



What's Happening?

Ions, Geigers, and Squares...Oh My!!



Seventh grade students have been honing their observation skills and practicing their use of specific science tools such as the compound light microscope.

They first examined unicellular algae in order to identify the specific cell structures found in

It's a Small World After All!

plant-like cells. Then they looked at how these structures are related to the important functions they carry out.

Two of these very important cell processes are photosynthesis and cellular respiration. To

learn these rather challenging concepts, students in Mrs. McCluskey's class first observed a digital model using an online 'Gizmo' to visualize the processes. Next, students demonstrated their knowledge attained from classroom instruction to create collaborative mini-skits

about photosynthesis and respiration. The students truly enjoyed this challenge and happily performed these skits for their classmates. As the school year continues, seventh graders will apply their understanding of structure and function of organisms to more complex creatures as they continue to develop their skills of observation and modeling science.



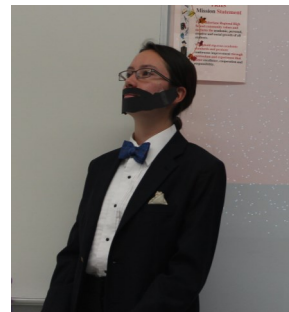
Madison Healey as Bernhard Riemann

Dead Mathematicians Society

AP Calculus students were treated with 'guest appearances' of numerous mathematicians who have made contributions to calculus. Each student in the class embodied a famous mathematician and presented to the class their life and significant mathematical contribution. This multidisciplinary approach allowed students to write about, present on and understand the historical perspective of these mathematicians and their contributions. Teacher, Christa Powers even got involved, presenting as Michel Rolle to inform the class about Rolle's Theorem. Senior, Madison Healey amazed the class with her Riemann sums display that involved a uniquely cut Mango. She was able to demonstrate the ability to calculate the area of a concave curve, by dividing the curve into smaller regular shapes (such as squares) and simply adding together their areas.



Sam Skinner as
Brook Taylor

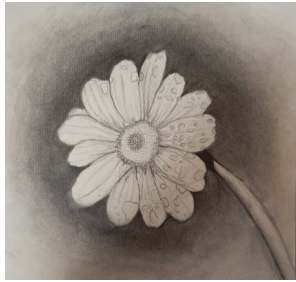


Stick Your Nose in Our Business!

7th Grade Draws the Line

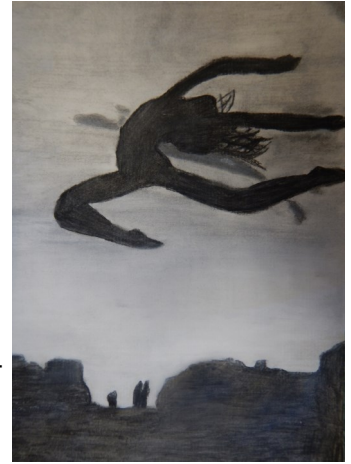
At the middle school, seventh grade art students are working on drawing techniques. They started the quarter learning about shape, form and proportion. First, they studied their hands and drew them in a three dimensional pose. A main goal was to observe carefully in order to get a specific shape that would begin to give the drawing a three- dimensional quality.

Next, to learn about value, students analyzed drawings of hands by Renaissance artists Leonardo da Vinci and Albrecht Dürer. They discussed what specific techniques added depth to the artists' work. Students developed their own shading skills by practicing to shade four different ways: hatching, cross hatching, blending, and stippling. They practiced each technique to see which suited their personal style best.



drawing by Madison Comeau

Finally, students applied their skills to make a finished drawing. Students selected their own subject matter. Each came prepared with an image from which to work. Some brought in a favorite picture from their family's photo album; others printed an image stored on their phone or instagram account. Seventh grader Madison Comeau looked through her photos carefully. She said, "I chose one that had a lot of good shadows on it. I wanted to try something different." Colin Scully also chose his image because of the range of values in the original photograph. He said, "I chose this one because I like the beach. It was a good picture because of all the blacks and whites." Students will later apply their knowledge of form and proportion to make a plan for their clay sculpture and will learn to create value using color when they make acrylic paintings.



drawing by Chloe Croteau

Taking the First Step Toward a Career in Education!

On October 10, 2014, Timberlane's Exploring Teaching students attended The National Education Association-NH Fall Conference in Bow, NH.



The Future Educators Academy at Timberlane High School offers two accelerated elective allowing juniors and seniors to explore careers within the field of education.

In the first course, Exploring Teaching, students learn about the process and responsibilities of being an educator through research, guest speakers, field trips and job shadowing. Students also explore classroom management techniques, learn teaching methods and develop their own philosophy of education.

The second course, Practicing the Art of Teaching, provides students the opportunity to gain valuable classroom experience by completing a 30-hour internship in the grade level and subject of their choice. Students successfully completing both courses qualify for 3 college credits.

"The Future Educators Academy provided me the opportunity to experience teaching in a classroom while still in high school. I was able to learn what it meant to be a teacher and all the behind the scene things that happen that you don't see until you get a chance to actually plan and teach a lesson. If I was never in this program, I would not have been able to get a feel for what teaching entailed and whether I liked it or not until later in college. The Future Educators Academy was an amazing experience that helped me decide that teaching was the right career choice for me."

- Erin Donnelly, TRHS Math Teacher

Oh the Humanities....

Integrating QR Codes in the Classroom



Integrating technology in the classroom can be challenging, but integrating the technology that students bring into the classroom every day is a new frontier. The students in Mr. Henderson's 8th grade Social Studies class recently demonstrated how smart phones and tablets may be safely and meaningfully integrated into the classroom.

Mr. Henderson wanted the students to gain a better understanding of the causes of the French and Indian War and, in a broader sense, to reflect on the economic impact of war on a society. To accomplish this task, Mr. Henderson devised an inquiry based learning activity tied to Quick Response (QR) codes. QR codes are encryptions that, when scanned, direct the user to more information (i.e. Websites, images, and informational text).

Approximately 75% of the students in Mr. Henderson's class have smartphones. These students first downloaded a free QR code scanner on their own mobile devices. Mr. Henderson first modeled how to use his own iPhone to scan a QR code. The students worked in pairs to ensure that there was at least one scanner between them. They then embarked on a journey through the school to find and scan the 12 to 18 QR codes that were placed on the school

walls. These codes linked to text notes on the causes of the French and Indian War. The students worked individually to write down what they scanned in their own evidence notebooks (portfolio). They were then asked to reread ALL the scans and develop their own thesis statements. After both members of the pair documented their scans and created their thesis statements, they went back to the classroom and started to compartmentalize the scans into two categories based on their interpreted thesis statements. Lastly, each pair was asked to choose one of their thesis statements and, using the QR scans as evidence, justify their stance to the rest of the class.

The students were engaged throughout the activity and were motivated by this opportunity to use their own technological devices as a means of supporting their learning in the classroom! The students developed a sense of ownership of the material and their learning. Mr. Henderson writes that the activity was effective in achieving his goal of greater understanding of the material and integrating student technology.

Fulfilling their Civic Duty

On the evening of November 4, Election Day, Advanced Placement (AP) Government & Politics students served as poll volunteers in both Danville and Atkinson. Their duties ranged from greeting and helping voters at the polls to signing in voters. These AP students were studying a unit on the importance of political and civic duty in American culture.



TRHS 12th grade students Owen Sweet and Lucas Appleton were two of the many AP Government & Politics students who volunteered at the local polling stations on the evening of November 5.

This opportunity to experience these themes-hands on was extremely valuable and powerful for the students.

American Studies Freedom Walk

On October 24th, American Studies students in the classes of Mrs. Czyz, Ms. Aquilini, Mrs. Guanci, and Mr. Kelly took part in a "Freedom Walk" summative assessment. Students were assigned both literary and historical figures from their first two units of study on the eras of Reconstruction and Westward Expansion. Students were then responsible for creating visual, written, and choice products reflective of what freedom means to their assigned literary and historical figures. In addition, each student created their own individual representation of what freedom means to them personally.

One of the mini projects created for the Freedom Walk was a two voice poem written by Kiley Broadhurst, Stacey Croak and Stephanie Croak. Students utilized green-screen technology to film a recitation of their work. The poem, which may be read individually or as one, juxtaposed the voice of Native Americans against that of the settlers during Westward Expansion.



All students displayed their projects in the Performing Arts Center (PAC). Visitors to the PAC were able to walk through this display of student work to experience the role that freedom has played in the lives of Americans throughout different eras of history.