

Sessions at RVGS on Friday, March 14

Roanoke Valley Governor's School Sessions

9:15 am – 12:30 pm

Due to transportation restraints, buses will leave from the hotel lobby at 9:15 am SHARP. The buses will transport participants to the Roanoke Valley Governor's School for Science, Mathematics and Technology for two different sessions and return participants to the Hotel Roanoke by 12:30 pm.

If you travel to RVGS, you will be there for two sessions before returning to the hotel for the afternoon sessions. Maps to RVGS will be provided at the registration table for those wishing to travel to the school in their own vehicles.

10:00 – 10:45 am RVGS Sessions:

Room 102 at RVGS

Partnership for Research and Education in Plants

Learn about PREP – a partnership between teachers, students and scientists to conduct novel experiments, learn about plant biology and molecular genetics, and share real data.

- Presented by Erin Dolan, outreach coordinator at the Fralin Biotechnology Center at Virginia Tech, and John Kowalski of the Roanoke Valley Governor's School

Room 109 at RVGS

Statistics and the Web

Instructors will be directed to an assortment of sites available to them for use as instructional aids in statistics, including other instructors' sites, university sites, web-oriented teaching resources and sites containing useful data.

- Presented by Julie Drewry, math teacher at the Roanoke Valley Governor's School

Room 118 at RVGS

Interactive Web Pages Using Hot Potatoes

Participants will learn to create and add to their web pages: a multiple choice test with feedback for each choice; a matching exercise based on drag and drop of either images or text; a crossword puzzle; and a free response exercise with built-in self assessment capability.

- Presented by Elaine Schmid, teacher at Thomas Jefferson High School for Science and Technology

Room 111 at RVGS

Double Session (10 – 11:45)

Introduction to Imaging

An introduction to a variety of digital imaging devices and software will be presented, including still, video and high-speed digital cameras. Classroom applications of imaging will be demonstrated.

- Presented by Aaron Schuetz, physics teacher at the Roanoke Valley Governor's School

Room 113 at RVGS

Double Session (10 – 11:45)

Geographic Information Systems: A Great Technology Tool for Instruction

The interdisciplinary nature of GIS allows students to explore many diverse topics using classifications and queries to produce a graphical output (map) that is geographically based. This will be an introduction and hands-on session for practicing those techniques.

- Presented by Fred Hoffman, physics and GIS teacher at the Roanoke Valley Governor's School

Sessions at RVGS on Friday, March 14

Roanoke Valley Governor's School Sessions (Continued)

9:15 am – 12:30 pm

11:00 – 11:45 am RVGS Sessions:

Room 102 at RVGS

Protein Fingerprinting and Column Chromatography: Real-world Biotech Tools To Understand Biology Concepts

Learn to use two cutting-edge tools of biotechnology to help your students understand biological concepts, including molecular characteristics (size, charge, polarity) and structure/function relationships with chromatography, and genetic mutation and evolution with protein fingerprinting.

- Presented by Erin Dolan, outreach coordinator at the Fralin Biotechnology Center at Virginia Tech, and Cindy Bohland of the Roanoke Valley Governor's School

Room 112 at RVGS

Fundamentals of Research

Every first-year student at the Roanoke Valley Governor's School must take Fundamentals of Research (FOR). FOR is a course designed to help the student become competent in the process of completing a research project and a formal research paper. The primary purpose of FOR is to help students develop process skills so that they will be able to complete quality research projects.

- Presented by Cameron Sspan and Erin Levering of the Roanoke Valley Governor's School

Room 114 at RVGS

Using Technology in the HS Chemistry Classroom

This session will focus on the variety of technologies used in Advanced Chemical Topics, a second-year chemistry course. These technologies include graphing calculators, computer-interfaced lab probes, computer-aided instruction and sophisticated instrumentation for chemical analysis.

- Presented by Gwen Sibert, chemistry instructor at the Roanoke Valley Governor's School

Room 118 at RVGS

Using Bioinformatics in the Classroom to Analyze Gene and Protein Sequences

This session will feature activities that introduce students to the use of computer databases as a resource for gene and protein information. Participants will receive a series of lesson plans that introduce students to Internet resources that allow them to analyze gene and protein sequences, investigate enzymatic pathways and research the molecular genetics of disease.

- Presented by Angelique Bosse, biology teacher at Montgomery Blair High School in Silver Spring, MD