D211 POST: ANATOMAGE TABLE PROVIDES NEW RESOURCE FOR BIOLOGY STUDENTS

Students at Palatine High School study the bones of the skull on the new Anatomage Table.

Students at Palatine High School now have a new way to study biology thanks to a device called an Anatomage table. The table allows students to explore 3-dimensional images of various aspects of human anatomy.

“The biggest advantage is just application, and the amount of different things you can do with this,” said Christian Keller, a biology teacher at Palatine High School.

The table uses images of actual cadavers to provide students with a real-life view of the human body. Students have the ability to view the body at every level. The latest update to the table included a variety of injuries, which allows students to see the impact beyond the surface.

Keller said the table allows the students to cut into various sections while allowing them to manipulate the view.

Senior Sarah Jasonowicz said the table is a great asset when she and fellow students are doing practical exercises.

“You’re able to see [the body] in a life size form,” she said. “It has helped me with practicals and tests. You can ask the table a question by tapping on the bones or muscles and it will name it for you.”

The interactive images of actual cadavers were one aspect which has helped senior Stephanie Bender in studying for tests.

“Seeing it in life makes it easier to picture on yourself,” Bender said. “It’s like math, you don’t know what you’re doing until you connect it to something real world.”

Bender and Jasonowicz both plan to pursue medical careers after college. They both feel having this table in high school helps them prepare for college classes.

Students at Palatine High School quiz each other on the bones of the skull during a biology class. Students are using the school’s new Anatomage table to verify their answers.

“This is definitely what I am going to see later in life,” said Bender. “I am going to have a head start.”

Jasonowich plans to eventually become a bio-medical engineer. She said this table gives her a taste of what she will need to know later.

"My ideal job would be doing prosthetics," she said. Seeing bones and how they attach and all the muscles I will need to learn later is great."

The school purchased the table shortly before the beginning of the school year, and Keller said he exploring more options to implement it into future classes.

"This first year I got it into the bones and muscles where it can be an additional resource," he said. "But, just thinking about next year, and how can we build in case studies? How can we make it so it can be part of discussions? The possibilities going forward are very exciting."

REGISTRATION OPEN FOR 2017 GEMS (GIRLS IN ENGINEERING, MATH, AND SCIENCE) CONFERENCE

Girls will learn about careers in engineering, math, and science by actively participating in hands-on sessions.

Registration is now open for the seventh-annual GEMS (Girls in Engineering, Math, and Science) Conference. The conference will be held at Conant High School on Feb. 4, 2017, for 5th and 6th grade girls and their parents in School Districts 15 and 54, and private schools within the District 211 attendance area. The event will run from 8 a.m. to 12:30 p.m.

Girls will learn about careers in engineering, math, and science by actively participating in hands-on sessions. These activities will be taught by women in fields such as structural design, polymers, technology, geology, and mathematics.

Some of the presenters include women from the American Chemical Society, Kraft Foods, Women Leaders in Action, and Cast Metals Institute. Participating girls also will receive a goody bag full of STEM (Science, Technology, Mathematics, and Science) information.

Parents are invited to attend the conference along with their daughter. The conference begins with a Career Expo, featuring booths where families can learn more about STEM-related careers, including the necessary skills girls need to be successful at the high school and college level. Raffle prizes will be given away during the conference's closing remarks. These prizes, along with goody bags for the girls attending, were generously donated by organizations that include John G. Shedd Aquarium, The Scope Shoppe, Thermo-Fisher, and Pearson Prentice Hall.

To register for the 2017 GEMS conference, please click here.

DISTRICT 211 AWARDED MOTOROLA INNOVATION GRANT FOR STEM PROGRAMS

Several students in High School District 211's science, technology, engineering, and mathematics programs (STEM) will see increased opportunities due to a recent grant that was awarded to the District.

District 211 was the recipient of a $40,000 grant for Advanced Manufacturing, Computer Integrated Manufacturing (CIM), and the Biomedical Engineering: an integrated approach to foundational learning in the twenty first century. The grant is part of the *Innovation Generation* grant program from the Motorola Solutions Foundation, the charitable arm of Motorola Solutions, Inc.

Through the grant, District 211 will provide more than 200 students in Advanced Manufacturing, Computer Integrated Manufacturing (CIM), and the Biomedical Engineering Programs, with enhanced learning opportunities, including career exploration. The Innovation Generation Local Impact grant will support three new courses in the Applied Technology Department: Advanced Manufacturing Technology Level 1, PLTW (Project Lead the Way) Computer Integrated Manufacturing, and PLTW

Biotechnical Engineering.

“The Motorola Solutions Foundation supports innovative, hands-on science, technology, engineering, and math education programs,” said Terri Busch, assistant superintendent for instruction in District 211. “The curricular goals of all three courses include providing educational pathways that allow our students to learn more about career opportunities in STEM-related fields through hands-on, interactive experiences.”

Since 2007, the Motorola program has provided $3.4 million in support of science, technology, engineering and math (STEM) education programs, supporting more than 400 school, museum and nonprofit programs across the United States and Canada. The Innovation Generation program awards funds to organizations such as District 211 that foster and support STEM initiatives for teachers and U.S. preschool through university students – especially girls and underrepresented minorities.

“We are so honored to partner with organizations like District 211 who are helping to create the world’s future innovators and technology professionals,” said Matt Blakely, director of the Motorola Solutions Foundation. “As a company dedicated to helping people be their best in the moments that matter, Motorola Solutions could not be more honored to support programs such as District 211.”

Beyond funding, District 211 will receive ongoing support from Motorola Solutions employee volunteers, who will act as mentors, tutors, and experts in STEM careers.

For additional information on the Motorola Solutions Foundation grants programs visit the website.

FREMD SCIENCE TEACHER USES TWITTER TO EXPAND CLASSROOM PROJECT

Image of student’s twitter page campaigning for the organelle Golgi Apparatus.

While classrooms and curriculum across the world continue to look at how technology and social media influence learning, a science class at William Fremd High School experienced how new social platforms can enhance a school project.

Students in Brad Graba's accelerated freshman biology classes at Fremd High School were assigned a project called Organelle Wars that involved using Twitter. The content of their projects revolved around organelles, which are differentiated structures within a cell that perform a specific function. Students were to use Twitter as a campaigning platform to get their organelle elected as "president of the cell" by campaigning and "smearing" other organelles in the process, much like political elections.

"Students expect to be tweeting amongst their friends, and it turned into them tweeting with biologists around the globe," Graba said. "It was an authentic learning experience for them. They were involved with real people doing real research on what they were learning about in biology class."

Graba said he carefully instructed his classroom to create anonymous Twitter accounts on behalf of their chosen organelle. Then, Graba used his own Twitter account to monitor the activity. Roughly 12 hours after students' accounts went live online, Graba noticed that a professor from Oxford Brookes University in Great Britain started responding, or "tweeting," to students.

The professor searched to see if anyone posted information on social networking websites about an organelle she is researching. Graba immediately wanted to know who had taken interest in his classroom's project, and after he realized it was safe communication, the professor started campaigning for her own organelle and helping students smear their competition.

Soon, students were tweeting and creating dialogue using the hashtag, which is used to mark keywords or topics in a Tweet, "#organellewars" after each message. Those tags started gaining popularity, and soon other researchers, professors, and professionals in the scientific community were interacting with Graba's students from all over the world. They even caught the eye of a BBC radio host where Fremd High School received a mention on his show, and of well-known science blogger at Discover Magazine, Ed Yong.

"Scientists were just as excited to be working with the students as the students were with them," Graba said. "They were just amazed when the radio show had mentioned the project, Palatine, and kids were tweeting that they didn't know biology could be so fun."

Graba said Twitter turned out to be a very powerful tool, and he is working on different ways to incorporate social networking and technology into future projects. Several colleagues of his are also looking into ways to apply it in their lessons. Graba is excited about the future of these types of projects and hopes to add a one-to-one component to the classroom next year, which will allow students to work on Apple iPad 2s to use throughout the duration of their course.

"Social networking and technology is where are students are at right now, so this is bringing education to them in accessible ways because they are on Twitter and Facebook already," Graba said. "To use those tools in school, which traditionally

have been forbidden, students get excited and are more engaged in the learning process.”