



**VAST's Vision:
Excellence in Science Education
Through Innovation**

ISSN 1945-7405

VAST.Org

Check the web for news, conference updates, registration, and forms.

The Science Educator

Fall 2020

A Publication of VAST, The Virginia Association of Science Teachers

Vol. 69, No.2



Networking at the PDI, Virtually Whoa! How Does it Work?

Barbara Adcock, PDI Committee

VAST has an exciting app for the virtual PDI which will allow networking prior to, during and even after the PDI! **Whoa is our PDI app.** It has both a version for your smart device, and for your computer, allowing you to seamlessly access the PDI on the go and when seated at your desk!

In Whoa, you will be able to:

- See the complete agenda and build your personal agenda.
- Visit our virtual exhibitor hall and take part in valuable exhibitor promotions!
- Access the links for the recorded and live sessions in both the app and the web version.
- Ask session presenters questions about their sessions.
- Network with fellow attendees, presenters and exhibitors.

In the community networking portion of the app, you will be able to post discussion topics, participate in discussion boards, and ask and answer questions. Networking is a huge piece of any conference, and with the app, you will be able to network prior to, during and even after the VAST PDI! Register now so you can receive the link to Wahova to begin networking.

Contests

You will also be able to take part in three contests within the app to be put into a drawing for a free 2021 VAST PDI registration. There will be a regional photo contest, a passport contest where visiting each exhibitor booth gets you put in the drawing, and a leaderboard contest for participating in the networking opportunities in the app.

Join us at the VAST PDI! Opportunities abound for only \$25!

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**Visit the "annual PDI" page for up-to-date
PDI information.**

**During the PDI Tweet to:
#2020VASTPDI**



COMMONWEALTH of VIRGINIA

DEPARTMENT OF EDUCATION

P.O. BOX 2120

RICHMOND 23218-2120

DATE September 23, 2020

TO: Science Educators

FROM: Anne M Petersen, Ph.D.
Science Coordinator
Office of STEM and Innovation

Myra Thayer and Gregory MacDougall
Science Specialists
Office of STEM and Innovation

SUBJECT: 2020 Virginia Association of Science Teachers Professional Development Institute

The Virginia Association of Science Teachers (VAST) and the Virginia Department of Education are pleased to announce the 2020 VAST Professional Development Institute (PDI), Learning Together Virtually, to be held online November 12-14, 2020. The sessions will be held online after traditional school hours in order to allow teachers to attend synchronous sessions. In addition, asynchronous sessions will be provided to allow flexibility in obtaining meaningful professional development aligned to the participant's interests and teaching assignments. Registration for the PDI will provide teachers and leaders with access to all training and resources until November, 2021.

The VAST PDI is a forum for science educators and administrators to network with fellow science teachers, gain new instructional strategies and lesson ideas, enhance science content knowledge, and experience cutting-edge technology. This year's VAST PDI will offer over 200 concurrent sessions intended to support the *Virginia Science Standards of Learning* as well as Virginia Department of Education initiatives. In addition, presentations will be conducted by nationally known keynote speakers.

VAST, a professional association with over 2000 members, advocates for high-quality science instruction for all students. The VAST PDI is designed to provide sessions for educators and administrators in all science content areas and at all grade levels. The PDI also provides an avenue for communication among all members of the science teaching community.

We encourage science educators and administrators to take the opportunity to include VAST PDI as part of their professional development plan. The VAST PDI provides educators an engaging opportunity to earn relicensure points while learning strategies to be used in the classroom.

For more information regarding the Virginia Association of Science Teachers or the annual PDI, please visit www.vast.org or contact Susan Booth, Executive Director at susan.science@gmail.com.

From the Desk of your

President



Michael Pratte
VAST President 2020

President's 2020 Virtual PDI Invitation

Please plan to join us for the 2020 Professional Development Institute this November!

As a science educator, you have met the challenge of this academic year by adjusting to hybrid and/or full virtual instructional models. You have rebuilt your inquiry lessons and lab investigations to the best of your ability into learning management system platforms. You have fostered a classroom community and growth mindset with your students for the whole child to be nurtured in this atypical school experience. It continues to be difficult and less than ideal with our content delivery and practice of science skills, but you continue to answer the call that all students deserve the highest quality science education as possible regardless of our current challenges. I applaud both You and your efforts and am honored to be among such a high caliber group of professional commonwealth educators who deliver formal and informal science.

Now is your time to receive the learning, networking, and support you deserve. This year's VAST Professional Development Institute has been custom tailored for you to meet the needs and demands of our current teaching environment. Our over one hundred twenty sessions are accessible either live after teaching hours or at your convenience as pre-recorded sessions.

Our exhibitors, presenters, and fellow conference attendees are set to connect with you via our new Whova conference app. The VAST conference experience has taken a quantum leap forward in providing this embedded networking tool to share information, opportunities, and communication between presenters, sponsors, keynote speakers, and a variety of content specific groups with you. Please take the opportunity to connect with our sponsors, VAST board, and fellow K-College teachers and informal education partners through the Whova app during and after the conference schedule.

VAST acknowledges that science educators, like other content leaders, need professional learning specific to their discipline. We remain committed through our mission to provide the very best professional learning opportunities to promote excellence in science teaching accomplished through the communication of science educators throughout the Commonwealth of Virginia. Your conference experience and access to professional learning materials will not end as the PDI window closes. For the modest conference cost of twenty-five dollars you will have extended access to prerecorded sessions and presenter materials as a one-year member of VAST with login privileges. This is a challenging year in our profession. VAST, your professional science association, has met the challenge to grow and improve our members experience beyond the annual PDI, quarterly Newsletter, and Virginia Journal of Science. Members can continue at their own pace and preference to view and learn from our growing repository of content specific to our science disciplines. Please contact your school, division, and/or collegiate professional development office to discuss how you can continue to submit hours for credit through the entire 2020-21 year.

In closing, I am extremely proud of our VAST Board and PDI team. The talents, energy, and team they have exhibited is a benchmark in our associations sixty-eight year history that will be tough to surpass. I am very appreciative to our teachers, exhibitors, and sponsors for the multitude of offerings during and beyond our fall conference dates. I believe that the quality, quantity, and the enhanced membership benefits will make this year a great success and entice you to join us in the fall of 2021 in Harrisonburg.

Take care,

Mike Pratte

VAST President, 2020



A Virtual Reality Approaching Normality

This is different. Our VAST Professional Development Institute will hold its annual statewide PDI from November 12-14 to support the Science SOL by offering both synchronous and asynchronous sessions conducted by nationally known keynote speakers and teachers and leaders throughout the Commonwealth. Educators at every level of science will find topics of interest to build their expertise.

I'm excited to say we have you covered. We have pulled together to make an amazing PDI. For \$25 you can begin to network with colleagues and vendors in late September/Early October. During this time and throughout November you will have three opportunities to participate virtually with competitions.

One competition will be uploading pictures for a photo contest and see how many likes you can acquire. Another will be a leaderboard to earn points by networking, doing polls and posting questions. Finally, a passport so you will visit each exhibitor. All of these will have virtual drawings.

There will always be something else...

Develop relationships, have coffee talks, be involved with discussion boards and support groups, to name a few possibilities.

During the PDI you will view live presentations. After the PDI you will have pre-recorded presentations that with the support of your division you can gain recertification points, possibly 5 points for every 3 pre-recorded sessions. We hope you will continue to grow with us.

See what we have to offer and encourage others to join us. You are important to us and we want to retain your membership and facilitate your positive growth. By providing our newsletters and website we work to continue to disseminate information and assist you in reaching your goals as members, leaders and trainers.

Together through communication we will encourage all to participate and establish a network of ongoing learning. As our caseloads increases this school year and you feel unsure, our goal is to help you to remain positive. In this reality we are all traveling together to the new frontier to blaze new trails.

Come along with our adventure in this virtual reality to approach normality.

Susan Booth, Ed.S.
Executive Director

Many Thanks to Our Generous Sponsors



**Virginia Space
Grant Consortium**



2020 VAST PDI SCHEDULE AT A GLANCE

“Our Courses, Our Contents, Leading to Many Career Pathways”



Virtual Exhibit Hall is available throughout the PDI

Pre-recorded presentations are available throughout the PDI

Be sure to check out the Community button on the WHOVA app! You will be able to take part in discussion boards on teaching strategies, content areas, and even propose discussion topics of your own. This is a great networking feature to explore!

Thursday, November 12

3:30 pm – Welcome to the PDI (Pre-recorded)

Michael Pratte – VAST President

Special Presentation by Em Stephens M.P.H. (pre-recorded, watch anytime during the PDI)

“A Pandemic Shaped Education. How Can Education Shape Future Pandemics?”

4:00 pm – 4:45 pm: Concurrent Session One - Live Presentations

5:00 pm – 5:45 pm: Concurrent Session Two - Live Presentations

6:00 pm – 6:45 pm: General Session I (pre-recorded)

Dr. Zipporah Miller sponsored by SAVVAS Learning Company

“Using Phenomena to engage Students in 3-Dimensional Learning Experiences”

7:00 pm – 7:45 pm: Concurrent Session Three - Live Presentations

8:00 pm – 8:45 pm: Concurrent Session Four - Live Presentations

Friday, November 13

4:00 pm – 4:45 pm: Concurrent Session Five - Live Presentations

5:00 pm – 5:45 pm: Concurrent Session Six - Live Presentations

6:00 pm – 6:45 pm: General Session II (pre-recorded)

Treasurer’s Report

Awards Announcements

Dr. Kenneth Miller sponsored by SAVVAS Learning Company

“The Brave Old World of Emerging Viral Diseases: Cross-Cutting Concepts and Case Studies in Biology”

7:00 pm – 7:45 pm: Concurrent Session Seven - Live Presentations

8:00 pm – 8:45 pm: Concurrent Session Eight - Live Presentations

Saturday, November 14

9:00 am – 9:45 am: Concurrent Session Nine - Live Presentations

10:00 am – 10:45 am: Concurrent Session Ten - Live Presentations

11:00 am – 11:45 am: General Session III (pre-recorded)

Election Results

Dr. Cindy Moss sponsored by Discovery Education

“Preparing Your Students for the Careers of Tomorrow”

Noon – 12:45 pm: Concurrent Session Eleven - Live Presentations

1:00 pm – 1:45 pm: Concurrent Session Twelve - Live Presentations

2:00 pm – 2:45 pm: Concurrent Session Thirteen - Live Presentations

2:45 pm
PDI Closing and Welcome to the 2021 PDI in Harrisonburg
Russ Kohrs – VAST President Elect (pre-recorded)

2020 VAST VIRTUAL PROFESSIONAL DEVELOPMENT INSTITUTE PROGRAM LINKS TO PDI RESOURCES



2020 Online Registration & Fees for PDI attendees, presenters, exhibitors, W-9 form

Schedule at a Glance

General Session Speakers:



Dr. Zipporah Miller, SAVVAS Learning Company (Thursday)



Dr. Kenneth Miller, SAVVAS Learning Company (Friday)



Dr. Cindy Moss, Discovery Education (Saturday)



Special Presentation on the COVID Pandemic, Em Stephens, M.P.H. (available throughout the PDI)

Live Concurrent Session Presentations

Presentation List by Day and Time (session number and room letter)

Presentation List by Grade Level

Index of Presenters by Last Name

Pre-recorded Concurrent Session Presentations (available throughout the PDI)

Presentation List by Grade Level

Index of Presenters by Last Name

Exhibitor List

My VAST Professional Development Plan (MS Word)

Link to PDI page. Scroll down to “My VAST Professional Development Plan”. (MS Word) Click to open in Word or download.

VIRGINIA ASSOCIATION OF SCIENCE TEACHERS
2020 VIRTUAL PROFESSIONAL DEVELOPMENT INSTITUTE
NOVEMBER 12-14
My VAST 2020 Professional Development Plan
NAME: _____

Date watched (MM/DD)	Session #	PRESENTATION TITLE	Teacher initials
	11	Reflections from the VAST President	
	12	Special Presentation - A Pandemic Impact Education	
	13	General Session 1 - "Using Phenomena in Design: Inquiry in 21st-Century Learning Environments"	
	14	General Session 2 - "The World (and World of Learning) We're Inhabiting: From Culture, Community and a New Model for Schools"	
	15	General Session 3 - "Empowering 21st Century Learning: A Century of Progress"	
	16	General Session 4 - "Empowering 21st Century Learning: A Century of Progress"	
	17	General Session 5 - "Empowering 21st Century Learning: A Century of Progress"	
	18	General Session 6 - "Empowering 21st Century Learning: A Century of Progress"	
	19	General Session 7 - "Empowering 21st Century Learning: A Century of Progress"	
	20	General Session 8 - "Empowering 21st Century Learning: A Century of Progress"	
	21	General Session 9 - "Empowering 21st Century Learning: A Century of Progress"	
	22	General Session 10 - "Empowering 21st Century Learning: A Century of Progress"	
	23	General Session 11 - "Empowering 21st Century Learning: A Century of Progress"	
	24	General Session 12 - "Empowering 21st Century Learning: A Century of Progress"	
	25	General Session 13 - "Empowering 21st Century Learning: A Century of Progress"	
	26	General Session 14 - "Empowering 21st Century Learning: A Century of Progress"	
	27	General Session 15 - "Empowering 21st Century Learning: A Century of Progress"	
	28	General Session 16 - "Empowering 21st Century Learning: A Century of Progress"	
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	30	General Session 18 - "Empowering 21st Century Learning: A Century of Progress"	
	31	General Session 19 - "Empowering 21st Century Learning: A Century of Progress"	
	32	General Session 20 - "Empowering 21st Century Learning: A Century of Progress"	
	33	General Session 21 - "Empowering 21st Century Learning: A Century of Progress"	
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	36	General Session 24 - "Empowering 21st Century Learning: A Century of Progress"	
	37	General Session 25 - "Empowering 21st Century Learning: A Century of Progress"	
	38	General Session 26 - "Empowering 21st Century Learning: A Century of Progress"	
	39	General Session 27 - "Empowering 21st Century Learning: A Century of Progress"	
	40	General Session 28 - "Empowering 21st Century Learning: A Century of Progress"	
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	109	General Session 97 - "Empowering 21st Century Learning: A Century of Progress"	
	110	General Session 98 - "Empowering 21st Century Learning: A Century of Progress"	
	111	General Session 99 - "Empowering 21st Century Learning: A Century of Progress"	
	112	General Session 100 - "Empowering 21st Century Learning: A Century of Progress"	

Be sure to visit the “annual PDI” page at www.VAST.org for up-to-date information about the 2020 PDI.

Virginia Association of Science Teachers Professional Development Institute



Sponsors* and Exhibitors

Visit their virtual exhibits to find classroom resources and more.

Accelerate Learning

Agriculture in the Classroom

**American Chemical Society (ACS) -
Virginia Chapter**

American College of Education

Army Educational Outreach - NSTA

**ASM Education Foundation - of ASM
International, Materials Society**

Bio-Rad Explorers

Booksource/Success Matters

**Center for the Advancement of
Sustainable Energy at James
Madison University**

CodeVA

DataClassroom*

Discovery Education*

Dominion Energy*

eMediaVA

ExploreLearning

Five Ponds Press*

George Mason University

Learning A-Z

Legends of Learning

miniPCR Bio

National Energy Education

Development Project (NEED)

National Institute of Aerospace

**People for the Ethical Treatment of
Animals (PETA)**

SAVVAS Learning Company*

School Speciality/FOSS*

Science Museum of Virginia*

STEMscopes

Success Matters LLC

Texas Instruments*

Toshiba/NSTA ExploraVision

Virginia Department of Aviation

Virginia Space Grant Consortium*

**Virginia Transportation Construction
Alliance**

Virginia Tech University

VAST

VJAS

Tips to Prep for Speaking, Digital-Style

Summary from Shameka Fennings of the NCSDDC.org

Virtual Conferences are the new norm so how do you transition and still connect your members. Everyone needs to feel appreciated. The program has to be top-notch. The following are tips for presenters. Remember the webinar audience will be able to know your excitement. Atmosphere shows your positivity. Stay the course. You are going to be great!!

Creating the Presentation-

- *Virtual slide decks (less is more)
- *Bullets should be brief (8 words max)
- *Imagery
- *Font size 36 points
- *Include a photo that might remain the entire time
- *Final slide include speaker's contact information and use WHOVA

Before the Presentation-

- *Equipment-computer, webcam, test all
- *Setting-ring light, green screen (not required)
- *Give outline to "in room assistance"
- *Watch your time (precise so you don't throw everyone off)
- *Always have a backup plan (pair the backup computer with mobile phone internet)

Day of the Presentation- (Speakers)

- *Choose a nice, solid-colored shirt to wear,
- *Close all windows, browsers and tabs on the computer
- *Turn off cell phones and mute email and app notifications to eliminate disruptions
- *Have a glass of water handy (no ice since it may clink)
- *Whatever is visible behind screen is neat and tidy-look professional
- *Light behind a computer makes you look better
- *Adjust the laptop or webcam so your head and shoulders fit the frame
Note: The top of the speaker's head will touch the top of the screen
- *Avoid feedback-wear a headset or use just the computer
- *Computer should be connected to the charger
- *Log in 10 minutes prior to the session
- *Have a clock visible to keep track of time

During the Presentation-

- *Do not read from your slides
- *Smile-happy viewers (use emotion and passion)
- *Take your time -don't talk too fast (slow with authority and digestible)
- *Moderator(s) will keep track of Q&A
- *Welcome your audience
- *Speak into the camera

***Go with the flow. If there is a mistake or a hiccup, then press forward.**

Self Confidence - A Zoom Ready Face

Contributed by Cheryl Coronado, Biology Teacher

Are you looking to earn more respect from your students, parents, faculty and others?



“Wearing makeup — but not gobs of Gaga-conspicuous makeup — apparently can help. It increases people’s perceptions of a woman’s likability, her competence and (provided she does not overdo it) her trustworthiness, according to a new study,

which also confirmed what is obvious: that cosmetics boost a woman’s attractiveness.” (“Skin Deep - Up the Career Ladder Lipstick in Hand!” By Catherine Saint Louis, October 12, 2011 The New York Times)

Perhaps you feel as do some women who were not happy to hear these findings. You are not alone, “I don’t wear makeup, nor do I wish to spend 20 minutes applying it,” said Deborah Rhode, a law professor at Stanford University who wrote “The Beauty Bias” (Oxford University Press, 2010), which details how appearance unjustly affects some workers. “The quality of my teaching shouldn’t depend on the color of my lipstick or whether I’ve got mascara on.”

Listen to the results of this authentic Harvard study. The conclusion, “cosmetics can significantly change how people see you, how smart people think you are on first impression, or how warm and approachable, and that look is completely within a woman’s control, when there are so many things you cannot control.”

Here are a few points one should keep in mind now that we know our students and others can “pin” our face or use “speaker view” as instruction occurs in a virtual classroom, such as on Zoom. Consider getting a good night’s sleep. If you’ve had too much salt or alcohol that night before, you will want to take steps to depuff your face. A good hydrating face wash that contains a toner, along with a quick face massage can help the lymphatic system drain the waste fluid. This is a good move for ladies and gentlemen.

Your good skincare routine should include an appropriate hydrating moisturizer and ladies may be interested in adding a color corrector to cover redness, dullness or conceal uneven areas of the complexion. A simple eye shadow, light shade on the lids, darker in the crease, and blend with a brush; can add dimension to the look. Some find curling their lashes and using a primer before applying mascara helps lashes look smoother, longer, and

well groomed. A light, highlighter in the inner eye makes one look awake.

A touch of blush, powder or cream adds a bit of color to the face. Blush color is quick and simple to place on the apples of the cheek. Don’t forget a little color on the lips. Ladies and gentlemen can use a little hydrating lip balm. That simple trick will bring your tired lips back to life. Ladies may prefer a gloss, tint of color or a neutral lipstick.

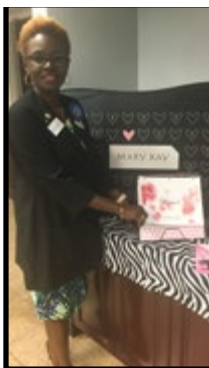
Are you ready for a simple makeover? Everyone can have their own personal beauty consultant. Just ask.

Follow this link to read more about the Harvard Study:

<https://www.nytimes.com/2011/10/13/fashion/makeup-makes-women-appear-more-competent-study.html>

Contributed by Cheryl Coronado, Biology Teacher, Mary Kay Independent Beauty Consultant.

www.marykay.com/mk4youbeautiful



Cheryl Coronado
Mary Kay Advanced
Product Consultant



Opportunities

- Private, ZOOM/GOOGLE MEETS personal consultations to enhance your professional image
- Great quality non-prescription skin care
- Make-up tips and gifts
- Unique custom gifts
- Quality for Smart Shopper 50% off products
- Earn an extra stream of income tax benefits.

Your purchase directly impacts me and my family!

“Follow” and “Like” me on Facebook

@mk4youbeautiful Join Club Coronado there.

Shop: www.marykay.com/mk4youbeautiful

Let’s talk! Call or Text me: 757-347-1686

Refer a friend. <https://forms.gle>



VAST Board of Directors Election

The biographies of the VAST Board of Directors nominations are listed below. Because our annual Professional Development Institute will be virtual this fall, our election will also be virtual. Since we will all be voting by “absentee ballot,” your ballot must be cast by November 2, 2020. All members will be sent an email that provides your membership ID number and well as a link to the virtual ballot.

To cast your ballot you will need your VAST Member ID number. To find your VAST Member ID at anytime, log in at www.vast.org and click on edit profile. Your number is on the first line. While you are there, edit your account information to insure you receive all the benefits of VAST membership.

Jill Collins - President Elect Candidate

During Jill Collins’ 24 years of teaching, she has been a conference presenter for VAST’s PDI, VCEC, VMI STEM, and IALR STEM-H. She is an active member of PLT, VSELA, VTEEA, ITEEA, and NSTA. Jill was a VISTA Coach for five years. Jill has taught elementary, middle, and high school sciences, and for the past five years has been a STEM Instructor at the STEM Academy in Pittsylvania County. She served as a STEM Content Writer for the Virtual Virginia K–8 Expansion Project and is a member of the PCS STEM Curriculum Committee as well. Jill served as co-director for Region VI for the past two years. During her involvement with VAST, Jill has contributed by communications with members, hosting a VDOE workshop, and assisting with and presenting at numerous VAST PDIs.

Stephanie Harry - President Elect Candidate

Stephanie Harry has served on the Vast board as the Chemistry Content Chair. She has presented at the Annual PDI for each of the past five years. She served on several VAST board committees and participated in Board of Directors meetings. Stephanie created the Chemistry page on the VAST website. She volunteered at the Region II Professional Development event and has submitted articles and pictures for the VAST journal and the newsletter. Stephanie is also an active member in several science related professional organizations such as AACT, NSTA, ACS and NOBCCHE.

Becky Schnekser - President Elect Candidate

Becky Schnekser has been a member of VAST for the past ten years; has taught for fourteen years; PDI presenter for the past nine years; Region 2 Director; Donna Sterling Exemplary Teacher Award recipient, and RISE awards recipient. She has been published in the VAST newsletter and Journal multiple times. Becky is a PreK-grade 5 science educator in Virginia Beach, a National Geographic Fellow, and was a field expedition team member with the Boiling River Project under the direction of Explorer Andres Ruzo. She is an advocate for science education and works to elevate teacher voice, to empower educators through authentic and application based professional development opportunities, and to promote their amazing work in classrooms.

Shirley Sypolt - President Elect Candidate

Shirley Sypolt is a VAST Life Member and has been a member of VAST for over 20 years. Shirley was the VAST President in 2013-2014 and in 2016-2017. She recently retired after 26 years of teaching grades 5, 3, and 2 at Cooper Elementary School in Hampton, where she was the science lead for 10 years. She earned a MAT (Master of Arts in Teaching Environmental Education K-12) degree at CNU, taking night classes. Shirley taught at CNU as an adjunct professor, at night, for 8 years. Shirley created and wrote an activity published in the 2003 Project WILD K-12 Curriculum and Activity guide. In 2003, she received a Citation of Distinguished Teaching from NSTA and a Presidential Award for Excellence in Mathematics and Science Teaching and renewed for National Boards in 2005. I have been a presenter at VAST and NSTA numerous times.

Robin W. Curtis - Secretary

For the past five years Robin Curtis has been the secretary for VAST. A Lifetime member, she joined VAST in 1990 and has been on the Board, served as Corresponding Secretary, Vice President and President in 2002. Robin is a member of VAS and has been a part of VJAS since 1995 and presently serves as am the Associate Director for VJAS. Robin is also a

member of NSTA and has served as District VIII Director 2006-2009 as well as served on many NSTA Committees. After teaching in the classroom for 30 years in both elementary and secondary, Robin retired to become an Adjunct Faculty for Virginia Commonwealth University and then William and Mary.

Tonya Bates - Region II Director

Tonya Bates has been a science teacher for 18 years at Hugo A. Owens Middle School. She has been the science department chair for the last 14 years and a member of VAST and NSTA for multiple years. Tonya sponsors a science club and has been a mentor multiple times for new teachers. Since 2006, she has been an instructor for JLab's Science Activities for Teachers (JSAT)) program. She has received the following awards including the AFCEA, the Lowe's Outdoor Classroom Grant, and was the Teacher of the Year for 2010-2011. Tonya has published several items for Chesapeake Public Schools for other teachers to utilize in their classrooms.

Paula Irwin - Region IV Co-Director

Paula was served on the Virginia SOL Earth Science End of Course Alignment Review Committee (Committee Leader), Earth Science Item and Test Review Committee and Chemistry Item and Test Review Committees. She was also chosen to serve on the New York State Regents Chemistry exam committee when she lived in New York State. As a science teacher for 22.5 years, Paula has been a member of several science organizations, including the American Chemical Society, Sierra Club, Smithsonian Institute and Arbor Day Foundation. In addition to VAST, she currently is a member of VSTE and ISTE. Paula was an adjunct chemistry and biology instructor for Syracuse University's Project Advance. Additionally, Paula taught seven VAST PDI workshops as well as four district-level workshops. She has Virginia teaching endorsements in Chemistry, Biology, Earth Science and Gifted, as well as a certificate in Educational Technology. Currently Paula is serving as the Prince William County Schools' Instructional Technology Coach.

LoriAnn Pawlik - Region IV Co-Director

LoriAnn's background with VAST began with the Chantilly conference when she was selected to attend on behalf of her district. LoriAnn said "It was amazing and so valuable for me to learn new strategies and interact with other "science people". She has enjoyed and presented at VAST Conferences: 2019- 1. Sterling Institute on PBL with NOAA on Climate Change and the National Geographic Educator Certification Process; 2018 – Wonder Science Kaleidoscope; and 2017 – Family STEAM Nights. LoriAnn came into public school education in 2012 after working in engineering, then she was traveling and homeschooled for 15 years as a military wife. During 2019-2020, she served as an elementary school Assistant Principal. She plans to return to the classroom in 2021 probably as a high school Physics Teacher.

Tom Fitzpatrick - Region VI Director

Tom Fitzpatrick has been active in Science Education for 34 years, serving 21 years as a middle school science teacher and 13 years as a science and now science and mathematics supervisor. He has presented at many VAST Professional Development Institutes and is a trainer for Project WET, WILD, Growing Up WILD, and Project Learning Tree. He served as a Certified Trainer for the JASON Project and as the VAST Region VI Regional Director. Tom recently served as the VAST President and Past-President. While still in the classroom Tom was a Virginia Regional Teacher of the Year. Tom was told that before he became president and had other duties, teachers looked for his name in the program so that they could attend his sessions.

Ben Campbell - Region VIII Director

Ben Campbell has been a member of VAST since joining the faculty of Longwood University and moving to Virginia in the fall of 2016. Previously Ben served as the Treasurer of the Central Arizona Chapter of the Society for Conservation Biology (2005-2007) and is currently Co-Director of Region VIII. Ben was appointed to this position in August 2017 and elected in November 2018. In addition to VAST, he is a member of the NARST, ASTE, NSTA, NABT, and VAS. As a graduate student, Ben was a teaching assistant, instructor of record, and student teacher supervisor for many semesters at Arizona State University and the University of Georgia. Before completing his education and joining Longwood, he was a high school science teacher for five years in San Antonio, Texas. At Longwood, he is the Secondary Science Education Program Coordinator. He currently teaches both biology content and science education courses. His research in science education focuses on teacher knowledge and planning for units of instruction.

White House Announces 2019 PAEMST Awardee in Science



Myron Blosser, who teaches biology and biotechnology at Harrisonburg High in Harrisonburg, received the presidential award for science. Blosser also serves as the co-director of the Governor's STEM Academy at the high school.



Myron Blosser, Harrisonburg High School

“My greatest strength has been bringing people together, building excitement around an idea, enabling others to reach their potential, and together achieving great success,” said Blosser. “This award is an affirmation that teamwork and collaboration are key to providing exemplary educational opportunities for students.”



2020 Virginia Outstanding Biology Teacher Award (VOBTA)

Kathy Frame

Every year, the Outstanding Biology Teacher Award (OBTA) program attempts to recognize an outstanding biology educator (grades 7-12 only) in each of the 50 states; Washington, DC; Canada; Puerto Rico; and overseas territories. Candidates for this award do not have to be NABT members, but they must have at least three years of public, private, or parochial school teaching experience. A major portion of the nominee's career must have been devoted to the teaching of biology/life science, and candidates are judged on their teaching ability and experience, cooperativeness in the school and community, and student-teacher relationships. OBTA recipients are special guests of Carolina Biological Sciences at the Honors Luncheon held at the NABT Professional Development Conference, receive gift certificates from Carolina Biological Supply Company, resources from other sponsors, award certificates, and complimentary one-year membership from NABT. At the state level, the Virginia Outstanding Biology Teacher Award (VOBTA) is presented at the annual Virginia Association of Science Teachers (VAST) Award Ceremony. This year, the VOBTA committee is proud to recognize:

**The 2020 Virginia OBTA winner
Alice Scheele, Patrick Henry High School,
Ashland Virginia**



2021 USA Biollympiad: Register September 14

Kathy Frame

The USA Biollympiad (USABO) is a competition for high school students who are passionate about biology. The competition has four tiers. The first tier, 50-minute Open Exam, is open to all students nationwide. In the second tier, the top 500 students in the USA from Tier 1 sit for a 2-hour exam to determine the top 20 students in the USA. These students identified as National Finalists move forward to the third tier the National Finals, a two-week training program with lectures, discussions and hands-on lab training conducted with instructors from top level universities to include Stanford, MIT, UC San Diego, George Washington University and others. Students are evaluated during this program and the top four students compete against 80 other countries in Tier 4 International Biology Olympiad (IBO). Students at each tier have declared that participation in the USABO has been a life-changing experience.

Your students who participate in the USABO will have the opportunity for this life changing experience by sharing their passion for biology with like-minded students nationally and internationally and establishing lifelong relationships that extend into their future careers.

Registration opens September 14. Please visit the USABO website to register and for more information at <https://www.usabo-trc.org/>.



Board of Education Approves Science Textbook List

On September 17, 2020 the Virginia BOE approved the proposed Science Textbook list to support instruction of the 2018 Science Standards of Learning. All books submitted by publishers underwent two different levels of review to ensure that they accurately reflect the content outlined in the 2018 Science Standards of Learning and to ensure that the books reflect the rich diversity of Virginia. The VDOE science team is grateful for the many hours our review teams spent on reviewing these textbooks and for making recommendations to guide divisions in the textbook adoption process.

The 2018 Science Standards of Learning reflect the integration of the scientific and engineering practices to support conceptual understanding of science topics. The instruction of these standards are intended to allow students to see themselves as able to “do science” while engaging in place based activities and experiments. We ask that divisions also consider how the textbooks reflect the diversity of their classrooms. The statements/questions below may be used as a baseline when reviewing textbooks for use in classrooms.

- There are opportunities in the textbook for students to view themselves, their community, and their cultural backgrounds in science.
- The textbook provides opportunities for teachers to design instruction that allows for students to engage in authentic science experiences and allows all students the opportunity to “do science” and develop scientific and engineering practices.
- The Nature of Science reinforces the fact that science is an ongoing, collaborative, and society driven endeavor that leads to the development and revision of scientific theories and laws. The textbook reflects the diversity of scientists and the impact of cultures involved in the development of scientific theories and laws, particularly those theories that are emphasized in the 2018 Science Standards of Learning.
- Would you recommend this textbook as a resource that teachers may use to address science content outlined in the 2018 Science Standards of Learning through the lenses of culture, race, gender, and backgrounds of their classroom populations?

As teachers, we know that the textbook is just one tool in our resource toolbox. As we seek to engage and excite students with science, we need to be sure that our instruction is relevant and provides opportunities for students to have ownership in their learning through providing experiences that encompass a variety of levels of inquiry based learning.

We should all continuously reflect on our instruction to determine if we are providing equitable experiences to all students in our classrooms.

Anne Petersen, Ph.D.
Science Coordinator
Virginia Department of Education

[Link to VDOE Textbook List](#)



FREE NASA OPPORTUNITIES FOR VIRGINIA HIGH SCHOOL STUDENTS!

Virginia Space Grant Consortium (VSGC) provides the following FREE STEM (Science, Technology, Engineering and Math) opportunities for Virginia high school students in grades 10 through 12.

10TH GRADE

Virginia Space Coast Scholars (VSCS) – Online course for 10th grade students focusing on missions flown or managed by NASA Wallops Flight Facility on Virginia’s Eastern Shore, with a week-long summer academy program at NASA Wallops Flight Facility. <https://vsgc.spacegrant.org/course/>

11TH AND 12TH GRADE

Virginia Aerospace Science and Technology Scholars (VASTS) – Online course for 11th and 12th grade students focusing on NASA’s human spaceflight missions and the Journey to the Moon and on to Mars with a week-long summer academy at NASA Langley Research Center. Students can earn up to four free dual enrollment college credits. <http://vsgc.odu.edu/VASTS/>

11TH AND 12TH GRADE

Virginia Earth System Science Scholars (VESSS) – This interactive online earth system science course for 11th and 12th grade students features NASA scientific research and data. Students can earn up to five dual enrollment college credits and can also be selected to attend a summer academy program at NASA Langley Research Center. <http://vsgc.odu.edu/VESSS>
Our online course applications are OPEN UNTIL OCTOBER 25th for 10th – 12th grade students to apply.

TEACHERS: Each of our programs also hires a cohort of Master Teachers to grade student work in our virtual environment from December through April. Teachers, please refer to each program’s website for details on becoming a paid Master Teacher for one of these programs!

YOUR NEXT ADVENTURE IS JUST ONE CLICK AWAY



Click the logos to learn more about our FREE programs.



An interactive online STEM learning experience for 11th and 12th-grade students highlighted by a 7-day residential summer academy at NASA Langley focusing on human spaceflight. Up to 5 dual enrollment credits.



An interactive online STEM learning experience for 11th and 12th-grade students highlighted by a 7-day residential summer academy at NASA Langley, focusing on the Earth’s responses to changes to climate, weather, and natural hazards. Up to 5 dual enrollment credits.



An interactive online STEM learning experience for 10th grade students highlighted by a 7-day residential summer academy at NASA Wallops focusing on the current missions at Wallops.



BLAST offers rising 9th and 10th graders a 3-day, on-campus college experience filled with hands-on STEM activities! Participants strengthen their passion for STEM and gain insight into exciting career paths.



Virginia Space Grant Consortium



Donta the Dragonfly Explores the Dominion Fall 2020

Cindy Duncan
Teacher Professional Learning Coordinator
Chesapeake Bay Foundation



Donta was last seen flying along the coast in Virginia Beach as she attended the annual Spring Gathering of Dragonflies at Pleasure House Point Natural Area. Soon after that adventure she found herself in COVID-19 lockdown. No exploring and adventuring anywhere as the Dominion faced an unprecedented event of shutting down for safety.

While she settled at home and acquired new skills for online learning and exploring, she came across some amazing learning materials for families, teachers and students offered by the Chesapeake Bay Foundation. In April they launched **Learn Outside, Learn at Home (LOLAH)**. CBF educators created new content from their own backyards and home offices so educators and students could keep learning outside and learning about the environment. They developed a variety of student investigations and activities, blog posts on the environment and nature journaling, and videos to help students learn at home. For more information visit: <https://www.cbf.org/join-us/education-program/resources/learn-outside-learn-at-home.html>

Across the Dominion families, educators and student learned more about their local environment, watershed and actions they can take to improve the water quality.

As Donta continued to explore and investigate the Chesapeake Bay Foundation website, she encountered newly developed resources for educators to utilize as they virtually return to school. **ONLINE WATERSHED LEARNING (OWL)** offers a live and local learning program designed to provide students the opportunity to discover their unique species, ecosystems and examine the most pressing environmental challenges of the watershed. Donta, who has visited a CBF Field experience was surprised when she learned that the expert educators from CBF could now join teachers and students on their computers to lead inquiry-based activities and discussions. Students will be inspired to investigate local environmental issues relevant to their communities and engage in actions to help **Save the Bay**. To find out more about the 45-minute interactive lessons and themes available visit: <https://www.cbf.org/join-us/education-program/chesapeake-bay-foundation-online-watershed-learning.html>

If you know of an online learning platform offered for students to help them connect to their environment, contact Odonat at cduncan@cbf.org.

Stay safe.

Chesapeake Online Watershed Learning – Live and Local

Chesapeake Bay Foundation is offering Chesapeake Online Learning (OWL) Live & Local experiences to provide middle school and high school students the opportunity to explore their environment with guided investigations. Our educators will work with teachers to curate a student directed investigative experience from our library of videos, issues and resources. We have designed this learning adventure to be correlated

[Make a Reservation Today](#)

State of the Bay

How do scientists determine the health of the Chesapeake? Join this learning experience to uncover key elements for assessing the health of our watershed. Along the way we will examine our own connections to indicators for the State of the Bay and decide how relevant these factors are to our communities.

- Habitat ([State of the Bay](#)) ([State of the Bay](#))
- Nutrients – Too Much of a Good Thing [Nutrient Scavenger Hunt](#) ([Too Much of a Good Thing](#))
- Sediment in Streams ([Sediment in Streams](#)) ([Reducing Sediments](#))

Watershed Connections

What happens when rain hits the land? This experience will examine the biggest threats to the Chesapeake Bay. We'll scour our own neighborhoods looking for sources of nutrient or sediment pollutants and create ideas on how to reduce them.

- Riparian Buffers and Clean Water ([Riparian Buffers and Clean Water](#)) [Riparian Buffers](#)
- Reducing Erosion [Reducing Erosion](#) [Reducing Erosion](#)
- Nutrients – Too Much of a Good Thing [Nutrient Scavenger Hunt](#) ([Too Much of a Good Thing](#))

Chesapeake Bay Ecosystems

The Chesapeake Bay is an estuary, a place where fresh and saltwater mix to provide a unique habitat for a vast array of birds, mammals, insects, and fish. Get up close and personal with some of the Bay's coolest critters as you contemplate how each is adapted to live in this environment.

- Learn About Fish ([Fish Adaptations](#)) ([Learn About Fish](#))
- Underwater Grasses ([Back to Basics: Underwater Grasses](#)) ([Bay Grasses](#))
- Blue Crabs 101 ([Blue Crabs 101](#)) ([Blue Crabs 101](#))

to state education standards, accommodate the needs of individual classrooms, and engage students in actions to help save the Bay. You can select any of the following topics and apply to have one, two or three live Chesapeake OWLs with a team of our field educators.

Purple: Videos

Green: Investigations

Underlined Investigation: Student Editable

Freshwater Ecosystems

What makes a healthy freshwater stream? This experience will take a close look at the key indicators of health and the types of pollution that have the biggest impact on our tributaries. We'll study the animals that live in freshwater, examine fish anatomy and uncover the strange world of fresh water mussels.

- Healthy Streams ([Fresh Water Stream Health](#)) ([What Makes a Healthy Stream](#))
- Riparian Buffers and Clean Water ([Riparian Buffer & Clean Water](#)) ([Riparian Buffers](#))
- Fresh Water Mussels ([Why Are Fresh Water Mussels So Cool](#)) ([Fresh Water Mussels](#))

Oysters and A Clear Bay

Why does the Bay depend on oysters? How can a small animal that doesn't even move have an impact on you? In this experience, we'll go on a deep dive to learn about these essential creatures and calculate how many oysters you'd need to filter the water your family uses each day.

- Oyster Filter Power ([Oyster Filter Power](#)) ([Oyster Filter Power](#))
- Biology of an Oyster Reef ([Oyster Dissection](#)) ([Oyster Dissection](#))
- History of Oysters ([Oyster Habitat Observations](#)) ([Oysters in a Clear Bay](#))

Forests, Wetlands and Healthy Water

Trees and wetlands are among nature's most important natural filters. They clean our air and water. They also provide vital habitat for animals. But how much do you really know about them? Join this experience to learn how to identify trees, see the superpowers of wetlands and how scientists monitor water quality of our rivers and streams.

- Riparian Buffers and Clean Water ([Riparian Buffer & Clean Water](#)) ([Riparian Buffers](#))
- Why is Water Quality Important? ([Why is Water Quality Important](#)) ([Water Quality Testing](#)) ([What is Water Quality](#))
- Wetlands ([Forested Wetlands](#)) ([Wetlands](#))



Cindy Duncan is a VAST Board member and leads the Environmental Literacy Standing Committee.



Transforming VJAS for 2020-21: Mentors, Virtual Symposium, More Awards

Dr. Julia H. Cothron
STEM Leader and Author

Virginia Junior Academy of Science Representative to VAST Board

VJAS advances STEM learning by engaging students, grades 7-12, in STEM research, offering a STEM competition and holding a statewide symposium in May of each year. Generally, over 600 students compete in about thirty different sections, which are subdivided for middle and high school students. Some examples of categories are botany, medicine and health, environmental and earth sciences, engineering and mathematics.

Prior to the symposium, students complete an individual or team project that is supervised by teachers, mentors or parents. Students write a formal research paper that is submitted to the VJAS competition. STEM professionals read the research paper, score it using published criteria and select students to attend the annual symposium. At the symposium, STEM judges score the papers and assess students' understanding through a presentation and/or questioning. By presenting at VJAS, students meet one of the criteria for a high school diploma seal, the *Board of Education's Seal for Excellence in Science and the Environment*. In each category, section awards are presented for first, second, third and honorable mention (up to 3). Special interest, honor and scholarship awards are determined by special teams of judges.

The Virginia Academy of Science (VAS) established VJAS in 1941 and continues to provide leadership, the symposium site and a large number of volunteers for the event. Now, eighty years later, VAS is transforming VJAS by virtually providing mentors and citizen science programs and moving to a virtual submission, judging and symposium format. And, as throughout its eighty years, VJAS supports Virginia's educational goals for its students.

TRANSFORMATION 1: VAS Offers Virtual Mentors and Citizen Science Programs

- VAS mentors from Virginia's colleges, universities and research centers are reaching out to assist middle and high school classrooms with a research project of local interest. To date, more than thirty mentors have been linked with classrooms.

Become a Mentor: <https://secure4.hsc.edu/forms/view.php?id=117158>

Secure a Mentor: <https://secure4.hsc.edu/forms/view.php?id=116443>

- VAS launched Virginia Bioblitz to promote exploration among K-16 students by encouraging them to document the biodiversity around them using the *iNaturalist App*. Officially launched on September 26, VAS envisions students and citizens "blitzing" year-round in their areas of interest, holding local "blitzes" and/or using *iNaturalist* with student research projects. Students can use *iNaturalist* as a tool for making a descriptive study of an area, comparing areas potentially impacted by prior variables (ex-post facto study) or investigating the impact of an intervention on an area. *iNaturalist* data can be used for data-mining projects, statistical studies or to acquire information needed for an engineering project.

Visit Virginia Bioblitz Page: <https://sites.google.com/view/virginiabioblitz/>

- James Madison University is supporting student research through an on-line guide for accessing the STEM resources in its library.

JMU Guide: <https://guides.lib.jmu.edu/VASJR>

TRANSFORMATION 2: VJAS Uses Virtual Submission and Judging Process

- VJAS's new virtual platform has been used by hundreds of schools and organizations to support various science competitions. A proven platform, it enables school sponsors, participating students and VJAS readers and judges to securely enter information, upload documents, review research papers and provide feedback.
- The VJAS Virtual Submission Platform is being launched in sections.

September 1 – January 15: School Membership window is open.

December 15 – January 15: Individual Membership Window will be available.

January 16 – February 24: Student Project/Paper Submission Window will be available.

February 24 – March 1: Sponsors Confirmation Window will be available.

March: Readers will use the platform to review, score and recommend papers for VJAS Symposium. Later, students will receive readers' scores and/or comments.

March 22: Begin checking the VJAS website for student papers accepted for 2021 VJAS Symposium

April: Students will use the platform to apply for scholarships and awards.

April – May: Judges will use the platform to review papers and will access other information being used to determine Category Winners. Later, students will receive judges' scores and/or comments.

- The VJAS Website contains information on the virtual submission platform and the written handbook, which describes VJAS procedures in detail.

On-Line Submission Platform: <https://vjas.org/on-line-submission.html>

VJAS Handbook of Official Guidelines & Rules, 2020-21: <https://vjas.org/handbook.html>

TRANSFORMATION 3: VJAS Will Hold a Virtual Symposium in May 2021

- VJAS will hold a virtual symposium in May, probably on a Saturday, with the date announced on the VJAS website.
- Students will access keynote speakers and the Category Awards Ceremony through Zoom, or a similar platform.
- Details for student presentations in the various categories are being developed. Students may make a short virtual presentation, focused on specific questions, and/or be interviewed by judges that have read the paper.

- The virtual symposium will eliminate geographic barriers, reduce conflict with school-related activities and be more cost-effective.

TRANSFORMATION 4: VJAS Will Expand Special Awards

- In early June 2021, VJAS will hold an event to announce special awards and scholarships. Annually, VJAS presents up to nine disciplinary-based awards, eight awards based on donor's interest, three scholarships and several recognition awards for teachers and students.
- Middle school honor awards have been expanded and are applicable to individuals and student teams, which have up to four members. Two new awards are the *Outstanding Eighth Grade Project Award* and the *VJAS Grand Middle School Award*.
- High school honor awards have been revised and expanded, with both individuals and teams considered. A *VJAS Grand High School Award* will be presented and the VJAS Delegates to the American Junior Academy of Science will be selected from Grades 9-11.

IT'S NOT A TRANSFORMATION: VJAS Supports Virginia's Educational Goals

Through VJAS students increase their understanding of Virginia's STEAM-H Standards and develop technical reading, writing and presentation skills. Creative and critical thinking are required to design projects and to rationally review plans, data and conclusions. Students can use the criterion-based feedback from VJAS readers and judges for continuous improvement. Students acquire career information by interacting with mentors, STEM readers or judges and visiting a university campus. Students have the opportunity to interact with diverse individuals from varied schools and communities.

Some VJAS participants develop citizenship skills by leading as a VJAS officer or volunteering at the annual symposium. Officers produce a publication, *The Voice*, which is distributed statewide through the VJAS network. In fall of 2020, VJAS Offices initiated a mentorship program that is accessed through VJAS school sponsors. High school students, who previously presented at VJAS, are virtually mentoring middle school researchers.



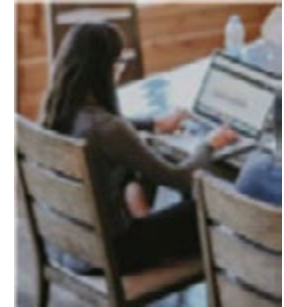
GEORGETOWN UNIVERSITY

Online Vaccine Educational Research Study

What is this study about?

Researchers from Georgetown University Medical Center are conducting this study to help young people learn more about vaccines-what they are, what they do, and how they can help prevent diseases.

This research study has been approved by the Georgetown University Institutional Board (IRB) and is designed to find out if 7th grade students will learn new information after watching educational videos about vaccines.



Who can participate?

This study is open to any 7th grade student in the Maryland and Virginia public school systems with access to a computer or mobile device with internet capability.

What will you need to do if you decide to participate?

It will take about 80-90 minutes to complete the study. Participants will be asked to:

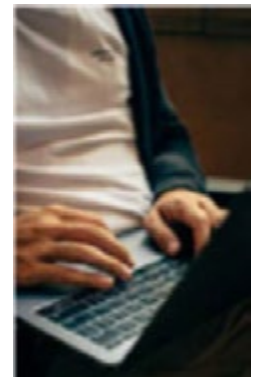
- Complete a brief survey with 16 multiple choice questions (10 minutes)
- Watch some educational videos. One group will watch some educational videos about vaccines. The other group will watch educational videos about the biology of cells. This will take about 60 minutes.
- Complete another brief survey with 20-25 multiple choice questions (10-15 minutes) after watching the videos.

One of the student's parents will need to give permission first and then the student will also need to sign a form agreeing to be involved in this study.

What will you get for participating?

All participants will have the opportunity to view the vaccine videos which contain important information about vaccines.

Participants who successfully complete the study will receive a check for \$40 for contributing their time to this research.



What if you have any questions?

If you are interested in participating or have any questions, please contact Dr. Edward Lewin's research team at el617@georgetown.edu.

Mapping With Drones Workshops Offered Online

October 9, 2020 --Small Unmanned Aircraft Systems (sUAS), also known as drones, are increasingly being employed as data collection platforms to support an array of applications that span disciplines and industries, including planning, natural resource management, marketing, structural inspection, agricultural production, permitting, STEM education, and public safety.

The Virginia Geospatial Extension Program will host a series of three-day introductory-level Mapping With Drones online workshops. No prior knowledge or experience with drones is required.

The workshops are targeted to natural resource professionals, planners, public safety professionals, agricultural operators, realtors, inspection teams, and educators.

The curriculum includes FAA and sUAS terminology, current federal sUAS regulations, different sUAS platforms and associated applications, and much more. At the conclusion of the workshop, participants will be prepared to take the FAA's Remote Pilot Knowledge Test (aka Part 107) and understand the steps to plan, conduct, and document a commercial sUAS operation safely and legally. They will also gain experience processing sUAS collected data.

The same curriculum will be presented during each of the following sessions:

- December 7-9, 2020
- January 5-7, 2021
- February 23-25, 2021
- March 8-10, 2021



General registration for the workshop is \$150; Virginia Cooperative Extension agents are eligible for a discounted rate. Visit the workshop website for additional details and a link to register. Please register at least one month in advance in order to receive workshop materials in time.

The workshop is sponsored by the Virginia Geospatial Extension Program in partnership with Virginia Cooperative Extension, Virginia Tech's Conservation Management Institute.

Conservation Management Institute and Department of Forest Resources and Environmental Conservation, VirginiaView, and the Geospatial Technician Education–Unmanned Aircraft System (GeoTED-UAS) project team.

For additional information, email John McGee or Daniel Cross.

How Did VAST PDI Go Virtual?

Hit with the full reality of Corona virus, the VAST leadership cycled through canceling the annual PDI, planning an on-site conference and hoping the virus would allowed us to actually have a traditional PDI; or would a virtual PDI be possible?

Could we cancel our reservation for the hotel? Could we pay for the hotel, meals, mailings if reservations were low? What could a virtual PDI look like? What about exhibitors?

The PDI committee met and brainstormed. Barbara Adcock shared the experience she had attending a virtual conference that used the WhoVa platform.

Suddenly questions had answers. Yes, they could handle exhibitors. Yes, both prerecorded and live presentations. Yes,

attendees can network and meet new and old friends and colleagues. Yes, we could create a library of prerecorded presentations on the VAST website when the PDI was over.

It hasn't been easy, but it was exciting to learn new skills and to revamp the process of planning a PDI. VAST adapted. Now we realize we have learned new ways of doing things that may be used even after things become "normal".

We can't wait to see what you think. Join the community of science educators, national speakers, and exhibitors who were impressed enough to commit to providing 37 exhibits, 125 presentations, and 4 general sessions. How about you? Register and join the community network using the Whova app. "See you there!"



Digital Demos

from the **Science Museum of Virginia**

Groups can explore the world with a live, virtual Digital Demo!
From dissections to engineering challenges, there is
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Special thanks to our
premier partner: 

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Mission of the Virginia Association of Science Teachers (VAST)

- *inspire students,*
- *provide professional learning opportunities,*
- *build partnerships,*
- *advocate for excellence at the school, local, state and national level.*



Please send articles, letters to the editor, or labs by the submission deadline, January 1, 2021, for inclusion in the next Newsletter.

Please consult the website for up to date information, VAST forms for awards and mini-grants, advertising and current PDI information: vast.org



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