

Up To Date

NASA's Independent Verification & Validation Program
Educator Resource Center Newsletter
Fairmont, West Virginia

Aug.-Sept. 2013

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FIRST VISTA Robotic Specialists Join ERC

Ryan Headlee and Derek Czarniecki are the newest members of the ERC team.

Derek Czarniecki is an Americorp FIRST VISTA, (Volunteer In Service To America, For the Inspiration and Recognition of Science and Technology), who will be working in the Education Resource Center (ERC) for the upcoming year. He graduated from West Virginia University with a degree in Business and Sustainable Design, and has done work on historical restorations in southern West Virginia. When not in the ERC or the field, Derek can be found roaming the mountains, he is a avid outdoorsman who enjoys white-water, mountaineering, hiking, cycling, gardening, hunting and any other excuse



Derek Czarniecki pursuing his love of kayaking.

he can find to be outdoors. He is also known as an active member of the community who has served as a volunteer



Ryan Headlee with the ERC's converted Bombbot

firefighter, and has taken a hands on approach to local watershed issues by volunteering with Friends of Cheat, and American Whitewater.

Ryan Headlee graduated from Penn State with a bachelor's in Mechanical Engineering. He is a member of the Pennsylvania Air National Guard, a Reserve of the Air Force, where he worked as an jet engine mechanic for 5 years until taking a position as an engine manager which he still works at one weekend a month. He worked for PennDOT for 2 years auditing and inspecting construction materials for highway projects in southwestern Pennsylvania. He has since joined the ERC to teach robotics to middle and high school students, targeting underserved youth in West Virginia. He is a student pilot, motorcyclist and has an interest in almost

NASA Heads To The Moon

NASA's Lunar Atmosphere and Dust Environment Explorer (LADEE, like "laddie") is a robotic mission on its way to orbit the moon to gather detailed information about the lunar atmosphere, conditions near the surface and environmental influences on lunar dust. A thorough understanding of these characteristics will address long-standing unknowns, and help scientists understand other planetary bodies as well.

The spacecraft was successfully launched at 11:27 p.m. EDT Friday, Sept. 6, from Pad 0B at the Mid-Atlantic Regional Spaceport, at NASA's Wallops Flight Facility, Wallops Island, Va. LADEE is on its way to arrive at the moon in 30 days, then enter lunar orbit

anything mechanical or electrical and in anything that flies.

School groups, club groups (4-H, Scouts, Boys and Girls Club), and Home school groups may contact Derek for help with Jr. FLL and FLL teams while Ryan will assist with FTC and FRC teams. Their ERC offerings include classroom or club visits to teach robotics, help in starting an age appropriate FIRST LEGO team, assisting in student robotic workshops at the ERC, helping prepare for and run WV robotic scrimmages and competitions, and promoting robotics at conferences and other meetings throughout West Virginia.

To contact Ryan or Derek:

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LADEE's launch was visible from Virginia to Massachusetts, and the fireball was captured by photographers and videographers in many locations. Crowds gathered in Times Square in New York and on the steps of the Lincoln Memorial in Washington to watch. The photograph above was taken by NASA's Ed Campion in Annapolis, MD.

STEM Activities Around WV



Students in Monongalia's Kaleidoscope afterschool program at Brookhaven Elementary build team working skills as they move "toxic waste" with one of the ERC's hydraulic robotic arms. Photo: Linda Jackson



Elkins High School students view the sun through a solar telescope that allows safe viewing of sunspots, solar flares, and coronal mass ejections.

Photo: Josh Revels

Robots have been programmed by Morgantown Learning Academy students to move through a maze during a student robotics workshop at the ERC.

Photo: Pam Casto



Educators learn the ins and outs of using telescopes and hands-on astronomy activities to engage students in the study of the solar system and the universe.

Photo: Jaime Ford



Viewing the Milky Way Galaxy in different wavelengths of the electromagnetic spectrum allows scientists, educators, and students to learn much more about our home galaxy.

Photo: Jaime Ford

Meet Chris Matheny ERC Intern

The newest Fairmont State University intern in the ERC is chemistry education major Chris Matheny. Chris replaces Josh Revels who is now a chemistry teacher at Elkins High School.



Chris Matheny, ERC Student Intern helps a student observe the sun.

Chris is an outdoor guy. From Clarksburg, WV, he loves camping and fishing throughout the state. He plans to continue his education by going to graduate school and eventually getting a Ph.D. in chemistry.

At the ERC he is assisting with preparing materials for workshops, creating reports for NASA's IV&V, organizing all of our equipment and printed material and much more. Rocketry, robots, and space exploration are his favorite ERC topics.

Lights On After School Marion County

Over 280 Marion County students attended the *Lights on Afterschool* program at Valley Worlds of Fun in Fairmont, WV on Thursday Oct. 17. *Lights On Afterschool*, is a nationwide celebration of afterschool programs that attract 1 million Americans to 7,500 events across the country. The ERC participated in the event with hands on rocketry activities and displays about rocketry workshops available for educators and students. Also, included was information on the Team America Rocketry Competition where last year two WV teams scored in the top twenty nationwide.



“Rocket boys” launch straw rockets toward a “Mars” landing zone.

Careers in the Corridor

The WVHTCF Mollohan Research Center was the scene for Careers in the Corridor on Oct. 10. Technology companies from around the park created displays that allowed high school students to learn about high tech jobs available right here in West Virginia. Students were able to talk to engineers and professionals involved in these careers and come



GLOBE Program trainer Dr. Rick Landenberger informs students about careers in remote sensing.



to an understanding of the education necessary to obtain a high tech job.

Ryan Headlee of the ERC explains ways to get involved in robotics.

Day in the Park



Astronaut Susan Kilrain explains to students from around WV what it was like to pilot the space shuttle. Her talk was one of many activities that took place on the annual Day In The Park celebration on Oct. 9.



The Seattle Museum of Flight presented the history of flight from birds to rockets. Shown above are students learning about hot air balloons.



The Harlem Shake and NASA Gangum stlye were big hits between the Astronaut Visit, Carnegie Science Museum presentation and the History of Flight by the Seattle Museum of Flight. Also as students arrived the ERC and provided information and displays on topics such as robotics and IR cameras.

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Links to Student Competitions

First Lego League Robotics:

<http://www.firstlegoleague.org/>

Real World Design Challenge:

<http://www.realworlddesignchallenge.org/>

Team America Rocketry Challenge:

<http://rocketcontest.org/>

Where in WV is the ERC?

Aug.-Sept. Workshops in Red

Aug.-Sept. Equipment Loans in Blue

To schedule a workshop:

Contact the ERC by calling 304-367-8436 or emailing:

pamela.casto@ivv.nasa.gov

To schedule equipment for loan: First check the equipment loan calendar on the ERC web-site to see if the equipment is available for the dates desired. Then email Nicole Culp who will schedule the dates.

nicole.culp@ivv.nasa.gov

Check us out on Facebook:

[NASA IV&V Facility Educator Resource Center](#)

And Twitter: @NASAIVV_ERC

Events:

Oct. 1...Robotics Student Workshop at ERC (filled)

Oct. 2...Aviation Student Workshop at ERC (filled)

Oct. 2, 3...Lunar /Meteorite Certification at FSU (filled)

Oct. 4,5,6...Rocket Boys Festival in Beckley

Oct. 9...Day in the Park (Students visit I-79 technology park) (filled)

Oct. 14...Robotics Explorations/We/Do's Teacher Workshop at ERC
1:00-4:00 pm (spaces still available)

Oct. 18...Aviation Student Workshop (filled)

Oct. 26-27...Rocket Club Workshop

Oct. 31-Nov. 2...WVSTA at Lakeview Resort in Morgantown



Quotes of the Month: Nature

"I would feel more optimistic about a bright future for man if he spent less time proving that he can outwit Nature and more time tasting her sweetness and respecting her seniority."

— [E.B. White, Letters of E. B. White](#)

"We have lived our lives by the assumption that what was good for us would be good for the world. We have been wrong. We must change our lives so that it will be possible to live by the contrary assumption, that what is good for the world will be good for us. And that requires that we make the effort to know the world and learn what is good for it."

— [Wendell Berry, The Long-Legged House](#)

