



## Future Research Supported by Toshiba Foundation

UPSM High School recently received a \$9,000 grant from the Toshiba Foundation that will go towards supporting the school's Urban Ecology Pathway. More specifically, the grant will help support experimentation and transportation to class research sites.

UPSM High School's Urban Ecology Pathway consists of three courses: Introduction to Urban Ecology, Urban Ecology: People and Forests, and a Capstone Senior Seminar. With the help of this grant, all three classes will be partaking in a stomata density study to develop advanced science skills. Students will use [stomata cells](#) to determine the density of plants in an urban setting vs the density of them in places like forests or lakes. In essence, if the plant is healthy it should have many of these cells underneath the leaf, but if they are stressed from pollution, they will decrease in density.



Essentially, students will explore and experiment with the idea that urban variables like factories are affecting the local environment negatively. Along with tree leaf samples the students would be researching fieldwork that would also include soil and water samples to identify contaminants. The research sites will include an urban cemetery, an active and a dormant automobile plant, and a rural park.

Ms. Heidi Quick is the lead instructor for the Urban Ecology Pathway. She was excited to add, "This study will start when the students are freshmen and will continue until they are seniors. This is the first time they will be doing a study with this type of longevity in the program. It will be great for them to see their research develop over the 4 year period while sharing data among the other classes. I'm super excited that everyone will be participating and that every student will have a vested interest in the data while saying we ALL did this research and contributed!"

Our UPSM High students are doing fantastic environmental research that can impact the city as a whole!