A. Linwood Holton Governor's School

Fall 2010 Newsletter

www.hgs.k12.va.us
Virginia's First Virtual Governor's School

Contents

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Director's News

We here at HGS are very excited about the new school year!

We are pleased to report that every school system in our geographic region is now a partner with us in providing challenging and relevant courses to their high school students. In total that makes 16 school systems and about forty high schools (covering a region a little over 4,000 square miles).

We are also pleased to report that in May of 2010 we completed our school's first Full-Site Evaluation. A Team of experienced educators from all across the Commonwealth, led by representatives from the Virginia Department of Education, spent four very busy days with us looking carefully at almost everything we do. Their findings were most complementary and particularly stressed the quality of our course offerings and the way everyone in our region worked together on behalf of our students.

And finally I am happy to report that student interest in our program is strong and that enrollment in our eleven courses this Fall (which includes Fall Semester and Year-Long Course enrollment figures) is up about 15% from this time last year. Once again, Anatomy & Physiology is our most popular class, as many students prepare for careers in the medical field.

We here at HGS want to express our appreciation to everyone who has made our school such a success and to ask that you help us spread the word about these exciting opportunities to other students who might qualify and be interested in what we have to offer.

Danny Dixon

My body, and how it works.....

Anatomy & Physiology classes are having a very busy, exciting, challenging at times, and rewarding experience so far this school year. All Anatomy students have been involved in investigations of proteins, carbohydrates, lipids, and nucleic acids. They now know how to make an "Enzyme Salad." They also know how to dissect a chicken. It is amazing what you can learn from a chicken! They have seen osmosis, diffusion, and active transport crossing the cell membrane via a Ziploc bag. Soon they will be designing an artificial stomach. There is much more ahead too!

Many students are experiencing for the first time what it could be like having a career in the medical field. They have been shadowing medical career professionals. This has been the highlight of our class for many students. One student was able to witness cataract surgery and another a live birth. This has helped them know whether or not they are suited for a medical career.

Soon the Anatomy classes will be lectured by an Internal Medicine Physician from the state of Oregon. He will share with the students some events and research that is going on in his practice there. Yes, he is going to have to get up very early to speak to the 7:20 AM class!

Two of the Anatomy classes travelled to Norfolk, Virginia, in November to the Eastern Virginia Medical School. The students were excited to know they would be working on cadavers in the gross anatomy laboratory and would also learn what it is like being a medical student. The other two classes will be taking this same trip in the spring.

The latest medical news has brought much discussion to the Anatomy classes. Students are constantly on the lookout for new medical research results and we talk about it in class and how it relates to what we are studying. Recently we learned there are exercises that can help sleep apnea. Some orthopedic physicians are helping patients born without fingers by transplanting bone from another area of the body as well as skin grafting.

There is never a slow time in Anatomy Class. The students have become best friends with their Hole's Anatomy Textbooks. Their Instructor is dedicated to helping them learn about the human body and forever planting this fantastic information in the "Universe Between Their Ears"!

Karen W. Smith

Students win NASA Aeronautics Competition

Seniors Craig Copeland and Jordan Gibson were awarded second place and juniors Dakota Helmandollar and John Angles took third place in the U.S. team division. Khadija Razzaq won third place in the individual category. According to Dr. Elizabeth Ward, Education and Outreach Director at NASA Langley Research Center, "For Linwood Holton Governor's School students, this is a first to win three prizes in one contest, so thanks to Dr. Rapp for his work with students that entered." The winning papers submitted by the students can be found online **here**. The winning students will receive cash awards and all students will receive NASA certificates of achievement and a letter of commendation for their work.

Khadija Razzaq

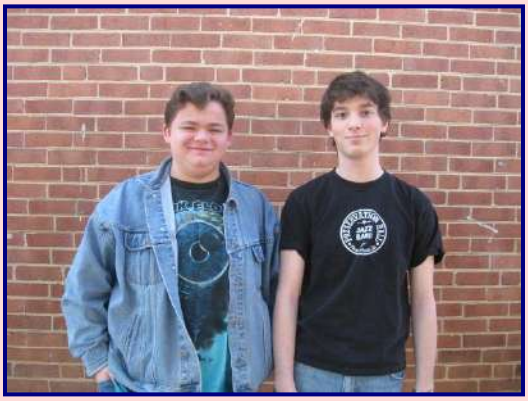
Craig Copeland and Jordan Gibson

NASA challenged students to write a paper about a civilian aircraft that could rescue up to 50 survivors in the event of a natural disaster, hover to help rescue missions, land on ground or on water, travel 920 miles, and cruise at speeds up to 345 miles an hour. And if that wasn't enough of a challenge, the amphibious tilt rotor vehicle had to be able to fight fires by siphoning water into an internal tank, then dumping it once airborne.

The competition was sponsored by the Subsonic Rotary Wing Project within the Fundamental Aeronautics Program of NASA's Aeronautics Research Mission Directorate in Washington.

More than 100 teens entered the contest in teams or as individuals. They represented the United States and six other countries – Hong Kong, India, Pakistan, Romania, Singapore, and Turkey. Along with the students who described the usefulness of the amphibious tilt rotor in rescue operations, a few offered their ideas for designing one.

Susan Gorton, principal investigator for the Subsonic Rotary Wing Project, led the review panel. She said reading the high school papers showed her how students perceive the future of aviation and NASA's leadership role. "They think anything can be done—and that's refreshing," said Gorton.



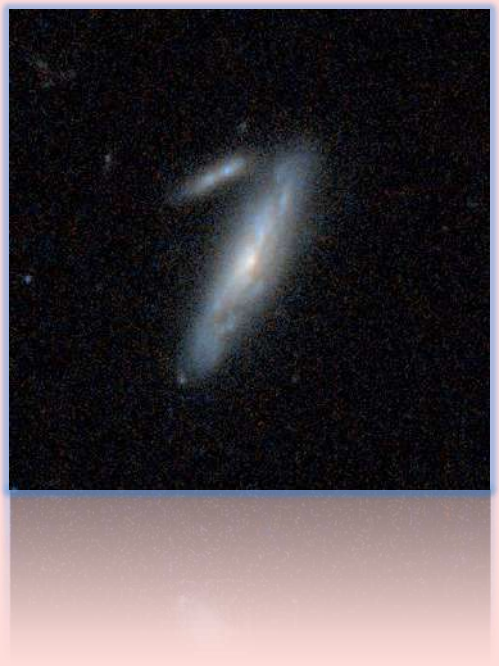
Dakota Helmandollar and John Angles

Galaxy Zoo

Students in Dr. Steve Rapp's Astronomy Class are exploring the weird and wonderful mix of galaxies that haunt the distant Universe. They are participating in a program called Galaxy Zoo at http://www.galaxyzoo.org. Galaxy Zoo allows the students to help with the classification of thousands of galaxies, a task at which their brains are better than even the most advanced computers. The students are producing a wealth of valuable data and sending telescopes on Earth and in space chasing after their discoveries. Dr. Rapp estimates that the students have classified about 500 galaxies so far. His students are looking at galaxy characteristics such as the following: shape (smooth and rounded), disk-like, bulging center, spiral arm pattern, number of spiral arms, bar features through the center, irregular shape, clumpy configuration, and symmetry.

The HGS students have helped create the world's largest database of galaxy shapes and have contributed new knowledge about galaxies. For example, astronomers used to assume that if a galaxy appears red in color, it is also probably an elliptical galaxy. But with the help of HGS students and others, Galaxy Zoo has shown that up to a third of red galaxies are actually spirals. Similarly, there is a much larger number of blue ellipticals than previously thought, including a small but significant fraction of blue ellipticals that are in the process of forming considerable numbers of new stars — sometimes up to 50 times as many new stars as our galaxy. The images below represent only a few of the galaxies that Dr. Rapp's students have classified. "Once again my students are taking on the role of the scientists and making their own discoveries," said Dr. Rapp.

(Please note this published **Bristol Herald Courier** article on the same.)



'The Game's afoot' for Two Buchanan County Holton Governor's School Students

Appalachian History Students Examine Two Infamous Crimes and their Aftermath

Sir Arthur Conan Doyle's brilliant fictional sleuth Sherlock Holmes has inspired criminologists and true crime aficionados for more than a century. Two Appalachian History students at the A. Linwood Holton Governor's School fit perfectly the criteria of true crime aficionado in the best Holmes tradition. Sans deerstalker caps and redoubtable sidekicks, Asher McGlothlin and Seth Lowe follow a more modern approach as they study two shocking criminal acts and their aftermath for Buchanan County, Virginia. As a portion of the research requirements of the Appalachian History class, McGlothlin is studying the 2002 shootings at the Appalachian School of Law while Lowe is exploring the saga of the Roger Keith Coleman murder trial and the events surrounding his 1992 execution for the 1981 murder of Wanda Faye McCoy. Lowe and McGlothlin, both students at Grundy High School, are finding their research challenging and enlightening.

For Asher McGlothlin, the shootings at the Appalachian School of Law by disgruntled student Peter Odighizuwa were highly personal. His mother, a professor at the School, was a member of the faculty at the time and McGlothlin spent a good deal of time with two of the victims, Thomas Blackwell and Anthony Sutin. When asked about his research into the crime, McGlothlin's zeal for his subject is apparent. "I have long been curious as to why the shootings happened, and what happened that day. A. Linwood Holton Governor's School has given me the opportunity to, as a student researcher, find the answers to some of these questions for myself and for those who have also been curious to know the facts." Interviews with current members of the faculty are at the heart of his research, including an on-going effort to interview Peter Odighizuwa himself, currently serving multiple life sentences. His research is clarifying his main goal for the project. "Throughout my research I hope to find a reason to [explain] why Peter O. may have committed these crimes, excluding insanity. I also wish to correctly define the aftermath of the law school shootings. The more I research, the more I become fascinated by this event. It seems that with each question that is answered, more questions are posed." When McGlothlin's project is complete, his findings as well as transcripts of his interviews will be posted at the ALHGS website for public dissemination. This will help McGlothlin achieve his overarching goal "to be able to tell the whole story of what happened at the Appalachian School of Law on January 16, 2002, what happened leading up to that date that caused the events which occurred, and what are the repercussions of that event."

> "*Throughout my research I hope to find a reason to [explain] why Peter O. may have committed these crimes, excluding insanity. I also wish to correctly define the aftermath of the law school shootings. The more I research, the more I become fascinated by this event. It seems that with each question that is answered, more questions are posed*."

researching the

THE 1981 MURDER OF WANDA FAYE MCCOY

Seth Lowe's research deals with events which occurred long before his birth: the 1981 murder of Wanda Faye McCoy and the subsequent trial and execution of Roger Keith Coleman. Despite the passage of time, Lowe finds the events surrounding this trial pertinent and elucidating. "I feel as if I have delved not only into a court case, but into the soul of Appalachia. The ramifications of this event still linger throughout our small community. Each time I pass by the tiny house where Mr. Coleman destroyed the lives of the families involved and many of those connected with the case, I cannot help but wonder why anyone would feel justified to commit the horrid acts that took place that night." For Lowe, as for many people who remember the crime and the trial, the residual bitterness surrounding Coleman's incessant protestations of innocence (debunked 25 years after the crime when DNA testing confirmed his guilt) proves challenging as he researches the event. "Until the moment of his execution on May 20, 1992, Coleman maintained his initial claims of innocence. After beginning my research, I immediately recognized this was an issue I was truly passionate about. The deep rooted emotions this event mustered in our community and in me was something I could not help but to be intrigued by. The innocence of the residents and law enforcement of Buchanan County was shredded by a man who had no respect for himself or those around him." As is true for his classmate McGlothlin, Lowe's research is very much a work in progress. Perhaps the most profound aspect for Lowe is that "the more I learn about this case the more I realize the devastating effect one person can have on society." Lowe's final research will also be made available online at the ALHGS website.

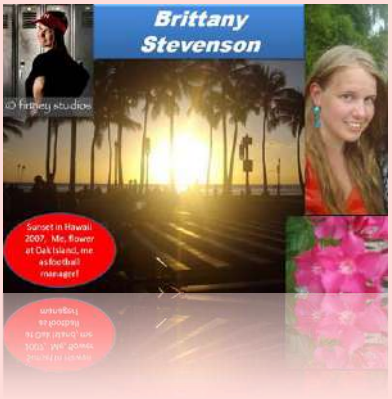
"The more I learn about this case the more I realize the devastating effect one person can have on society."

Mark Hagy, the Appalachian History Instructor, offered the following observations on these students and their research. "Asher and Seth have each set out on a course, largely of their own design, to study two heinous acts of violence in the recent history of Buchanan County. They have done field work research to this point that I find incredibly detailed and thorough. Each progress report that I receive from these young men reflect an ever-increasing grasp of these events. It is amazing and exciting to watch these student scholars in action. Of course, that is one of our chief goals at the A. Linwood Holton's Governor School." When asked what he believes, beyond the research itself, the best lessons these young men will take away, Hagy said: "Their study of these crimes reveal that in the modern era, our once-isolated region can feel the impact of the larger society, especially through criminal acts. I suspect that these students, and their classmates, will realize that our protective mountains cannot shield us from life's harsher realities. This is not a happy lesson, but one that is essential."

The research of Asher McGlothlin and Seth Lowe should be accessible at the Appalachian History Archive at www.hgs.k12.va.us by early 2011.

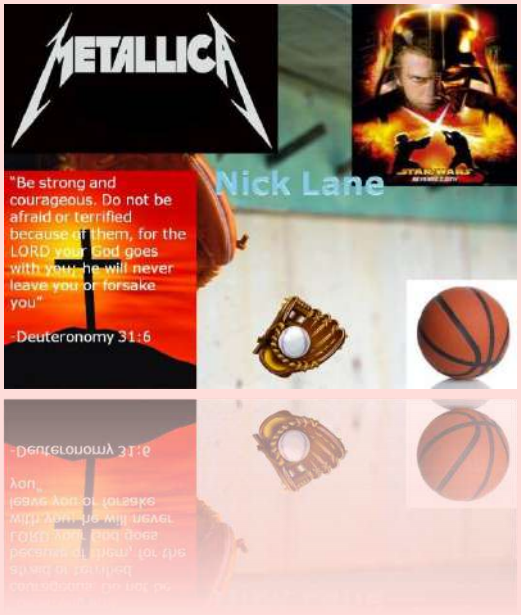
The Multimedia Canvas

Advanced Multimedia Applications (AMA) productively started its second year. Over the course of the semester, students have been perfecting their video skills using different hardware and software programs. Software programs include Corel Project Maker, FlipVideo Software, and Windows Movie Maker. With the skills, students have finished PSAs, Daily Routine Videos, and Movie Trailers. Fall students went searching for answers on how multimedia and technology has changed over the years. They interviewed family members and found insight, which helped the class understand how quickly technology and multimedia changes. One area of discussion is the size of technologies and how items keep shrinking in size.



Many times throughout the semester, we only use PowerPoint as our canvas to create different projects such as templates and images for websites and images for movie files. We also learn how to present projects in many different modes, one being the Interactive Presentation. With the Interactive Presentation, students offer the powers of persuasion as their audiences react by being involved.

Yearlong students are working on PSAs, Public Service Announcements. Fall student Rebecca Leep completed her PSA titled, "Texting & Driving: Is it Really Worth Your Life?" In her video (Click Here), she portrays how easy it is to be distracted by a cell phone while driving. Ms. Leep provided devastating statistics in her in PSA, but her mixture of video, images, and music makes her PSA very appealing to her audience. Other PSAs were completed on bullying, alcohol abuse, animal abuse, and medical issues. Furthermore, all students work to complete their professional scholastic websites as they prepare for their college careers.



Student Reflections

Andrew Christian
2007 Graduate

During my senior year at Tazewell High School, I participated in Mrs. Karen Smith's "early bird" Anatomy and Physiology I&II courses through the A. Linwood Holton Governor's School. Attending the virtual classroom was one of the best and most beneficial decisions I have ever made. It allowed to me to meet other students throughout southwest Virginia with similar academic and career interests. Also, since many pre-med students take the course, it gave me a head-start in learning about medical school requirements, the admissions process, and even visiting several campuses.

Although high school is academically challenging in its own right, it is nothing compared to the work associated with college. By participating in this class, it provided me with a smooth transition into the amazingly different world of college work. While in the class, a lot of focus was placed on daily individual course reading in order to gain a proper understanding of the topics covered during lecture. Also, as a current biology major and chemistry minor, the anatomy class introduced me to the concept of weekly and graded laboratory assignments. Although the class was taught virtually, the learning process was not compromised. Mrs. Smith was always available to answer questions before or after class, by email, or by phone call.

"My experiences in the A. Linwood Holton Governor's School were nothing but positive and beneficial."

My experiences in the A. Linwood Holton Governor's School were nothing but positive and beneficial. It prepared me for the rigorous academics of college by teaching me the importance of self-discipline and the responsibility of completing reading and ungraded assignments. I feel that this class, as well as the other virtual classes, would benefit any high school student planning to attend college. Also, since I received eight hours of college credit, it allowed be to bypass the anatomy classes at Wake so I could take other courses that I wanted to take or were required for my major. I would definitely recommend that all academically motivated students participate in the governor's school for a challenging yet rewarding experience.

Andrew is working with the Wake Forest Institute for Regenerative Medicine. This research team is making science fiction a reality. They are successfully growing more than 22 different organs and tissues in a lab. This is the first team to successfully implant a laboratory-grown organ into a human. Stem cells from the patient are collected and allowed to proliferate. When enough cells have been grown they are placed on a tubular scaffold that mimics the shape of the desired organ. The scaffold is then placed in a bioreactor system that mimics the conditions of the human body.

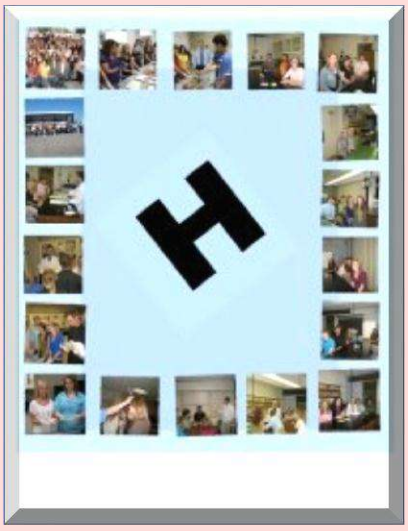
Showing Our Gratitude!

On November 11th superintendents, principals, counselors, facilitators, gifted and technology coordinators and others across the region attended an Appreciation Luncheon at the Southwest Virginia Higher Education Center on their behalf.

"On behalf of the Faculty and Staff of HGS, I would like to express our appreciation to all of our K-12 and Higher Educational Partners, our Advisory Committee, and our Governing Board for your ideas, guidance, and unwavering support of our school and its programs. It is a pleasure to work with each of you and we look forward to another successful year!" said Danny Dixon, Director of the School. "The goal of the luncheon is to let our supporters know that we are aware of the time and effort that they contribute to our school and students and that they are appreciated."

There were approximately fifty educational partners present, which was the largest attendance yet. Even though everyone was unable to attend, our desire was to let them know that they are indeed appreciated.

Thank You!



Facebook

Find us on to discover more about upcoming events!
Or, simply use it as another avenue to just "keep in touch."
We're there and waiting…and remember…
we are already one of *your* biggest fans!

Check us out!

Governing Board Members

Mr. Paul Hayes.....Buchanan County
Ms. Beth Rhinehart .....Bristol City
Ms. Willie Harris.....Norton City
Mr. William Patton.....Dickenson County
Mr. Kyle Chadwell.....Lee County
Ms. Linda Cross .....Russell County
Mr. Lowell Campbell .....Scott County
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Ms. Elizabeth Lowe.....Washington County
Ms. Betty Cornett .....Wise County

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Mr. Don Shaffer .....Guidance Counselor, Washington County
Ms. Debra Gilly.....Governor's School Facilitator, Wise County
Mr. Richard Pannell .....Community Member, Washington County

Thank You for your nurturing hand!

Participating Schools

Abingdon High
Appalachia High
Bland High
Carroll County High
Castlewood High
Chilhowie High
Clintwood High
Coeburn High
Council High
Ervinton High
Galax City High
Gate City High
Graham High

Grayson County High
Grundy High
Haysi High
Holston High
Honaker High
Hurley High
J.I. Burton High
J.J. Kelly High
John Battle High
Lebanon High
Lee High
Marion Senior High

Northwood High
Patrick Henry High
Pound High
Powell Valley High
Richlands High
Rocky Gap High
Rye Cove High
St. Paul High
Tazewell High
Thomas Walker High
Twin Springs High
Twin Valley High
Virginia High

Participating Colleges

MOUNTAIN EMPIRE COMMUNITY COLLEGE
SOUTHWEST VIRGINIA COMMUNITY COLLEGE
VIRGINIA HIGHLANDS COMMUNITY COLLEGE
WYTHEVILLE COMMUNITY COLLEGE

OUR MISSION

Is to provide **challenging learning opportunities** for the gifted & talented students of far Southwest Virginia that are not available to them in their regular school program.

We will accomplish this by **strengthening their abilities** and **nurturing their social and emotional well-being—**through **mentoring, rigorous academic courses, service to the community, and leadership training** within an *entrepreneurial culture that encourages* ***creativity, initiative, and problem solving.***