

SCIENCE EXPLORATION DAYS 2009

JUNIOR HIGH DAY

Grades 7–8(9)

Wednesday, May 13

9:30 am - 1:00 pm

Sponsored by
Central Western Section
Science Teachers Association of New York State

St. John Fisher College
Rochester, New York 14618

101. ADVENTURES IN CIVIL ENGINEERING

Mr. William VanAlst (American Society of Civil Engineers)

The role of the civil engineer in solving problems is developed through discussions. A variety of careers in engineering will be explained.

102. WILDLIFE DETECTIVES

Mr. Ron Schroder (NYS Department of Environmental Conservation, retired)

You'll learn how to detect the wildlife that lives around us by identifying the clues they leave behind. Hands-on samples will aid your sleuthing.

103. EXCITEMENT OF CHEMISTRY

Dr. Kenneth Schlecht (SUNY College at Brockport)

View an array of numerous chemical phenomena intended to surprise you and catch your interest. Witness explosions, color changes, and fire, all designed to generate thought and a scientific explanation.

104. WHITE-TAILED DEER: HISTORY AND BIOLOGY

Mr. John R. Hauber (NYS Department of Environmental Conservation)

While our forebears and Native Americans once depended on deer for survival, now the deer depend on us. We will discuss deer biology, including antler development and deer aging techniques.

105. CRASH DYNAMICS

Mrs. Jean Triest and Trooper Robert Brown (Monroe County Office of Traffic Safety)

What happens in a car crash? See the physics in a crash using the Vehicle Rollover Simulator. Learn why safety belts help protect ALL the vehicle occupants.

106. LIGHTNING EXTRAVAGANZA

Jamie Oliver (Electronic Engineer, Eastman Kodak Company)

Witness a 4-foot, continuous lightning discharge from a 1,800-watt Tesla Coil. Experience plasma forming, and learn about Nikola Tesla, one of the world's true genius inventors.

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107. EYE, TISSUE, AND ORGAN DONATION

Ms. Karen Guarino (Rochester Eye and Tissue Bank)

Team up with others to play an interactive game “STAT RUN” that is fast paced, full of fascinating information, and designed to teach and explore the field of organ and tissue donation.

108. AQUATIC MACROINVERTEBRATES

Ms. Edith Davey (Ontario Soil and Water Conservation District)

Investigate macroinvertebrates in real water samples. The populations of different insect, worm, and crab species will indicate the relative oxygen level of a stream. Learn via hands-on how to do this!

109. PRACTICAL ASTRONOMY

Mr. Fred Arnold and Mr. Tom Bird (Monroe BOCES 2 Elementary Science Program)

Use the sky to find your location, the time, and to impress your friends! The presentation will be conducted in the Starlab portable planetarium.

110. CRIME SCENE INVESTIGATION

Deputy Dan Lyon (Monroe County Sheriff’s Office)

Students actively participate in fingerprint development, use of infrared spray, and other techniques used to investigate crimes.

111. TRAINING AND CARE OF DOGS

Ms. Marian Moeller (Bristol Valley Training Club)

A live dog demonstration using purebred dogs will demonstrate how to train and care for many breeds.

112. HUBBLE SPACE TELESCOPE DISCOVERIES

Mr. James Secosky (Finger Lakes Community College)

Take a look at some of the awesome discoveries made with the Hubble Space Telescope!

113. GEOGRAPHY AND GEOLOGY OF MARS

Mr. James Secosky (Finger Lakes Community College)

The speaker is an amateur astronomer who has received many pictures of Mars using NASA's Mars Global Surveyor. We will discuss naming of major features on Mars and describe the major geologic characteristics.

114. INCREDIBLE INSECTS

Mr. Robert Iveson (Ward’s Natural Science Establishment, retired)

Learn why insects are so successful and why “bugs” may not be as bad as most people think they are. The amazing adaptations and dynamic diversity of earth’s most abundant life forms will be illustrated with actual (and live) specimens.

115. CREATING A WEB PAGE

Mr. Robert Palmer (Rochester Democrat & Chronicle)

Get hands-on experience building a Web page! Emphasis will be on placing pictures and text, and managing color, fonts and sizes. You are encouraged to bring your own pictures (JPG or GIF) on a floppy disk. If you bring a disk, you can take your creation home.

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116. GOOD BUGS AND BAD BUGS – KNOW YOUR ALLIES
Ms Liz Berkeley (Cornell Cooperative Extension)
Find out how to determine which bugs are helpful around your house and yard. Learn how to manage the undesirable ones with environmentally sound methods.
117. TRANSFORMING NUCLEAR ENERGY INTO ELECTRICITY
Michael Mann (Constellation Energy/Ginna Nuclear Power Plant)
Find out how nuclear energy is safely transformed into electricity at a nuclear power plant. Learn about the Ginna Station's past, present and future. We'll also take a look at some radioactive materials found in your home or neighborhood.
118. CHEMICAL FOUNTAIN
Lafayette Eaton and Kristina Lantzky-Eaton (St. John Fisher College)
Students will create a chemical fountain and explore the chemistry behind the fountain.
119. CRITTER RACES
Sheila Brady Root (St. John Fisher College)
Teams of students will observe racing insects, make hypotheses, collect data in Excel and graph results. Web sites will be used to enrich understanding of the results.
120. MASTODONTS IN THE MUCK
Jutta Siefert Dudley, PhD (SUNY College at Brockport)
Many swamps across the Great Lakes region contain the skeletal remains of elephant-like creatures called mastodons that were part of the Ice Age ecosystem. How did these animals live and why did they become extinct? Come find out what we know so far. You will examine some samples and see how paleontologists digging in the muck uncover the past.
121. PHYSICAL THERAPY
Connie Chau (Assistant Professor, Nazareth College)
Come find out what a physical therapist does and who needs physical therapy. Learn about common types of injuries and things you can do to prevent them.
122. EXPLORING ENGINEERING
Dr. Margaret Bailey (WE@RIT Executive Director, Kate Gleason Chair, Associate Professor, RIT)
This session will introduce students to the world of engineering with some fun, hands-on activities and question and answer session with engineering faculty and students from The Kate Gleason College of Engineering at RIT. This may be of particular interest to girls.
123. ULTRASOUND: THE WAVE OF THE FUTURE
Prof. Hamad Ghazle and Jodie Crowley (Rochester Institute of Technology, Allied Health Sciences)
You have heard of, and probably know someone who has had an ultrasound examination. You may have even had an ultrasound examination yourself. Did you ever think that a career in ultrasound might be right for you? Do you like to work, interact with and help people? Do you want to work in the medical field? Are you thinking of becoming a doctor? Do you want to be able to have a job anywhere? Join us to get the answers to these questions and learn about this exciting career.
124. INTERACTIVE HANDS-ON FORENSICS WORKSHOP

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Mr. Timothy Wilson and Ms. Deborah Janes (Eastman Kodak Company)

The drive to unlock the mystery of some crime through the application of science is great for the forensic scientist. The result of the forensic scientist's work has real meaning with life and death implications and impact upon the criminal justice system. Participants will investigate several different disciplines of analytical sciences as they pertain to forensics. No chemistry background needed for this exploratory workshop; just the willingness to get your hands dirty while having fun.

125. THE MYSTERY OF CHOLERA

Sheila Myers (Finger Lakes Institute, Hobart and William Smith Colleges)

This program will involve a look at the history of how the City of Rochester decided to find clean drinking water for its residents. The students will examine how the outbreak of Cholera in the 1800s led the City on a search for safe, clean water from the Finger Lakes. We will examine the symptoms of Cholera and play a game that uses clues to determine how the epidemic spread in Rochester as well as other major Cities in the World.

126. ENDANGERED WILDLIFE OF NEW YORK

Mr. Mike Wasilco (New York State Department of Environmental Conservation)

Find out why wild animals become endangered and which species are vulnerable to extinction. We will focus on what is being done to help rare wild animals in New York such as Bald Eagles, Bog turtles, and Karner Blue Butterflies.

127. CLIMATE CHANGE AND GLOBAL WARMING

Dr. Jose Maliekal (SUNY College at Brockport)

This program will be an introduction to global warming and related issues. Also, we will discuss strategies to mitigate global warming.

128. CAN YOU HEAR ME NOW? HOW WE HEAR: FROM EARBUD TO BRAIN.

Sarah Klimasewski (Audiologist)

Overview of basic anatomy of the ear and auditory pathway, how sound travel through the pathway, different types of hearing loss and hearing conservation; particularly how to listen to personal stereo systems safely and the hazards of too much "noise".

129. "A+...B-...O...SOMETIMES A LETTER IS NOT A GRADE"

Shelia Stapley (American Red Cross)

The American Red Cross fulfills the need of the American people for the safest, most reliable, most cost-effective blood through voluntary donations. Come learn all about this amazing fluid and how an hour of your time can mean a lifetime to someone else.

130. POLYMERS

Tim Cawley (Rochester Museum and Science Center)

Explore the amazing world of Polymer Chemistry in this totally hands-on program. Perform experiments to make different kinds of polymers like slime, nylon, and Styrofoam. Extract DNA from a banana!

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Important Information for Students and Teachers

1. Each student attending SED will be scheduled to view a gigantic exhibit area and three additional 40-minute seminar sessions. No lunch period will be scheduled.
2. A **\$3.00** registration fee is required for each student.
 - a. If a particular school must cancel after sending their fees, 80% refund will be made provided that a letter from the School Superintendent's Office explaining the cancellation is sent to the SED Registrar by the postmark deadline of **February 14, 2009**. No refund will be made if the cancellation letter is postmarked after the deadline.
 - b. If an individual student cannot attend, a substitute may attend using that student's schedule. No individual student refunds are possible.
3. The misbehavior of students at SED will jeopardize their school's participation in future events and will result in that student's immediate suspension from the SED program.