

**Virginia Association of Science Teachers
2023 Professional Development Institute**

**Thursday Afternoon Ticketed Workshops
3:15 PM – 5:00 PM**

Cost for each workshop is \$10.00.

**Register online (<https://vast.wildapricot.org/2023pdi>) for one of the workshops by
October 31.**

Workshop #1: Connecting Classrooms and Communities

Presenters: Danielle Murray, Katherine Brooks and Ivy Phillips of Science Museum of West Virginia

Sponsored by the Science Museum of Western Virginia

Grade Level: K-12

Description: This workshop will show how educators working with K-12 students can utilize resources in their communities to supplement their classroom experiences from 3:15-4:15. Followed by a teacher field trip to the museum where we showcase the outreaches and field trip offerings to the attendees from 4:15 to 5:00-closing.

Workshop #2: Engaging Students Through Phenomena-based Instruction

Presenters: Pam Caffery, National Solutions Sales Consultant, hand2mind

Sponsored by hand2mind

Grade Level: Elementary

Description: Come explore how everyday phenomena can be leveraged to engage students in meaningful scientific investigations, collect authentic data, and develop appropriate scientific models and explanations. Participants will investigate a wide range of everyday phenomena while gleaned turnkey strategies for a successful 5E learning experience.

Workshop #3: Introduction to Small Uncrewed Aircraft Systems (sUAS, or Drones)

Presenters: Kristen Duprey, STEM Education Specialist, Virginia Space Grant Consortium

Kari Espada, STEM Education Specialist, Virginia Space Grant Consortium

Sponsored by the Virginia Space Grant Consortium

Grade Level: High School

Description: Virginia Space Grant Consortium (VSGC) coordinates and leads a variety of precollege and higher education programs that pipeline students into STEM majors and careers. This workshop will give teachers an introduction to small uncrewed aircraft systems (UAS, or Drones). Hands-on training and resources for integrating UAS into the classroom will be provided. Instructors will also provide information about careers in UAS and how they are used in the workplace. The primary target audience is high school teachers with little knowledge of UAS.

An overview of various UAS applications, an introduction to UAS and physics of flight, flight planning and operations, coding with drones, and hands-on flying of drones will be provided. Teachers will leave this workshop with a better understanding of UAS applications, vehicle and sensor selection, safe flying practices, how to obtain controlled airspace flight authorizations, coding with drones, and classroom-ready instructional resources to be used in the science classroom. Teachers will also hear about the availability of additional training, courses, certification programs, and dual-enrollment and distance learning opportunities available through Virginia's community colleges.