

SCIENCE EXPLORATION DAYS 2008

JUNIOR HIGH DAY

Grades 7–8(9)

Thursday, May 15

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. STOP DWI - FATAL VISION GOGGLES

Mrs. Jean Triest (Monroe County Office of Traffic Safety)

A discussion of the impact other people's choice to drink and drive can have on your life.

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.

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.

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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.

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.

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117. TRANSFORMING NUCLEAR ENERGY INTO ELECTRICITY

James Zapetis/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. BE RED CROSS READY

Kathy Cufari (American Red Cross)

Find out how to prepare for possible disasters and other life threatening emergencies. You will learn to prepare a kit, develop a communications and evacuation plan and find out what types of disasters and emergencies are most likely to occur in your area. You will also learn about heart attack, stroke, shock, bleeding, and injuries.

122. ENVIRONMENTAL AND SCIENCE POLICY

Jamie Romeo

We will discuss a number of local issues regarding science and public policy, and the application of what is learned in the classroom to real life situations, legislation and other critical decision-making.

123. 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.

124. IMAGINING THE PASTABILITIES: EXPLORING THE STRENGTH OF NOODLES

Lynn M. O'Brien (Associate Professor of Chemistry, Nazareth College)

Students design their own experiments to investigate how many pennies a piece of spaghetti can support without breaking under a variety of conditions. Students will discover the variables that need to be considered when constructing support structures and build their own super pasta supporter. The "pastabilities" are endless!

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125. TERRIFIC TARANTULAS

Dr. Ralph Charlton (Director, Dancing Wings Butterfly Garden at Strong National Museum of Play)
Maligned and feared by many, tarantulas are one of the most misunderstood creatures on the planet. Allow me to set the record straight as I present an overview of their fascinating biology, ecological roles and behaviors. I think you'll agree with me that these gentle giants are enthralling creatures worthy of admiration, not revulsion. Students will get a special opportunity to interact with a variety of live tarantulas.

126. GEOGRAPHY OF THE FINGER LAKES

Sheila Myers (Finger Lakes Institute, Hobart and William Smith Colleges)
This talk will introduce students to the unique geographic features of some of the Finger Lakes. Using math skills to determine the ratios of land to water volume in three of the Finger Lakes they will construct spatial models using candy to envision how some lakes are more vulnerable to pollution than others.

127. CARDIAC PHYSIOLOGY

Marc Connolly
This talk will cover the physiology of the heart and how the body reacts to cardiac emergencies. We will also discuss what can be done to prevent and treat these emergencies.

128. 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!

129. NANOTECHNOLOGY

Tom Schulte (Education Outreach Coordinator, Microelectronic Engineering Department at RIT)
A discussion as to how nanotechnology relates to today's electronic industry.

130. 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.