

2009 Professional Development Conference For Agricultural Educators Oswegatchie Educational Center, Croghan, New York

Pre-Conference Sessions- June 20th-21st 2009

Have you ever wanted to host a student teacher?

Presenter- Dr. Travis Park, Cornell University

Have you hosted a student teacher and wondered how to make the experience more meaningful? Serving as a cooperating teacher is one of the most meaningful professional development opportunities, as well as one of the most important professional functions we have to perpetuate agricultural science education in New York State. Please consider joining us for a Saturday afternoon workshop about hosting a student teacher. We will share best practices, share ideas and models of mentoring student teachers, and explain the expectations for cooperating teachers. Additionally, we look forward to hearing from you about ways to improve the Cornell student teaching experience.

Ag in the Classroom: Bringing Learning to Life

Presenter- Heather Davis, New York Ag in the Classroom

Whether you are a pre-service teacher preparing to student teach or a veteran teacher looking for some new and exciting resources, this is the workshop for you! New York Ag in the Classroom offers a wide array of resources to help teachers integrate knowledge about agriculture and the food & fiber system into the curriculum, to provide relevant learning experiences across the curriculum that enhance student achievement and bring learning to life. Join us on Saturday afternoon for a hands-on introduction to the NYAITC program. We will feature an overview of the program, hands-on activities from our K-12 agriculture & environmental curriculum, Food, Land and People and a discussion on working across the curriculum and grade levels. Each participant will walk away with the Food, Land and People Curriculum (55 Lessons) CD as well as a packet full of activities and resources. This will be a high energy, high fun workshop and we can't wait to see you there!

Forestry-Got Wood?

Presenters-Tina Minor James, Walton Central School, and Tony Schabloski, Urban forestry technician

The Forestry CDE is an exciting way to integrate Forest Management Techniques, Compass and Pacing, and Timber Cruising into your curriculum. Work with an Urban Tree Technician and learn the safe way to take down your problem tree. Learn proper knot tying, equipment use, and tree assessment. Take home a CD full of resource materials to make the Forestry CDE an easy transition into your program of activities.

Conference Sessions- June 21st-24th 2009

Silkworms to Sheep: Fiber Fanatics

Presenter- Mary Lou Geneway, Pioneer HS

Did you say sericulture? I never learned that in college! This is a two-part workshop focusing on the fiber industry and the abundance of activities it offers for your students! The first part will introduce the silk industry, from rearing silkworms to collecting cocoons for silk reeling. Activities will make the instructor comfortable with the process, and will show how silkworms can be done on a limited budget. The second part of the workshop will involve wool processing from fleece to fiber. Participants will wash, card, and dye wool, and needle felt a simple project. These are great

activities for students to learn the value-added concept stressed in the Marketing Plan CDE. The workshop will weave math and science concepts into fun activities!

Landscape Architecture and Design

Presenter- Julia Clarke, Paradise Grounds LLC

Behold; the perfect landscape. The perfect city park, the calm and beautiful outdoor nature center, the breathtaking symmetrical formal English garden. What do they all have in common? A good Landscape Architect. Behind every man made outdoor experience, you will find a talented designer. And what do all talented designers have in common? A good design process. During this workshop you will begin to understand the process as a whole, and then begin to use mass and space in a whole new way as you create your "paradise." Session will also include instruction in the use of lineweights, and color rendering. By the time you finish the session, you will walk away impressed by the new creative, and artistic skills you have mastered, and you can pass on.

Renewable energy – solar energy and photovoltaics

Presenters- Dr. Ben Ballard and Dr. Phil Hofmeyer Morrisville State College Renewable Energy Training Center

Harness the power of the sun, our most abundant energy resource and the primary energy source on earth. Solar photovoltaics, or solar PV, provide a means of directly converting solar energy into electrical energy. Yes, New York does have enough sun to make solar PV practical. Solar PV can be incorporated into off-grid and grid-tied electrical systems in homes or commercial buildings. Solar PV cells today can be as high as 24% efficient at converting sunlight directly to electrical energy—compare that to an internal combustion engine generator where over 60% of the energy is lost as heat! Solar PV cells are made from the second most abundant element in the earth's crust: silicon, a semiconductor. By introducing impurities into the silicon semiconductor, an electrical field can be generated. When a PV cell is exposed to solar radiation electrons flow thorough an external circuit which can then run electrical devices. This workshop will focus on the basics of solar PV systems, including an introduction to site assessment and design, and will provide teachers with activities and materials for use in their classes.

Funding for training via Morrisville State College's Renewable Energy Training Center is provided, in part, by a grant from the President's Community-Based Job Training Grant Initiative administered by the US DOL Employment & Training Administration.

"By Choice or by Chance" – Ain't it Great to be an Agriculture Teacher!

Presenters- Dr. Travis Park and Barrett Keene, Cornell University

Why are you a teacher of agriculture? What gets you up and going in the AM besides your alarm clock? How do you make a difference in the lives of your students? What do you love about agriculture? Teaching? Students? With the state of the economy and world in our Country, let's take a bit of time and consider what's really important. The evening will be relatively light-hearted, but also engaging and personal. Bring your best ideas, your incredible stories, and your heart.

Agricultural Risk Management

Presenters- Ken Couture, Killingly High School, CT, and Robert Haight, Cornell University

This workshop is designed to inform agricultural educators about a series of four lesson plans developed by the Risk Management Agency. Learn how to assess risk using a SWOT analysis, develop marketing and business plans to hedge risk, and understand why managing risk is a vital

skill in agriculture. This workshop will provide you with tools and curriculum to make risk management a fun and interactive learning experience for your students.

Renewable energy – micro-hydro (hydro electric)

Presenters- Dr. Ben Ballard and Dr. Phil Hofmeyer Morrisville State College Renewable Energy Training Center

Hydro power is a historically important natural resource in the northeastern United States, and civilizations throughout history have relied upon the power of moving water. Today, hydroelectric power generation comes in two broad categories: large-scale hydro sites (generally those exceeding 5-30 MW) and small-scale hydro. Small-scale hydro is further broken down by a subset of very small systems, termed “micro hydro” on sites producing less than 30 kW of continuous power. Where water flow (volume of water per unit time) and head (elevation drop) are of adequate size and location, humans can extract a portion of the kinetic energy in moving water and convert it into electrical energy for consumption in useful electrical applications. Micro hydroelectric power generation is considered one of the most useful and under-utilized renewable energy systems available for grid-tied and off-grid home applications. This workshop will focus on the basics of micro hydro systems, including an introduction to site assessment and design, and will provide teachers with activities and materials for use in their classes.

Hydraulic Robotic Wrestling

Presenter- Than Mehlenbacher, Filmore Central School

The objective of this workshop is to design, develop and construct a "Hydraulic Robot" to wrestle against other robots in the classroom. Each group of students must assume the role of engineers and use the most appropriate technological resources to achieve success with the activity. Discover how you can take common shop materials, combine them with syringes, and engage your students in the exciting world of hydraulics. This activity is interdisciplinary and can be used in middle school technology or mechanical science class.

Renewable energy – wood gasification

Presenters- Dr. Ben Ballard and Dr. Phil Hofmeyer Morrisville State College Renewable Energy Training Center

How can an age-old renewable energy resource—wood—play a role in reducing our dependency on fossil fuels? Wood is one of the most widely used fuels worldwide, and it one of New York’s most plentiful natural resources. Although traditional wood stoves are fairly inefficient and dirty, the process of gasification can provide highly-efficient heating and electricity generation for our future. During this workshop, we will explore the processes and applications of gasification and complete a hands-on project building and testing wood gasification camp stoves. These little stove can produce over an hour of heat from a small handful of wood pellets!

Snack Food Tech

Presenters- John Busekist, Cattaraugus LV, Jon Clayson, Pioneer High School, and Erin McCaffrey, Stockbridge Central School.

Got the mid afternoon munchies? Come to Snack Food Tech and learn from the best snackers in ag education. Busekist, McCaffery, and Clayson will show you how to make simple foods incorporating science and processing in the classroom. This workshop will leave you yearning for more. Each participant will receive curriculum, labs, recipes and snacks!!

Experimental Design and Ethology (Animal Behavior Activities)

Presenter- Tim Montondo, Wards Natural Science

In this workshop, participants will have 30 minutes to plan, prepare and try an experiment using an Eastern Red Spotted Newt, Lady Bugs or other critters. They will be provided with a variety of items to use as variables along with a common “secret ingredient”.

They will then share their idea with the rest of the groups to determine whose experiment will reign supreme! Along the way, we’ll learn and discuss proper care and handling of animals in a classroom, use of animal for observation, and directing students to set up an experiment without doing it for them. There will also be a chance to share and show off any animal labs that have worked for you. (BYOTGF: bring your own trained gold fish)

CDE’s “Can’t Do Experiences” OR “Classroom Development Events!”

Preparing students for a Career Development Event should be a part of every ag educators lesson plan. CDE’s bring to life the very lessons you are teaching and allows your students to apply their knowledge. Learn what is necessary to not only have students in FFA succeed in Career Development Events but also see what can be done to bring these exciting and hands on experiences into your classroom. Be prepared to get to the heart of the CDE and develop your own abilities to help your students to succeed!

Agriscience- Michelle Sutton, TST BOCES

Dairy Handlers - Tara Taylor, Beaver River Central School

Parliamentary Procedure- William Stowell, South Jefferson Central School

Diesel Mechanics- Marty Krause, Pioneer Central School

Renewable energy – fuel cells

Presenters- Dr. Ben Ballard and Dr. Phil Hofmeyer Morrisville State College Renewable Energy Training Center

Are hydrogen-based energy systems in our future? One important technology for a hydrogen economy is the fuel cell, also known as “gas battery”, which generates electricity through an electrochemical reaction known as reverse electrolysis. This reaction combines hydrogen and oxygen to form water vapor, heat and electricity, all of which can be further utilized by the fuel cell system. Waste heat can be utilized for space heating, water vapor can be captured and reused to generate more hydrogen, and electricity can be used to run an external electrical appliance. The “fuel” for fuel cells, hydrogen, can be extracted from fossil fuels, generated from electrolysis of water using renewable electrical energy derived from solar or wind, or generated from plants or other biological sources directly. We will explore these ideas in more detail and participants will conduct simple experiments to demonstrate the principles behind fuel cells.

Who ate our corn? Bring science alive with live insects and more!'

Presenter- Dr. Craig Wilson, Texas A&M and USDA

Participants will handle the insect and learn how to have their students grow the Corn Ear Worm insect (*Helicoverpa Zea*), and will collect and interpret data on life cycles. An Intel-digital microscope will be used to show how technology can be incorporated in instruction to engage students. In addition, you will engage in other hands-on, inquiry-based activities that link the worms to corn/bio-fuel, nutrition and predation by bats to cover plant growth and Area-wide Pest Management (APM) Research. Free class sets of insects can be ordered after the session. Materials and links to USDA/Agricultural Research Service (ARS) research scientists involved in cutting-edge research will be provided.

How will we navigate through the new Career pathways?

Presenter-Terry Hughes, NYS Career Pathways

Where will all the future New York Agriculturalists come from? How will they find their way to the amazing exciting careers in Agriculture? Who will provide their **VERSATILE** Pathway? Welcome to a new initiative that will connect Secondary Education to Postsecondary Education to Careers in Agriculture with a clear easy to understand Pathway. We will share new programs of study that have been developed to increase the opportunities for young people to see exactly how they can prepare to enter the many career areas in the field of agriculture. These Programs of Study can be used to enhance Articulation Agreements, be a key component to the CTE approval process and most importantly increase the number of highly trained individuals prepared to enter the Agricultural Workforce.

Public Relations with a little Elf Magic

Presenter: Gleason Walley, Chateaugay Central School

“If you build it they will come.” A simple statement that has penetrated our society can become part of your classroom. Gumball machines and the simple and yet fun, “ball-in-cup” can provide an elf-worthy experience to the skilled and unskilled students in your school, from kindergarteners to seniors, while engaging the leaders and non-leaders alike.

The basic premise is high school and middle school students in your programs, through teamwork and planning, engage in a toy manufacturing process by mass producing component parts for gumball machines and ball-in-cups. Come find out how material purchasing, product design, production planning, and mass manufacturing and assembly can be incorporated into this public relations gold mine. Your students will develop various woodworking skills, an efficient work process, mathematical business planning and interpersonal skills while working together and mentoring young students. The Santa’s Workshop experience can be incorporated into any educational classroom. No shop... no problem. With help from the technology program in your school you can have the parts produced for you and your chapter members can help with the assembly in your classroom. Are your elementary students in a different building? Have them come to you, or take the FFA experience to them. Become an “elf” yourself, enjoy the experience of an FFA Santa’s Workshop, and take home a toy or two of your own.

BOCES Menagerie vs Teachers in the NOCTI Practical Challenge

Presenters- Lynn Telaak, Olean BOCES, and Lorraine Dennis Belmont BOCES

Ruby the rat, and friends challenge teachers to try their hand at the practical assessment for the NOCTI. The skills include: lifting dogs, muzzling, reading thermometers, identifying parasite eggs & restraint and sexing rodents. We will also share teaching resources and strategies.

Exploration of Long Pond

Presenter- Todd Lighthall, Oswegatchie Educational Center

We will paddle around the perimeter of Long and Round Ponds, identifying flora and fauna that call this area home. We will see Loons, Beavers, water lilies, and much more. We will also explore some of the history, geography, and chemistry of Long Pond. Come prepared for a fun lesson on the water.