PLEASE ANSWER THE FOLLOWING. WHILE FILLING OUT BELOW PLEASE KEEP IN MIND THE CONTEST CHALLENGE, "SHOW HOW STEM CAN BE APPLIED TO HELP IMPROVE YOUR LOCAL COMMUNITY."WHAT IS THE MOST DIFFICULT ISSUE FACED BY YOUR SCHOOL'S COMMUNITY?

Our community is very fortunate to be located on a unique and complex aquatic ecosystem. Numerous homes and businesses sit directly on the shores of our lakes and impact it every day. Along with enjoying the resources our environment provides, comes the responsibility of caring for and managing these resources. We get much from our fresh water environment, but we also put much back into it as well. Nutrient overload and contamination result in unpleasant and unhealthy conditions in water directly on school property.. Our community and school continue to search for effective ways of managing this resource.

**EXPLAIN HOW YOU COULD APPLY STEM TO ADDRESS THE ABOVE ISSUE? (PLEASE NOTE YOU WILL BE ASKED TO EXECUTE THIS PROJECT.)**

Our project will use new innovations in water management to monitor and manage water quality. Our STEM students at Coventry will work to develop new ideas in wetland construction to design, build, and monitor floating wetlands to reduce the nutrients and contamination that continues to negatively impact our neighboring lakes. We will design and build *floating wetland structures* from approved recycled materials that will absorb contaminants from local runoff and utilize the excess nitrogen and phosphorous that promotes eutrophication in our local water. Students will continue to measure water quality to assess, modify, and promote their designs.

**WHAT IS THE BIGGEST HURDLE YOUR STUDENTS FACE THAT HINDERS THEIR ACADEMIC ACHIEVEMENT?**

I believe our biggest obstacle to true academic achievement has more to do with the understanding of what achievement actually is than with student performance. With a renewal of problem-based learning opportunities and a new STEM approach to learning, students and teachers are finding themselves rethinking their roles in teaching and learning. Therefore, the biggest hurdle for academic achievement comes from the fact that we have not developed the skills necessary to innovate and collaborate as we solve real world problems. This shift in the culture of learning will take time, persistence, and practice.