



Calling ALL teachers! PLEASE JOIN US IN CHARLESTON, NOVEMBER 15 and 16!

SOUTHEASTERN REGIONAL MEETING OF AMERICAN CHEMICAL SOCIETY sponsored by the SC Section of the ACS and the SC Association of Chemistry Teachers

The SC Section of the American Chemical Society and the South Carolina Association of Chemistry Teachers are the sponsors for the PK-12 program of the Southeastern Regional Meeting of the American Chemical Society which is meeting in Charleston in November. The PK-12 program is scheduled for Friday, November 15 and Saturday, November 16. Registration for teachers is \$25 and the web site for Registration is OPEN and is <http://sermacs2002.cofc.edu>. PLEASE JOIN US IN CHARLESTON! The program includes workshops for elementary, middle and high school levels. Descriptions of the Workshops and other presentations are listed below. The grade levels are an indication of the main targeted group. All teachers are welcome to sign up for any workshop. You may want to Register as soon as possible to improve your chances of getting your choice of workshops since there are limits on some of them due to materials and/or the size of the rooms. If you have any questions, please contact Betsy Martin at [martine@cofc.edu](mailto:martine@cofc.edu) or 843-953-5516.

Grade level Workshops [Sign up on the Registration Form in TEACHER EDUCATION PROGRAM]  
Elementary

1. "Inquiry Matters" Standards-based inquiry lessons from the ACS with in-put from Project Inquiry-Charleston/Berkeley Schools. ACS staff with staff of Charleston and Berkeley School Resource Teachers

**Friday, 8:00 am-11:00 Room: Francis Marion-Laurens**

2. "Teaching With Toys" Use the now WORLD- FAMOUS **Teaching Science with TOYS** program to link chemistry concepts and everyday experiences. Enhance your science curriculum with innovative, hands-on lessons that support the Standards. John Idhe/Miami of Ohio Center for Chemical Education

**Friday, 11:30am-1:30 Room: Francis Marion-Laurens**

3. "Chemistry Behind the Kits for K-5- What's the MATTER?(Level 1)" FOSS, a NSF exemplary program, is based on the thinking processes of the child. This workshop takes a close look at MATTER with investigations and teaching demonstrations designed to contribute to the understanding of the content behind the kits such as FOSS. The emphasis will be on States of Matter. Akin

**Friday, 11:30 am-1:30 pm Room: Francis Marion-Rutledge**

4. "Integrating Children's Literature and Chemistry in K-3 Classroom" This workshop is for those looking for a new inquiry-based activity to present to K-3 classrooms. It involves an original problem-solving adventure story and its accompanying chemistry activity. Materials may be purchased for \$10/set Sigmann/Wheeler Appalachian State University Department of Chemistry

**Friday 1pm-2pm Room: Lightsey Center 224B**

5. "Science Notebooks" Using science notebooks in the elementary and middle schools in Berkeley, Charleston and several other school districts in SC. "This project is modeled after programs used in Local Systemic Initiatives supported by the NSF. Rodney Moore-Project Inquiry Charleston & Berkeley Schools **Friday 2pm-5pm** Room: Francis Marion-Laurens

Middle:

6. "Chemistry Behind the Kits for 6-8- What's the MATTER?(Level 2)" This workshop takes a close look at MATTER with investigations designed to contribute to the understanding of the content behind the kits. The emphasis will be on Solutions and Acids and Bases. L. Akin

**Friday, 8:00 am-9:30 am Room: Francis Marion-Rutledge**

7. "Carbon Dioxide in The Classroom" Carbon Dioxide is not just a greenhouse gas! See how Carbon Dioxide is being used in environmentally friendly processes, from dry cleaning to making polymers. Classroom activities for the pre-college science classroom will be demonstrated and handouts will be provided. Regina Barrier The Science House, NC State University

**Friday, 10:00 am-11:00 pm Room: Francis Marion-Rutledge**

Middle/High School

8. "Investigations with CBL/TI Units- Introducing Technology Into the Classroom" Texas Instruments TI 83+ calculator and the Vernier Calculator Based Laboratory(CBL) unit offer a relatively inexpensive way to introduce technology into the middle and high school classrooms. This workshop will use colorimeter probes to determine Beer's Law, pressure probes to analyze the behavior of samples of gas, the pH probe to follow pH changes in a titration, and the use of two probes to follow and record multiple changes simultaneously. In addition, find out 'What's New at TI'. Norma Mackenzie and Jeff Walker  
**Friday, 8:00am-10:00am** Room: Lightsey Center 224B

9. "ChemCom- Chemistry in the Community" Explore the activities, laboratories and investigations as well as the philosophy that create the American Chemical Society's "ChemCom" experience. ACS staff and Regis Goode  
**Friday, 8:00 am-11:00am** Room: Lightsey Center-224A

10. "Chemagination Competition" Challenge your students to think about how chemistry will shape the future, their future! Use this science essay and poster contest for high school chemistry students to spark their thinking as the answer the question: "What innovation or breakthrough in chemistry will be important in the lives of teenagers in the year 2025?" To **ENTER YOUR STUDENTS NOW!** Go to <http://chemistry.org.oca> or contact Sarah Hudson at [shudson@dorchester2.k12.sc.us](mailto:shudson@dorchester2.k12.sc.us) ACS staff and Sarah Hudson  
**Friday 8:00am-2:30pm** Francis Marion- Poster Room Ccolonial (B)

11. "Putting Polymers in Your High School Classroom" Chemical Heritage Foundation Exhibit with Teacher/Student led hands-on Activities- Participate in 10 to 12 experiences that can bring the study of polymer chemistry into the high school classroom. This workshop is created by teachers with support of the Charleston County Library, BP, and Rhodia. In addition, visit The Chemical Heritage Foundation traveling exhibit on POLYMERS AND PEOPLE at the Charleston Library. Ashburn/ Robinson/ Muse/ Lentz/ Miller/ Turner  
**Fri. 9:30 am- Noon** Room: Charleston County Library, 68 Calhoun Street

12. "Chemistry Keeps Us Clean!" National Chemistry Week-Activities for the Classroom  
Each year the ACS National Chemistry Week Celebration creates hands-on activities that explore the chemistry of a topic that affects us all. This workshop will allow you to explore the "chemistry of clean" and discover new ideas for your classroom. ACS staff and Earle and /Wieland  
**Friday, 10:30 am- Noon** Room: Lightsey Center-224B

13. "Using Winogradsky Columns to Explore Bacteria and the Cycling of Elements in the Environment"  
The Savannah River Ecology Laboratory Outreach Program will share this activity kit that focuses on the role of bacteria in cycling iron and sulfur in soils and sediment. Add an environmental aspect in your chemistry curriculum and laboratory. Dee Boggs Savannah River Ecology Lab  
**Friday, 11:00am-Noon** Room: Lightsey Center 224A

14. "High School Chemistry Standards for South Carolina" This workshop will introduce the latest update to the Chemistry Competencies for SC students. The South Carolina Standards are based on the National Standards. Competencies for students in high school Chemistry will be presented by the State Department Science Coordinator. The workshop will share the work of the state committee and the progress in the area of high school competencies. Linda Sinclair **Friday 2:30-3:45pm** Room: **Francis Marion - Drayton**

15. "You Want Me to Teach What--**Chem Tech?**" Participants will receive copies of the newly-revised, teacher-developed Chemistry for the Technologies Modules that include several new lab activities designed by SC teachers to address the SC Science Curriculum Standards and actively engage students in learning Chemistry. Hickman/Fickett/Wroblewski-Mullins/Walton/LeMaster/Manville State Dept of Education  
**Friday, 1:00 pm-2:00pm** Room: Lightsey Center 224A

16. "History of Chemistry" Explore laboratories, projects, and activities that bring the beginnings and the evolution of chemistry to your students. The focus is on the revolutions in thought that have shaped the development of basic chemical concepts. Ashburn and Suarez

**Friday, 2:00pm-4:00 pm** Room: Charleston County Library, 68 Calhoun Street

17. "Designing Instruction for Physical Science Based on The National and State Standards" Ninth grade Physical Science teachers from the Charleston County School District will share the process they are using to design instructional modules to teach and assess the standards. The design is based on the model, Understanding By Design. Samples of units will be shared. Tempel/Albrectson/Minnema/Carson

**Friday, 2:00pm-5:00pm** Room: Francis Marion-Rutledge

18. "Science in a Technological World" This workshop introduces resources from the ACS that are available for teaching chemistry as a part of the technological world. The workshop is appropriate for chemistry teachers who are seeking to relate their courses to the technical world and to address applications of chemistry. ACS staff and Ellie Muniz

**Friday, 2:30pm-4:00pm** Room: Lightsey Center 224 A

19. "Kids & Chemistry" This program has been developed by the American Chemical Society to give scientists the resources and training necessary to share hands-on science with schoolchildren ages 9 to 12. High School teachers whose students are involved in **Service Learning Projects and Outreach Programs** to elementary and middle school students are invited to attend this workshop to enhance their ability to train their students to go into classrooms to share chemistry with younger children. Andrea Bennett

**Friday, 2:30pm-4:30pm** Room: Lightsey Center 224 B

20. "Tie-Dye With Flinn" Penney Sconzo will lead this workshop in which participants will learn to tie-dye garments as an activity to explore the chemistry of COLOR. Each participant will bring a clean, cotton garment to use to experiment with colors and tying techniques. Penney Sconzo Flinn Team

**Friday, 4:30 pm-5:30 pm** Room: Lightsey Center 224 A.

21. "Chemistry of Art" Create works of art while investigating the behavior of matter. This workshop allows you to use the properties of matter to explore the creative side of your nature. Use marbling, stained "glass" window cards, chromatograms, and tie-dyeing to enthrall your students and to show chemistry in a new and "beautiful" dimension! Suarez Bishop Kenny High School

**Saturday 8:30am-10:30am** Room: Lightsey Center-226 A

22. "Water Quality Assessment with LabPro Technology" Imagine your students' surprise when you take them outside and start teaching your lesson from the middle of the stream! What better way to teach water quality than in the water! In this 2-hour workshop, Vernier LabPros and TI-83 Plus graphing calculators will be used to assess various water quality parameters. Water temperature, pH, dissolved oxygen, total dissolved solids, and the presence of selected ions will be determined. Methods of presentation, site selection, and trouble-shooting will also be discussed. Regina Barrier, The Science House, NC State University

**Saturday, 8:30am-10:30am** Room: Lightsey Center-224 B

23. "Electrophoresis-Connecting High School Chemistry and Biology" Introduce your students to chemistry through the use of biotechnology. This technically simple separation experiment is from the Exploring Electrophoresis Series developed by the National Center for Biotechnology Education.

Encourage your students to make the connections between chemistry and this application in biology.

Pat Ryan, Carolina Biological

**Saturday, 8:30am-10:30am** Room: Lightsey Center – 224 A

24. "An Introduction to Computational Chemistry for High School Chemistry Educators" The workshop is primarily intended for high school chemistry educators who have had little or no experience in computational chemistry. An introduction to computational chemistry and modeling will be followed by a

"hands-on" portion in which participants will use various free or relatively inexpensive software. Emphasis will be placed on topics that will highlight the ways in which computational chemistry can be used as an educational technology. Metz, Department of Chemistry, College of Charleston  
**Saturday, 8:30am-11:30am** Room: Science Center 116, College of Charleston

25. "Chemistry from Kitt Peak" SC teachers report from the Univ. of Arizona and Kitt Peak, the "Mecca" for astronomy academics. Walking and working this summer in the footsteps of modern explorers of the nature of the universe, they have been studying the Hydrogen spectra of a stars, taking images of the Andromeda Galaxy for later study to look for novae, and taking images of extended objects to study their spectra. This workshop for teachers will share ideas for connecting chemistry to its application for study of the nature, history and extent of the universe. Bob Carroll and Andy Cohen Saturday,  
**10:30am-11:30am** Room: Lightsey Center 226 B

26. "Project SEED and Chemistry Olympiad: High School/College Collaborations" The American Chemical Society encourages collaboration between teachers at the pre-college level and college faculty. Two major efforts that can enhance the experience of your students are Project SEED and the Chemistry Olympiad. Project SEED provides the funds for high school students and their teachers to work in a university research laboratory. The Chemistry Olympiad provides a stimulating challenge to students who participate at the local, national and international levels. In addition to the student challenge portion, the Chemistry Olympiad provides a series of hands-on assessment laboratories that are available for use in your classes. ACS staff and Hildebrand  
**Saturday, 10:30am-1:00 pm** Room: Lightsey Center- 224 B

27. "Introducing Inquiry into the High School Chemistry Class Using Toys" This workshop presents an extension of the world-famous Teaching With TOYS that has been so popular with young learners. From the Center for Chemistry Education of Miami University of Ohio, this workshop presents experiences that will engage high school students in investigations of a chemical nature. John Idhe Center for Chemistry Education Miami University of Ohio  
**Saturday, 11:00am-1:00pm** Room: Lightsey Center- 224 A

27. "Operation Progress IV- Chemistry to Share" Operation Progress IV brought teachers from across the Southeast to the Clemson Biennial in 1996. This workshop is to share ideas that have had a major impact in the teaching lives of OP IV teachers. There are four themes:  
Every Chemistry Classroom Can Do Laboratory-Shoe-String Chemistry  
Implementing Inquiry-Based Chemistry in High School Program  
Bringing "real" world Chemistry into the Classroom  
Technology in Your Chemistry Program. Karen Bailes and OP IV Teachers  
**Saturday, 11:30am-1:00pm** Room: Lightsey Center- 226 A

28. "IMMEX Workshop: Technology Based Assessments" The IMMEX system ([www.immex.ucla.edu](http://www.immex.ucla.edu)) is a web based assessment tool for teachers and students. Students are presented with a case-based, open-ended problem which cannot be solved until students choose more information from within the problem space. The IMMEX system not only records whether the students solve the problem successfully, but also tracks how students solve the problems. This information can be used to diagnose student difficulties in problem solving and allows the teacher to give specific feedback related to the individual student. This workshop will allow attendees to explore and use the IMMEX system and show how to use the various assessment tools. Cooper and Case, Department of Chemistry, Clemson University  
**Saturday, Noon-3:00pm** Room: Science Center 116, College of Charleston

29. "Crime Scene Investigations/Forensics" What could be more exciting than turning your students into super sleuths? Do you want to know a way to make your students eager to learn science concepts and solve a mystery at the same time? Pam Walker and Elaine Wood, co-authors of Crime Scene Investigations will discuss ways to turn your classroom into crime scenes and your students into crime scene investigators. Attendees will receive handouts of sample labs from the book and participate in activities such as "Guilty of Graffiti" and "Fibers Don't Fib". Pam Walker and Elaine Wood  
**Saturday, 2:00pm-4:00pm** Room: Lightsey Center 224 A

30. "Flinn Workshop" Join Flinn Science Workshop team member, Penney Sconzo, and participants in the Flinn Chemistry Summer Workshop/CofC(Charleston) as they share many interesting investigations, teaching demonstrations, and laboratories of the newest Flinn team of Sconzo, Becker and Brogie. Penney Sconzo Flinn Foundation  
**Saturday, 2:00pm-4:00 pm** Room: Lightsey Center 224 B

Workshop [Listed with the General Workshops on page 1 of the Registration Form]

31. "One-Day Safety Workshop" This one-day safety workshop is designed for teachers of chemistry from grades 7-12 and college. Topics covered will include among others, OSHA laboratory standards, the legal aspects of safety, eye and face protection, chemical storage, handling glassware and chemical disposal. Jack Breazeale College of Charleston/Department of Chemistry  
**Saturday 8:30am-4:30pm** Room: Science Center 317, College of Charleston

Additional Presentations in Technical Sessions:

32. "AP Chemistry Workshop" This workshop run by SC Association of Chemistry Teachers/ACS members who are graders and/or teachers of AP chemistry is designed to bring AP teachers together for discussion of teaching and testing in the AP program. The program is open to all teachers. Lisa Zuraw, Clarice Wenz and Sue Zoltewich **Saturday 11:30am – 1:00 pm Room: Lightsey Center 226B**

33. "Chemagination Workshop for Teachers" Learn more about this new contest for 9-12 grade students. Marisa Burgener of the ACS office will discuss the concept and details of this contest. This will be an annual contest sponsored by ACS. Also CONSIDER ENTERING YOUR STUDENTS NOW! Go to <http://chemistry.org.oca> . **Saturday 2:00pm-3:00pm Room: Lightsey Center 226A**

34. "Teaching Calculator-Free Chemistry" Morton Hoffman Suppose we were to change the way students learn chemistry by not permitting the use of calculators on exams, quizzes, and homework, but only in the laboratory where experimentally-derived numbers are involved. This workshop is designed to encourage students to think about the concepts and relationships in chemistry while working without calculators. **Saturday 8:30am-9:30 am Room: Lightsey Center 226B**

Talks in the Technical Session:

35. "Overcoming The Fear in K-12 Science Fair" After years of involvement as science fair judge, parent, K-12 science-teacher consultant and chemistry instructor, the presenter designed and taught a program called 'Science Process Skills' at Armstrong Atlantic State University. This presentation will examine the issues and approaches that were used in this program. Sabitra Brush **Friday 1:00pm-1:20pm Room: Francis Marion - Drayton**

36. "Operation Chemistry" is a program for middle school science teachers offered by faculty of the University of North Carolina Greensboro and Elon College. The nature of the Operation Chemistry program and the educational modules will be discussed. Jerry Walsh, Paul Kelter, Johanna Mazlo, Stacey Gillespie **Friday 1:25pm-1:45pm Room: Francis Marion - Drayton**

37. "A University/Community Science Partnership" The University of Alabama at Birmingham has been

involved in a NSF grant to involve graduate and advanced undergraduate science fellows as resource personnel in local schools. This program has strengthened the university/community partnership to deliver inquiry-based learning to diverse learners in K-12 science. Larry Krannich, Stephen Hajduk and David Radford **Friday 1:50pm-2:10pm Room: Francis Marion - Drayton**

38. "A University/Community Science Partnership" UAB/NSF GK-12 Program

39. "Overcoming The Fear in K-12 Science Fair" Brush