Cooper Yerby

Cooper Yerby has always had a passion for water. It's no surprise the senior at Olathe North High School has been swimming and diving competitively for much of his life.

But that's not really where his passion for water lies. Yerby, a member of the 21st Century Distinguished Scholars program at North, is more consumed with the basic human function that water provides.

"I've always been fascinated with water, how it interacts with our environment, how necessary it is, and the problems it causes for societies," he said. "Pretty much every facet of water fascinates me because water deals with life and is an essential component for every human civilization to function."

His passion for water led him to join and help lead fellow Distinguished Scholars classmates in creating "Tapped Out" — a plan to awaken our collective senses to the impending water crisis by showcasing the wonders of water, the history of its use and the urgency of conservation — for the Burns & McDonnell Battle of the Brains competition.

And that was just the start. "Tapped Out" was the winner of the competition and got Yerby thinking big picture.

"After Battle of the Brains, I really wanted to continue water research since water is one of my great passions in life," he said.

That passion led him to pursue an internship and that pursuit led him to K-State Olathe to work on a research project with Dr. Sara Gragg, food science, and Dr. Saugata Datta, geology, at K-State.

That research project led him to submit two abstracts of his studies to national societies.

And that led him to be invited to present posters at both the Geological Society of America Annual Meeting in Vancouver, British Columbia in October and the American Geophysical Union Conference in San Francisco in mid-December.

With the help of Datta and water samples that he helped Yerby obtain from Bangladesh, Yerby began to test for different water-borne pathogens.

"Some of the pathogens I researched included Salmonella, E-coli and Listeria," he said. "I worked on putting them in different enrichment fluids, cultivating them, and then using the enriched water to try and enumerate the amount of differing pathogens present in the water."

The more he researched, the more he came to the conclusion that the reoccurring theme was that there weren't any pathogenic microorganisms present in the water.

"I tested the samples in many different manners. It was really odd to me that none of the microorganisms we were testing for were present in a majority of our tests," Yerby said. "We had no microbial growth according to our results and models, however there was a terrible smell from our samples that seemed to get worse every day."

"I knew from the smell and seeing research from other doctors that there was bacteria growing, just not any pathogenic bacteria."

That's what made his abstracts so compelling to the two highly regarded societies.

"I presented my preliminary research about finding barely any
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- Shane Kaberline, assistant principal at Indian Trail Middle School, has been named Kansas Association of Middle School Administrators 2014-15 Assistant Principal of the Year. Frontier Trail Middle School Principal Rod Smith is one of six middle school administrators named KAMSA “Exemplary” Principals of the Year. The KAMSA awards will be presented to the principals in May at a luncheon in Topeka.

- Two orchestra teachers in the district have received honors from the Kansas Music Educators Association. Joel Martin, orchestra teacher at Olathe Northwest High School, has been named by the Kansas Music Educators Association Northeast District as the High School Orchestra Educator of the Year. Page Mitchum, orchestra teacher at Prairie Trail Middle School, was named by the Kansas Music Educators Association Northeast District as the Middle School Music Educator of the Year.

- Amy Martin, a member of the Olathe School District School Board, has been chosen President-Elect Designee by the Kansas Association of School Boards Delegate Assembly. In nominating Martin, KASB members described her as a dynamic school leader. Martin will start serving her term as President-Elect on July 1, 2015 and assume the Presidency on July 1, 2016. KASB is a not-for-profit organization dedicated to serving members of governing boards for unified school districts, community colleges, area vocational-technical schools and cooperatives, interlocals and regional service centers. The association serves a membership base of close to 5,000 school board members and educational leaders.

- Nancy Smith, a first-grade teacher at Bentwood Elementary School, has recently received National Board Certification from the National Board for Professional Teaching Standards. National Board Certification is a professional achievement in which a candidate’s teaching practice is measured against rigorous standards. The process requires developing a portfolio, preparing videos, and taking a written assessment. Currently, the district has 35 teachers who have attained the distinction.

- The Olathe North High School Wind Ensemble has been selected by competitive audition to perform at the 2015 National Concert Band Festival as part of the Music for All National Festival March 12-14 in Indianapolis. The National Festival features some of the best high school and middle school concert bands, orchestras, and percussion ensembles in the United States. In the 24 years of the National Festival’s existence, Olathe North is only the second band from Kansas to ever receive an invitation.

pathogens in the water and how odd that was,” Yerby said. "Now we are trying to see if there are any sort of compounds or any inhibitory factors within the water supply that are prohibiting the proliferation of certain microbes. We know that there are very high levels of arsenic and other elements in the water and we also know that there are a variety of anthropogenic and natural pollutants that are present.”

The opportunity to present the posters, share his thoughts and pick the brains of some of the foremost researchers in the field of geology was invaluable, according to Yerby. It also reshaped his post-secondary career choice a bit.

"It was very interesting to talk to many distinguished scientists in the field," he said. "It really opened my eyes to becoming a geologist as a career. I never thought of geology as my future career choice until I went to the conferences. There are so many amazing opportunities within the field.”

Suddenly, Yerby is pointed in a different direction.

"Throughout high school I’ve loved the DS program. When I left middle school, all I wanted to do was pursue a STEM career. I didn’t know which one, so I entered Distinguished Scholars-Science because it provides flexibility for me to take a variety of classes and truly explore my interests. "The program has provided me many freedoms and opportunities that I wouldn’t get in the general curriculum."

From an initial interest in chemical engineering to now thoughts of geology, Yerby has taken his experiences to heart.

"Geologists go out into the world, and it’s like a treasure hunt," he said. "Geology is a great career path because it provides chances to immerse yourself into different cultures while exploring the beauty of our planet."

Where he will continue his education is not clear just yet, but he knows what he wants to do when he gets there. All because of following his passion.

"If I hadn’t gotten that internship, I never would have known," he said. "Dr. Datta has been invaluable. He pointed me in the direction of a career choice I never would have thought of without working with him. I’m grateful for the opportunity."

"It makes me feel like I’ll be ready for any sort of experience that I’m put into."

He may not be certain where the current will take him, but he is certain to be able to make sure that water is safe to enter.