

**VIRGINIA ASSOCIATION OF SCIENCE TEACHERS  
2023 PROFESSIONAL DEVELOPMENT INSTITUTE  
CONCURRENT SESSION PRESENTATIONS  
Saturday Presentations**

Session 7: Saturday 9:45 AM - 10:35 AM, Crystal Ballroom A (Ballroom Level), Grade: ELEM, Content: Engineering, STEM

**98. Bring It Together: Elementary Engineering Integration**

Kristie Gutierrez, Old Dominion University

Jennifer Kidd, Old Dominion University

Danielle Rhemer, Old Dominion University

Do you love engaging your students in engineering challenges but struggle to fit them into your already demanding instructional time? During this session, the ODU Ed+gineering team of faculty and students will tackle challenges associated with engineering integration and share an elementary engineering lesson that incorporates multiple subject areas. Online Ed+gineering resources will be provided.

Session 7: Saturday 9:45 AM - 10:35 AM, Crystal Ballroom B (Ballroom Level), Grade: ELEM, Content: STEM

**99. STEAMing into an Improved School Culture**

Liz Lynch, Patrick Henry Elementary School

Ashley Taylor, Patrick Henry Elementary School

Lizzy Fulcher, Patrick Henry Elementary School

Erica Becker, Patrick Henry Elementary School

At our school, we have leveraged STEAM based extracurricular activities to promote critical thinking, and inquiry, while developing soft skills. Our students engage in STEAM programs including Odyssey of the Mind, FIRST Robotics, Maker experiences, KidWind, and more. Participants will sample these programs by creating maker products, programming robots, presenting information, and applying scientific principles. Teacher leaders will be there to answer questions and share academic outcomes.

Session 7: Saturday 9:45 AM - 10:35 AM, Crystal Ballroom C (Ballroom Level), Grade: ELEM-MS, Content: Environmental Science, General

**100. Environmental Awareness: Supporting a Path Towards Action**

Stefany Feldbusch, Blandy Experimental Farm

Emily Ford, Blandy Experimental Farm

In this session, we consider cognitive development when integrating environmental awareness into lessons (PreK - Middle School). We will delve into David Sobel's stages of development and how they are driven by children's understanding of their world. (Sobel is an author and educator supporting place-based education.) Come ready to participate in an outdoor lesson to explore the stages guiding environmental awareness and share ideas for adapting a lesson to other stages.

Session 7: Saturday 9:45 AM - 10:35 AM, Crystal Ballroom D (Ballroom Level), Grade: HS, Content: Biology/Life Science

**101. A Bewildering Tale**

Jinx Rasmussen, Virginia High School

Amanda Gardner, Virginia High School

A Bewildering Tale is an engaging murder mystery activity that incorporates most of the human heredity objectives. Using karyotypes, pedigrees, gel electrophoresis results, and their understanding of inheritance patterns, participants will examine information about each of the suspects to determine who killed Marty Motivational. This thrilling mystery immerses students into the concepts of human heredity and biotechnology, allowing them to gain skills that they may then use to solve the mystery.

Session 7: Saturday 9:45 AM - 10:35 AM, Crystal Ballroom E (Ballroom Level), Grade: ALL GRADES, Content: Earth/Space Science, Biology/Life Science, General

**102. Teaching Beyond the Text: Integrating Arts and Literacy**

Christina Hannaman, Gayle Middle School- Stafford County Public Schools

Alyssa Scrubb, Gayle Middle School - Stafford County Public Schools

Learn how to engage every student through creative avenues in science, including both literacy and arts integration. Attendees will be provided with strategies and samples to boost engagement and build background knowledge by moving beyond textbooks, labs, and demos. These strategies can be used across a wide range of academic levels, grade levels, and content areas. Sample activities and projects will be provided.

Session 7: Saturday 9:45 AM - 10:35 AM, Buck Mtn. (Ballroom Level), Grade: ALL GRADES, Content: Environmental Science

**103. A Breath of Fresh Air**

Melinda VanDevelder, Virginia Commonwealth University School of Education

June, 2023 brought widespread attention and focus to air quality, the factors that impact it, and highlighted the need for better understanding of it. Environmental topics about land and water have immersive and active hands-on labs; however, air quality labs and activities are not that readily available to use in the science classroom. The idea behind this workshop is to bring an array of hands-on air composition and air quality activities.

Session 7: Saturday 9:45 AM - 10:35 AM, Mill Mtn. (Ballroom Level), Grade: MS-HS-COL, Content: STEM

**104. Science and Social Justice**

Elizabeth Edmondson, Virginia Commonwealth University

Meredith Kier, College of William and Mary

Engage students in local issues that connects their lives to science. Attend our session where secondary science preservice teachers from VCU and W&M will share inquiry-based, hands-on lessons with a social justice focus. You will have an opportunity to see and participate in these classroom tested activities.

Session 7: Saturday 9:45 AM - 10:35 AM, Bent Mtn. (Ballroom Level), Grade: ALL GRADES, Content: Biology/Life Science, Environmental Science, STEM

**105. Infusing Environmental Action Civics into Your Curriculum**

Sarah Jennings, Earth Force

Sheri Sharwarko, Jamestown Elementary School

Join Earth Force and an Arlington teacher to hear about their strategic partnership that empowers young people to take civic action on environmental issues in their community. We will share about the 5th grade students' action projects and the process to get to meaningful, collective action, as part of Caring for Our Watersheds. Join us to learn the 6 step process, participate in two activities, and learn how you can get action funding that aligns with VDOE's MWEE and ELIT expectations.

Session 7: Saturday 9:45 AM - 10:35 AM, Tinker Mtn. (Ballroom Level), Grade: ALL GRADES, Content: Science Education for All

**106. Gifted Learners in the Science Classroom**

Debra Hicks, Kilgore Gifted Center

In the general education classroom, the Gifted students needs tend to be put aside for the needs of other students. This session is to give to some strategies and activities that you can give your gifted or even high achieve students to meet their learning needs. These activities can be easily scaffolded to meet the needs of all learners.

Session 7: Saturday 9:45 AM - 10:35 AM, Brush Mtn. Ballroom Level), Grade: ALL GRADES, Content: STEM

**107. Culturally Responsive Teaching for STEM Instruction**

Arthur Bowman, Norfolk State University

Kianga Thomas, Norfolk State University

See the power of Culturally Responsive Teaching (CRT) to make STEM instruction inviting for students from any cultural background. Students often do not relate to STEM topics due to not seeing connections of the content to their lives. The universal nature of STEM allows relates to students from any cultural background. By considering the classroom's cultural diversity, teachers have a student engagement. CRT recognizes cultural diversity leading to a better understanding of STEM content.

Session 7: Saturday 9:45 AM - 10:35 AM, Washington Lecture Hall (Conference Level), Grade: ALL GRADES, Content: K-12 Educators

**108. VDOE Update**

Anne Petersen, Virginia Department of Education

Myra Thayer, Virginia Department of Education

Gregory MacDougall, Virginia Department of Education

The VDOE Update will provide educators with information on current state initiatives and opportunities in science education through the Virginia Department of Education.

Session 7: Saturday 9:45 AM - 10:35 AM, Wilson (Conference Level), Grade: ELEM, Content: Computer Science Integration

**109. Bonding the Beauty of Science and Best of Computer Science**

Jessa Campbell, Albemarle County Public Schools

Sandy Shaffer, Albemarle County Public Schools

Katie Breaud, Albemarle County Public Schools

Unleash the synergy of computer science and science curriculum! Join us for an interactive session, integrating coding, data analysis, and more. Empower your students with 21st-century skills while nurturing curiosity, creativity, and critical thinking. Get ready to revolutionize your science lessons!

Session 7: Saturday 9:45 AM - 10:35 AM, Monroe (Conference Level), Grade: MS-HS, Content: Chemistry

**110. Teaching Chemistry Lab Skills - Inexpensively and Quickly!**

Jen Sharp-Knott, Floyd County High School

Some of the basic lab skills to be covered are: using a digital scale, making standard solutions, measuring and calculations using significant figures correctly, and titrations.

Session 7: Saturday 9:45 AM - 10:35 AM, Harrison-Tyler (Conference Level), Grade: ALL GRADES, Content: Biology/Life Science

**111. Antarctica Today!**

Kathy Frame, Papillon Education services LLC.

View the wildlife and status of Antarctica and the role of conservation to save this amazing habitat and our role in its preservation.

Session 7: Saturday 9:45 AM - 10:35 AM, Madison (Conference Level), Grade: HS, Content: General

**112. The Autoclave: A Versatile Tool in High School Science**

Timothy Bill, Harrisonburg High School

Explore the fascinating use of autoclaves in high school science. Learn how autoclaves help illustrate chemistry's gas laws, demonstrate biology's germ theory of disease, and ensure a safe healthcare environment in health science studies. This instrument bridges the gap between theoretical knowledge and real-world application, fostering students' scientific curiosity. Embrace a unique opportunity to advance classroom learning with this ubiquitous piece of laboratory equipment.

Session 7: Saturday 9:45 AM - 10:35 AM, Jefferson Board Room (Conference Level)

**113. Presentation Cancelled**

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Session 8: Saturday 10:50AM – 11:40 AM, Crystal Ballroom A (Ballroom Level)

**114. Presentation Cancelled**

Session 8: Saturday 10:50 AM - 11:40 AM, Crystal Ballroom B (Ballroom Level), Grade: ELEM, Content: Earth/Space Science, General

**115. Swimming with the Fishes: Effects of Climate on Fish**

Matthew Thayer, CBNERR/VIMS

Sarah Nuss, CBNERR/VIMS

Anna Caputo, CBNERR/VIMS

Designed for 4th grade, this \*new\* online, interactive game will demonstrate the differences between weather and climate, and how specific species of fish can be affected by changes in climate. Created in partnership with the VDOE and Virginia Public Media, the game demonstrates changing climate over 100 years and students use their knowledge of climate change to help their fish survive. Test out the game yourself, plus learn about non-digital options available for teaching this lesson.

Session 8: Saturday 10:50 AM - 11:40 AM, Crystal Ballroom C (Ballroom Level), Grade: ELEM-MS, Content: Scientific Literacy

**116. Empowering Student's Scientific Literacy with C-E-R**

Jennifer Saleeba, Rocky Mount Elementary

Lisa Angell, Ferrum Elementary

In this hands-on, collaborative session, educators are introduced to scientific literacy and how student's skills in critical thinking, evidence-based reasoning are empowered through the CER (Claim-Evidence-Reasoning) framework. Participants engage in activities to understand the CER framework as well as strategies for implementation across the STEM classroom. Teachers leave with a toolbox of C-E-R resources including at least one grade-level appropriate CER to use immediately in the classroom.

Session 8: Saturday 10:50 AM - 11:40 AM, Crystal Ballroom D (Ballroom Level), Grade: HS, Content: Biology/Life Science

**117. Skull Comparison Lab on a Budget**

Christopher Moran, The Teacher Institute for Evolutionary Science

Comparing the human skull to those of other primates and extinct hominids is an essential investigation in high school biology. Students observe the pattern of the gradual accumulation of traits over time, leading to modern humans. Skull model sets can cost up to thousands of dollars. The Teacher Institute for Evolutionary Science has created a FREE skull comparison lesson. The activity includes a slide show, instructions, a data table, and assessment questions.

Session 8: Saturday 10:50 AM - 11:40 AM, Crystal Ballroom E (Ballroom Level), Grade: ALL GRADES, Content: Earth/Space Science, Physics/Physical Science

**118. Moon Phases and Tides- Teach the Abstract to Concrete Brains**

Thomas Fitzpatrick, Roanoke City Public Schools

Angelo Bonilla, James Breckinridge Middle School

Leslie Barrett, James Breckinridge Middle School

Teaching the phases of the moon, why it happens, and how the sun and moon affect tides on the Earth are concepts hard for kids to comprehend. Let's go beyond removing and eating Oreo filling to model the phases! Join us in a deep dive into teaching this. Make your own Moon Phase Model that actually gives kids that spark of understanding. Study and investigate tide tables with another simple model. Supplies for the first 20 attendees- everyone else can take pictures! SOL 4.6c, 6.3c, e, ES.3b

Session 8: Saturday 10:50 AM - 11:40 AM, Mill Mtn. (Ballroom Level)

**119. Presentation Cancelled**

Session 8: Saturday 10:50 AM - 11:40 AM, Buck Mtn. (Ballroom Level), Grade: ALL GRADES, Content: General

**120. Experiencing Science as a Language Learner**

Angela Webb, James Madison University

Emily Stewart, James Madison University

Although most science teachers may have limited personal or professional experience engaging with multilingual learners (MLLs), MLLs are a fast-growing population in today's K-12 public schools and deserve equitable and accessible science education. In this presentation, we will (1) demonstrate and facilitate discussion of specific supports for language learners in science, and (2) foster an understanding and appreciation of the unique learning experiences of MLLs in science.

Session 8: Saturday 10:50 AM - 11:40 AM, Bent Mtn. (Ballroom Level), Grade: HS-COL, Content: Biology/Life Science

**121. Experiencing Biology Through Interactive Learning**

Patrick Hardner, Turner Ashby High School

Many traditional biology classrooms focus on older methods of learning that prohibit student engagement, leaving them unsatisfied with the material. An alternative to this approach is to address the concept of active learning (which is discussed in many education journals) while also taking it a step farther: interactive learning. Students must interact with biological content to become interested in the topics. We will discuss lessons that promote interactive learning in a biological context.

Session 8: Saturday 10:50 AM - 11:40 AM, Tinker Mtn. (Ballroom Level), Grade: MS-HS, Content: Earth/Space Science, Biology/Life Science, Environmental Science

**122. VCU: Role Play Experiences Sustaining Watershed Ecosystems**

Al Byers, VCU School of Education: Center for Innovation in STEM Education

Sue Kirk, VCU School of Education

Elizabeth Edmondson, VCU School of Education

Learn about activities to engage students in the importance of bivalves in ecosystems through role play challenges for mussels and oysters. The oyster scenario deals with recycling & sanctuaries as juxtaposed against commercial oyster aquaculture harvesting. The mussels scenario deals with threatened & endangered mussels and invasive species. Students select roles such as environmental scientists, watermen, and regulators as they research and identify an issue to advocate for through discourse.

Session 8: Saturday 10:50 AM - 11:40 AM, Brush Mtn. Ballroom Level), Grade: ALL GRADES, Content: STEM

**123. Developing the Mind of an Experimentalist**

Arthur Bowman, Norfolk State University

This presentation will use an experimental approach to show how high-quality STEM instruction can be achieved by aligning the objective of developing experimentalist-thinking with whatever science content is to be taught. This approach can be most impactful beginning in the lowest grades and continuing into higher education and beyond. Included will be critical thinking, scientific writing, mathematical-thinking, communication skills, and personal empowerment.

Session 8: Saturday 10:50 AM - 11:40 AM, Washington Lecture Hall (Conference Level), Grade: ALL GRADES, Content: General

**124. Gotta Talk: How to Facilitate Productive Classroom Talk**

Myra Thayer, Virginia Department of Education  
Anne Petersen, Virginia Department of Education  
Gregory MacDougall, Virginia Department of Education

Discourse is important in learning, but it can be taunting to have a classroom of students talking. In this session we will explore the "when and how" of leading discourse with students. You will leave with some talk structures that you can immediately implement in your classroom.

Session 8: Saturday 10:50 AM - 11:40 AM, Wilson (Conference Level), Grade: ALL GRADES, Content: Math in Science, General, STEM

**125. Integrating Science Using a Cup, a Tray, and a Great Book**

Lori Pawlik, Colgan High School/Prince William County

Low budget? Need ideas to tie it all together efficiently? Come learn positive ways to seamlessly create more time in your schedule with a high impact for student learning.

Session 8: Saturday 10:50 AM - 11:40 AM, Monroe (Conference Level), Grade: ALL GRADES, Content: Physics/Physical Science, Math in Science

**126. Kinematics as the Mathematics of Time-dependence**

Tatsu Takeuchi, Virginia Tech Department of Physics

In an introductory physics class, the first thing taught is "kinematics," namely the description of motion in terms of "displacement," "velocity," and "acceleration." Though many students are under the impression that "kinematics," and consequently "physics" is difficult, they are often confused by the physics terminology and not by the math itself. In this talk, I will demonstrate how easy kinematics really is, and how universal it is, i.e. it can be applied to many different sciences.

Session 8: Saturday 10:50 AM - 11:40 AM, Harrison-Tyler (Conference Level), Grade: MS, Content: STEM

**127. Computer Science for Middle School (CS4MS)**

Melani Loney, Old Dominion University  
Lisa Steffian, Old Dominion University

Middle school educators in Virginia are expected to integrate computer science instruction across various content areas but may lack the foundational knowledge or confidence to make this happen. This session will share the design and outcomes of the Region II, VDOE funded project CS4MS. This ongoing professional development instructs educators in creating lessons by aligning and integrating CS SOLs with cross-curricular subjects. Teachers engage in online asynchronous microcredentials and/or an in-person summer workshop.

Session 8: Saturday 10:50 AM - 11:40 AM, Madison (Conference Level)

**128. Presentation Cancelled**

Session 8: Saturday 10:50 AM - 11:40 AM, Jefferson Board Room (Conference Level)

**129. No Presentation**

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Session 9: Saturday 11:55 AM - 12:45 PM, Crystal Ballroom A (Ballroom Level)

**130. Presentation Cancelled**

Session 9: Saturday 11:55 AM - 12:45 PM, Crystal Ballroom B (Ballroom Level), Grade: ALL GRADES, Content: General

**131. Amplifying Instruction to Reach ELs in the Science Classroom**

Alexis Rutt, University of Mary Washington

Erich Sneller, Harrisonburg City Public Schools

The incredible linguistic diversity of Virginia's science classrooms presents opportunities and challenges for teaching the rigorous, linguistically demanding science content and practices outlined in the 2018 SOLs. In this session, participants will learn tangible, science-specific strategies for amplifying their instruction to support English Learners in accessing and participating in grade- and age-appropriate science instruction. A variety of instructional resources will be provided.

Session 9: Saturday 11:55 AM - 12:45 PM, Crystal Ballroom C (Ballroom Level), Grade: ELEM, Content: Infusing STEM & the Arts

**132. Inclusivity Fostered with STEAM-Infused Instruction**

Susan Bardenhagen, Prince William County Schools

Crosscutting STEM + the Arts into a K-5 classroom setting follows a natural progression of learning, incorporating a sense of wonder of both curricular content and the natural world, and fostering problem-solving with the experimental and engineering design processes. Presenter will share activities and model lessons using patterns, attributes, and storytelling- all designed to reach out to all learners and promote diversity and inclusion.

Session 9: Saturday 11:55 AM - 12:45 PM, Crystal Ballroom D (Ballroom Level), Grade: MS-HS, Content: Biology/Life Science, Environmental Science

**133. Tuskless Elephants? Engaging Students In Science Practices**

Bernice Brythorne, Monticello High School

How can we engage all students in the science practices and make their thinking about evolution by natural selection visible? In this workshop, participants will experience a lesson using a variety of free, classroom-ready BioInteractive resources to explore the phenomenon of elephant tusklessness. Participants will explore these resources and learn strategies to support students with multiple science practices, such as asking questions, analyzing data, and writing evidence-based explanations.

Session 9: Saturday 11:55 AM - 12:45 PM, Crystal Ballroom E (Ballroom Level), Grade: ALL GRADES, Content: Biology/Life Science, Engineering, STEM

**134. MineCraft, Engineering, & Biology**

Angela Morris, Henry County Public Schools

Science teachers will see how to incorporate engineering design practices into a life science class or lesson using MineCraft. The BioDome design challenge focuses on students designing a BioDome to colonize Planet Xolon. Students will need to learn about biomes, organisms, nutrient cycles, and interdependence of organisms. Teachers will be given the opportunity to explore MineCraft during the session.

Session 9: Saturday 11:55 AM - 12:45 PM, Buck Mtn. (Ballroom Level), Grade: ALL GRADES, Content: Science supports language arts

**135. Knock Down the Silos: Outdoor Science Learning and Literature**

Lillian Ledford, University of Virginia

Emily Ford, University of Virginia

What if science and literacy could be taught simultaneously? In our partnership with Clarke County Schools we paired National Geographic readers, quality fiction and non-fiction texts, and integrated outdoor science activities. Science and reading reinforce each other. By connecting content areas, student engagement increased. Come prepared to participate in an example activity outdoors, brainstorm your own, and access our resources.

Session 9: Saturday 11:55 AM - 12:45 PM, Mill Mtn. (Ballroom Level)

**136. Presentation Cancelled**

Session 9: Saturday 11:55 AM - 12:45 PM, Bent Mtn. (Ballroom Level), Grade: MS-HS, Content: Biology/Life Science

**137. Making Biology Lessons More Active!**

Julia Kogut, John Handley High School  
Marisa George, John Handley High School  
Kelly Huynh, John Handley High School  
Emilia Guirguis, John Handley High School

We are a group of biology teachers that work closely at our high school. Our common goal has been to find ways to make learning more active for our freshmen biology students! We will go through some examples of activities and lessons we have developed, and share handouts as well as a google drive with all of the materials in it. Come get ready to use materials, but also ideas on how to make existing activities more active!

Session 9: Saturday 11:55 AM - 12:45 PM, Tinker Mtn. (Ballroom Level), Grade: MS-HS, Content: Earth/Space Science, Biology/Life Science, Environmental Science

**138. Using a Simulation, PEWI, to Experience Watershed Ecosystems**

Suzanne Kirk, Virginia Commonwealth University  
Elizabeth Edmondson, Virginia Commonwealth University  
Al Byers, Virginia Commonwealth University

Learn about activities to engage students in the importance of bivalves in ecosystems through a simulation, PEWI, that challenges the health of mussel populations. The simulation allows students to manipulate land conditions that ultimately impact mussel populations and water quality. This simulation is perfect to embed within MWEE activities and is part of a larger set of activities highlighting mussels and oysters available through #GoOpenVA. Laptops Helpful.

Session 9: Saturday 11:55 AM - 12:45 PM, Brush Mtn. Ballroom Level), Grade: MS-HS, Content: Earth/Space Science, General

**139. Science & Diverse Learners**

Andrea Bryant, Lucille Brown Middle School

How do we reach our students who have different ways of learning? In this session, you are going to experience and develop ways to increase student engagement, organization, and retention of knowledge through simple strategies that support students social-emotional learning, coping skills, and understanding of the scientific process.

Session 9: Saturday 11:55 AM - 12:45 PM, Washington Lecture Hall (Conference Level), Grade: ELEM-MS, Content: General

**140. Making Meaningful Connections CS Curriculum Integration**

Keisha Tennessee, Virginia Department of Education  
Kim Wilkens, Tech-Girls

Computer science and science share fundamental principles, such as logical reasoning, data analysis, and experimentation. Integrating these disciplines allows students to explore the interconnections of concepts and develop a deeper understanding of both subjects. This session has been thoughtfully designed to empower educators with the necessary knowledge, practical skills, and resources to seamlessly integrate the 2017 Computer Science Standards of Learning (SOL) into their instruction.

Session 9: Saturday 11:55 AM - 12:45 PM, Wilson (Conference Level), Grade: HS-COL, Content: General, STEM

**141. Increasing Student Participation in Independent Research**

Matthew (Matt) Togna, Collegiate School

Have you attempted to increase student-initiated scientific research at your school? Do you long for greater participation in Virginia Junior Academy of Science? Are you an IB teacher looking for ways to enhance the Group 4 or Internal Assessment experience? In this session, I'll discuss how at one area school, we've implemented a semester-long Scientific Research Course and Club where students design, conduct, and write about their own independent research.



Session 9: Saturday 11:55 AM - 12:45 PM, Monroe (Conference Level), Grade: MS-HS, Content: Biology/Life Science, Chemistry, STEM

**142. Opportunities for MS & HS Students and Teachers at VT**

Victoria Corbin, Virginia Tech, College of Science

Sandy Hancock, Fralin Life Sciences Institute, Virginia Tech

We will describe programs for engaging your middle school and high school students in the process of doing science. Participants will get a hands-on introduction to the Biotech in a Box kits that we lend to teachers for free. We will also describe summer professional development workshops we offer to middle and high school science teacher in all areas of science, from data science to physics to earth science to biology. Our goal is to make science teaching and learning fun, easy and effective!

Session 9: Saturday 11:55 AM - 12:45 PM, Harrison-Tyler (Conference Level), Grade: HS, Content: Physics/Physical Science

**143. Bernoulli, Pressure and more -Demonstrations for class.**

Tony Wayne, Albemarle High School

The AP physics 1 curriculum is changing by adding fluid dynamics. Where do you start? Begin with a collection of demonstrations and activities showing Bernoulli's Principle, Pascal's principle and pressure. Come learn for your self how you can get students involved in understanding, "Fluids."

Session 9: Saturday 11:55 AM - 12:45 PM, Madison (Conference Level)

**144.** Presentation Cancelled

Session 9: Saturday 11:55 AM - 12:45 PM, Jefferson Board Room (Conference Level), Grade: HS-COL, Content: Biology/Life Science

**145. Introduction to Bioinformatics**

Mark Levy, Roanoke Valley Governor's School

Participants will learn about the primary forms of data used in bioinformatics work, publicly available sources for these data, and some basic tools for analyzing biological sequences. Participants should bring a laptop if possible to follow along with demos. This is designed to be maximally helpful to someone with a biology background but little to no bioinformatics experience.