistry laboratory are novel tools that allow students to design and carry out experiments to solve problems while learning chemistry content.

Presenter(s): Ed Waterman, Rocky Mountain HS (retired)

Session Chair: Kevin Duffy

(062) 9-12 B Lecture, Discussion

**Virtual Biology: Pearson Education's New and Exciting Sophisticated Virtual Environment for Biology**

In this talk we will describe Pearson's new Virtual Biology environment containing experiments for Microscopy, Molecular Biology, Genetics, Ecology, and Diversity.

Presenter(s): Brian F. Woodfield, Brigham Young University

Session Chair: Jeanne Piorkowski

(063) K-12 AS,GI Discussion

**NJ Science Olympiad General Membership Meeting**

Come share your ideas and meet the officers of the NJ Science Olympiad.

Presenter(s): Sandy Buleza and Jennifer Wirt, NJSO State Co-Directors

Session Chair: Irma Gahan, Retired

(064) 5-8 ES,ENV,LS Discussion

**Bringing Your Classroom Outdoors**

Whether you have a large grassy area or blacktop, join us to explore ways to enrich your lessons.

Presenter(s): Christine Lijoi, Lawton C. Johnson Summit MS; Michelle Wiessner, Van Vleck House and Gardens;

Session Chair: Christine Lijoi

(065) K-12 B,ENV,GI Lecture, Discussion

**The Science Of Service Learning**

Come see how your students can serve the community while learning important science concepts. Teaching science and how to make a difference!

Presenter(s): Kimberly Altamura, Saddle Brook HS; Gayle Dunlap, Saddle Brook MS

Session Chair:

(066) K-2 AS Hands-on

**Inquiry Through The ABC's of Science**

Participants will be engaged in hands-on activities connecting science to the letters of the alphabet. All will leave with materials ready to use.

Presenter(s): Joanne Hunt, Macmillan/McGraw-Hill

Session Chair:

(067) 5-8 LS Hands-on

**PBIS- Project Backed Inquiry Science for Middle School**

Learn about Active Chemistry, a NSF funded chemistry course that follows a project-based guided inquiry design and is successful for all levels of students.

Presenter(s): Gary Curts, IT'S ABOUT TIME

Session Chair:

**Tuesday 11:45 – 12:45**

(068) K-12 AS,P, Elementary Science Lecture, Demo

**Cool Tools for Light and Color**

This presentation will highlight some cool, hands-on demos for teaching concepts with Light and Color. Lessons and innovative demonstration ideas for all grade levels.

Presenter(s): Buzz Putnam, Whitesboro HS

Session Chair:

**Tuesday 12:00 – 1:30**

(069) 9-12 P,PS Lecture, Discussion

**Biography as a Motivator in Physical Science**

Students relate more to scientists' dramatic life stories than to science. Incorporate biographical reports and other science-related writing into physical science classes with great results.

Presenter(s): Dr. Elliot Richman, Ramapo HS

Session Chair:

(070) K-12 AS,SL Hands-on

**Uncover Student Ideas in Science using Formative Assessment**

Students have many misconceptions that can impede their learning. Experience several formative assessment probes and learn to use them to identify and address student misconceptions.

Presenter(s): Theresa Roelofsen Moody and Dr. Wil van der Veen, NJACE Science Education Institute at Raritan Valley Community College

Session Chair: Beth Schaefer

(071) K-12 B,C,ENV Hands-on

**Water, Water Everywhere: A Regional Research Project and SENCER.net**

Connect with teacher-researchers across NJ in a regional water research project. Resources, activities and sample analysis by Rutgers' labs and NSF-funded SENCER.net.

Presenter(s): Monica A. Devanas, Rutgers University

Session Chair: Sue Coletta

(072) K-8 ES,PS Hands-on

**Keeping Things in Motion - Using NASA materials to teach Newton's Laws of Motion**

Use NASA Space Science to involve all your students in Newton's Laws of Motion. Arrange methodology so that all your students are empowered by science.

Presenter(s): Linda Smith, Paulsboro Public Schools

Session Chair: Roberta Conner

**Tuesday 12:00 – 1:00**

(073) 9-12 B,GI,LS Round-table discussion

**RNA Tie Club - Storytelling in Biology**

Scientific endeavors can be brought to life with real life stories of scientists. This illustrates scientific process, enhances student learning and interest in science.

Presenter(s): Meenakshi Bhattacharya, West Windsor-Plainsboro HS South Holly Crochetiere, West Windsor-Plainsboro HS North

Session Chair: Holly Crochetiere

(074) K-4 AS,GI,LS Hands-on

**Primary Level Hands-On Science Building and Experimentation with K'NEX from Fisher Science Education**

Giant Kid K'NEX pieces allow primary youngsters to build models for science investigations with ease. Explore for yourself as we build and learn.

Presenter(s): Robert O. Jesberg, K'NEX Education  
Session Chair:

(075) K-8 G,LS Demonstration

**No Fear Insect Lessons**

Learn fun and interesting ways to teach about insects. Try on our insect costume and see what every day products come from insects.

Presenter(s): Patricia Heaney, Collier Services/Kateri Center

Session Chair: Dan Wilson

(076) 9-12 P Demo

**Physics Demo Den: Circular & Rotational Motion**

Members of NJAAPT will present a series of demonstrations that be performed in the classroom.

Presenter(s): Borislav Bilash II, Pascack Valley HS

Session Chair:

**Tuesday 12:15 – 1:45**

(077) 9-12 AS Hands-on

**What's New from Vernier**

In this hands-on workshop, you will learn about new Logger Pro features, new sensors, and data-collection options. Come try out the new products available from Vernier.

Presenter(s): Gretchen Stahmer DeMoss, Vernier Software & Technology

Session Chair:

**Tuesday 12:30 – 2:00**

(078) 9-12 B,G,LS Demo

**The Aesthetic Realism Teaching Method: Students Learn, Ethics Comes Alive!**

Using exciting demos illustrating the vital importance of enzymes, the presenters simultaneously relate the subject to everyday, ethical questions had by teachers and students alike.

Presenter(s): Rosemary Plumstead and Sarah Ross, retired NYC HS Science educators

Session Chair:

(079) K-12 AS Hands-on

**Can Diapers "Help" the Environment?**

Well... not diapers but maybe the stuff in them! By dissecting diapers, we will look at the potential positive impact of superabsorbent polymers called hydrogels.

Presenter(s): Lisa Rothenburger, Rutgers Cooperative Extension of Somerset County; Laura K. Bovitz and Jeannette Rea-Keywood, Rutgers Cooperative Extension 4-H Youth Development Program

Session Chair:

**Tuesday 12:30 – 1:30**

(080) 9-12 ES,ENV,LS Demo

**Interactive Learning with Virtual Worlds**

Bring the interactive learning of computer games into your classroom with virtual worlds - River City, Quest Atlantis and Second Life's NMC Salt March Dynamics.

Presenter(s): Martha Schoene, Seton Hall University

Session Chair:

(081) 9-12 PS,P Lecture, Demo

**Potato Gun Physics**

Constructing an air powered potato gun and using it inside and outside of the classroom. Applies to low level physics to advanced.

Presenter(s): Mike Rose, West Milford Township HS; Gino Rose, Jefferson HS  
Session Chair:

### Tuesday 1:00 – 2:30

(082) 9-12 C,PS,SL Hands-on

#### **Pressure and Temperature Relationship (How are temperature and pressure of a gas related?)**

The presentation will be a hands-on activity utilizing the CPO SCIENCE Data Collector, Gas Pressure Sensor and Temperature Probe to determine the mathematical relationship between pressure and temperature of gas.

Presenter(s): Louis Fellner, CPO Science

Session Chair: Kip Bollinger

(083) K-12 AS,GI,SL Hands-on

#### **Make It, Use It, And Take It Back To Your Classroom**

Construct a different kind of balance, answer the "banana question," experience SIX SURPRISES, and a procedure that pervades all of science and technology. Materials for first 25

Presenter(s): Dr. Mitch Batoff, Past President, NJSTA

Session Chair:

### Tuesday 1:00 - 2:00

#### **Exhibits Area Special Considerations For Earth Science**

This hour has been scheduled for Earth Science Teachers to visit the Exhibits area

(084) 9-12 B,LS,GI Lecture

#### **Galapagos: More to Ponder Over Than You Might Think!**

Come and enjoy a presentation that reveals a closer and more instructive look at Galapagos species including marine iguanas, tortoises, finches and less familiar endemic penguin, cormorant, lava lizards, boobies, sea lions, and mockingbirds.

Presenter(s): Anthony V. DeFina, Wayne Hills HS

Session Chair: Carmine Villa

(085) 5-8 GI Hands-on

#### **Critical Response Strategies: A Blueprint for Inquiry**

In this hands-on, design and technology workshop, participants will experience seven simple strategies for turning the act of teaching into the art of inquiry.

Presenter(s): Dr. Bill Metz, Retired

Session Chair:

(086) 9-12 C Demonstration

#### **Demo Den: Acids and Bases**

Many colorful and fun demonstrations to aid teaching of acids and bases.

Presenter(s): Bob Corell, Janine Mikulca, and Renee Szporn, Princeton HS; Allene Johnson, Retired

Session Chair:

(087) 5-12 B,ES,PS Lecture

#### **Building Reading Skills through Science Content**

Build Literacy strategies that engage students in content acquisition through pre, during, and post-reading activities. Reinforce vocabulary, key concepts, graphic organizing skills, reading comprehension, and cross-curricular topics using the 5E model.

Presenter(s): Maxine McCormick, McGraw-Hill

Session Chair: Maxine McCormick

(088) 9-12 AS Lecture

#### **10 GREAT Web 2.0 sites for Science Projects**

Tired of the same old posters and powerpoints? Come find out about 10 (at least) great websties for student projects.

Presenter(s): Patti Duncan, Wallenpaupack Area HS

Session Chair:

(089) 9-12 P Demo

**A Torque Activity for Physics Class**

Participants will complete a lab activity during which they will construct a mobile as an assessment of their understanding of torque and the conditions of static equilibrium. Two skill levels will be explored: college prep physics and honors.

Presenter(s): Bill Koenig and Borislav Bilash II, Pascack Valley HS

Session Chair:

(090) K-12 AS Discussion, Demo

**Using Digital Microscopes In the Classroom**

Observe a demonstration of effective use of imaging techniques for students and teachers. How to capture images? How to present images in lab format, video quizzes and other forms of assessment.

Presenter(s): David Doty, Swift Optical Instruments; David Sandomir, Micro-Optics

Session Chair:

(091) K-12 AS,ENV,SL Lecture

**What does being green REALLY mean? Closing circles and altering your footprint for a new future.**

Learn how Liberty Science Center lowered energy use over 40% and some key concepts to help your students design the world of the future.

Presenter(s): Daniel Smith, Liberty Science Center

Session Chair:

(092) K-8 PS Hands-on, Lecture, Demo

**Get Charged Up with Educational Innovations!**

Join us for fun activities with static electricity. Make your own Franklin static motor and discover a plethora of activities to get your class charged up. Make and take and door prizes!

Presenter(s): Ken Byrne, Educational Innovations, Inc.

Session Chair:

**Tuesday 1:15 – 2:45**

(093) K-12 SL Lecture

**Retention: New Faces of the 3Rs**

Now that you've hired the teachers, how are you going to keep them?! Retention is a serious issue, and this session will address factors of retention.

Presenter(s): Dr. Pat Shane, NSTA President, UNC Chapel Hill Center For Math/Science

Session Chair: Nina Visconti-Phillips

**Tuesday 1:30 – 2:30**

(094) K-4 AS,C,GI Hands-on

**Chromatography Flowers and Watercolors**

Participants will make water color paints and use chromatography to create beautiful flowers while integrating science and children's literature.

Presenter(s): Dr. Eva M. Ogens, Jersey City Public Schools

Session Chair:

(095) K-12 AS,P,SL Lecture, Discussion, Demo

**Math and Science Beyond Euclid and Newton**

Math and science changed drastically in the 20th century, and this should be reflected in our teaching. Computers allow students to visualize these changes.

Presenter(s): Joe Molitoris, Education Consulting/GCU

Session Chair:

(096) K-8 AS Demo

**Science Serenade**

Listen and enjoy a collection of original songs by a middle school science teacher designed for the listener to gain an understanding of "Scientific Concepts."

Presenter(s): Leigh A. Russ, South River MS

Session Chair:

**Tuesday 2:00 – 3:30**

(097) K-12 AS,SL Lecture

**Using Student Assessment Data to Improve Classroom Teaching and Learning**

As teachers we constantly measure student achievement throughout the school year. This session will focus on techniques for analyzing student responses for program review.

Presenter(s): Dr. Joseph L. Zawicki, NYSELA President, SUNY College at Buffalo

Session Chair:

(098) K-4 AS Hands-on, Lecture, Demo

**Science Activities for the Elementary Classroom**

Elementary classroom activities that can easily be done within a period. Participants will do several activities and receive folders with lesson plans for physical and life sciences.

Presenter(s): Mary Ann Savino, Central School, East Brunswick

Session Chair:

(099) 5-8 B,ENV,LS Hands-on

**The People Connection: Activities on Population and Human Ecology**

Help students understand their role in the delicate balance of people, natural resources and environmental quality with memorable, interdisciplinary games, simulations and problem-solving challenges.

Presenter(s): John Volpa, Indian Mills Memorial School

Session Chair:

(100) K-12 B,LS Hands-on

**Anatomy In Clay II: Heart & Hormones**

Participants build the heart, blood vessels, and endocrine glands out of brightly colored clay. Experience the intra-relationship of systems and application of Pathology. "Learn by doing!"

Presenter(s): Starla A. Ewan, Zahourek System, Inc/ Estacado HS

Session Chair:

**Tuesday 2:00 – 3:00**

(101) 5-8 C,GI,PS Hands-on

**4 Creative Element Research Projects**

Students research an element to produce one of four different projects. You'll leave with one example and information on how to make all four.

Presenter(s): Francene Wuertz, Ronna Silagi, Karen Cotter, Lawton C. Johnson MS, Summit NJ

Session Chair:

(102) 9-12 C Hands-on

**Make and Take: Discrepant Events - Demos that Defy Logic**

Liquid disappears & reappears, volumes that do not add up, and liquids that do not reach equal levels in a container. Cost: \$15.00

Presenter(s): David Lee, retired, Mountain Lakes HS; Bettyann Howson, Retired

Session Chair:

(103) 9-12 C Demonstration

**Demo Den: Spectacular Solutions**

Demonstrations will be presented involving color changes, solubility properties and energy changes.

Presenter(s): Paul Sekuler, Rosemarie Pittenger, Jessica Liotti and Michele Lumsden, JP Stevens HS, Edison

Session Chair:

(104) 9-12 B,F,LS Hands-on

**DNA, Forensics, Replication, and Transcription with K'NEX from Fisher Science Education**

Explore a CSI-type DNA forensics activity before moving on to replication, transcription and DNA mutations. DNA structure and mRNA will be built and explored.

Presenter(s): Robert O. Jesberg, K'NEX Education

Session Chair:

(105) K-4 ENV,LS,SL Lecture, Discussion

**Utilizing the School Grounds to Promote Inquiry-based Science**

Do your school grounds support active learning? This workshop will show how to effectively utilize an outdoor learning center.

Includes topics, professional development, resources and management.

Presenter(s): Nancy Yard and Rosemary Martin, Holland Township School

Session Chair:

**Tuesday 2:15 – 3:45**

(106) K-12 AS Hands-on

**Budget-Conscious Science with Vernier**

Tight budget got you down? Come try Vernier's less expensive Go! Link interface and sensors. Technology can still be a part of your science.

Presenter(s): Gretchen Stahmer DeMoss, Vernier Software & Technology

Session Chair:

**Tuesday 2:30 – 4:00**

(107) K-12 AS,GI Discussion, Demo

**Repair & Maintenance of Microscopes, Balances, and other Lab Equipment**

Proper care and basic repair of various microscopes and balances will be demonstrated. Other lab equipment, including spectrophotometers, autoclaves, pH meters, etc will be discussed. Q&A.

Presenter(s): Raoul Bovelle, Mel Sobel Microscopes, Ltd.

Session Chair:

(108) PreK-2 B,ENV, Language Arts, Visual Arts Hands-on

**Growing Up WILD: Exploring Nature with Young Children**

Growing Up WILD is an early learner program that builds on children's sense of wonder about nature and invites them to explore wildlife and the world around them.

Presenter(s): Liz Jackson, NJDEP Division of Fish and Wildlife

Session Chair:

**Tuesday 2:30 - 3:30**

**Exhibits Area Special Considerations For Physics / Physical Science**

This hour has been scheduled for Physics and Physical Science Teachers to visit the Exhibits area.

(109) 9-12 C Demo

**Electrochemistry**

Energize your students with colorful demonstrations, intriguing laboratory activities and computer simulations in electrochemistry

Presenter(s): Claire Miller, Madison HS; Eve Krupka, Retired; Michael Ricketts; Kris Bedient, Manalapan HS

Session Chair:

(110) 5-8 B,GI Hands-on

**Using Crazy Traits to Investigate Natural Selection**

Using CPO Crazy trait, participants will explore genetic teaching strategies including adaptations and population genetics. Resources provided.

Presenter(s): Dr. G. Kip Bollinger, CPO Science

Session Chair:

(111) 9-12 ES,ENV,LS Lecture

**Exploration of the Ocean from Shore to Solar System**

First hand and illustrated report of discoveries about our oceans from the shore as well as utilizing technology from our solar system.

Presenter(s): Dr. Peter Rona, Institute of Marine and Coastal Sciences - Rutgers

Session Chair: Judy McLoughlin

(112) 9-12 AS, Research Lecture, Discussion

**Independent Student Research: Preparation, Presentation, and Scholarship Opportunities**

Available to all N.J. students, the Monmouth Junior Science Symposium offers opportunities for scholarships and awards for oral and poster presentations of original research.

Presenter(s): Jame Danch, Colonia HS; Frank Darytichen, Retired, Woodbridge Twp. School District

Session Chair:

**Tuesday 3:00 – 4:00**

(113) 9-12 C Demonstration

**Demo Den: Spectacular Demos to Teach Reactions**

Demos for different reaction types, that can be used in the classroom to inspire students and explain chemical reactions, will be presented.

Presenter(s): Mita Chaki, Franklin HS; Susanne Iobst, Passaic Valley HS; Sunila Sharma, West Windsor Plainsboro HS South; Martin Goldman, Rahway HS; Marilyn Gorman, Retired; Cheryl Litman, North Brunswick HS; Paul Sekuler, J.P. Stevens HS, Edison

Session Chair:

**Tuesday 3:15 – 4:15**

114) K-12 Business Meeting Discussion, Meeting

**NJSTA Annual Board Meeting**

All are welcome. Come meet your Board, participate in the meeting, or find out how to become more involved.

Presenter(s): Nina Visconti-Phillips, New Jersey Science Teachers Association

Session Chair: Chris Lijoi, NJSTA President Elect

**Tuesday 3:30 – 5:00**

(115) K-12 AS,SL Hands-on

**What Does Effective Science Instruction Look Like?**

Hillside HS team relates changes in vision of effective science instruction and work as a leadership team through the Academy for Leadership in Science Instruction.

Presenter(s): Paul Skelton, Hillside HS; Dr. Lee McCaskill, Debbie Lee, and Heather Melowic, Hillside HS

Session Chair:

**5:00-6:00 PM  
PRESIDENTS' RECEPTION**

**Sponsored by  
Pearson Education (Scott Foresman & Prentice-Hall)**

**6:00 PM  
ANNUAL BANQUET  
(Ticket Required)**

**Keynote Address: *Humanity and the Sea*  
Dr. David Gallo  
Woods Hole Oceanographic Institute**

**Sandra Buleza and Nancy Evans Bennett, Executive Co-Chairpersons**

