My name is Bob DeGraff. Our Trout in the Classroom (TIC) program is one of the best things I’ve seen happen to any school system in a long time!  Last year was my first in the support role of our TIC program and the school was Highland Park High School. HPHS had participated for at least one year prior to my taking over as the representative from the local Chapter of TU so things went smoothly from my perspective starting the moment we received the eggs till the day we released over 200 healthy 2 to 3 inch fish into our designated stream.

I belong to the Gary Borger Chapter of Trout Unlimited and we are located in north eastern Illinois.  I’m preparing this introduction document for a several reason: 1, TU National, our parent organization, asked us to generate a paper describing our program; 2, I thought it would be a good tool for the next person from our chapter, who takes over this program, to use to help guide them through the early stages of setup and preparation for receiving the eggs from the state DNR; and 3, I’m introducing a new tank to a very excited class of 5th graders later today.

The tanks we use for our classes are 70 gallon tanks. We had a used tank donated to our chapter over the summer but it was really dirty from lack of regular cleaning so I got to work several weeks ago scrubbing it in preparation for the new addition to our TIC program.  When you clean a tank, you should be very careful not to use soap or other harsh chemicals that may linger in the tank. I used CLR and Lime-A-Way to get rid of the crusty lime deposits and other built up scum on the tank, cover and filter but I used bleach on the gravel which I had removed to a separate container and let it soak for several days.  The chlorine in bleach is really dangerous to fish so I was very careful to thoroughly rinse the gravel before adding it back to the tank.

The whole tank preparation process, from what I understand, takes a few weeks which is why we are starting now. The current date is Oct. 17th and we anticipate receiving our trout eggs around the middle of Nov.  The reason we need this time before the eggs get here is to let the tank run and build up the beneficial bacteria that helps keep the tank’s environment healthy for fish.  These bacteria break down the fish waste and any food they don’t eat that ends up falling to the bottom of the tank and decays there….more about this later.  The temperature of the water in the tank needs to be chilled to around 50 degrees Fahrenheit which is the best for raising trout.  We are currently running the filter at room temperature in hopes that the bacteria will start to grow faster than at the lower temp.  Sometime next week we plan on adding the chiller to the system and turning the temperature down to the prescribed 50 degrees.  During this period prior to adding fish, we need to start testing the water for the chemicals that define a healthy environment. This testing ensures the water is safe for the fish and establishes a base-line for future water quality testing after the fish start to change the makeup of the water….fish have to “go” too….and that is why we need a good strong population of bacteria living in our tank and filter.

The bacteria that live in our tanks perform a variety of life saving chemical changes which gets a little complicated but we really only need to know that it does happen and if some of our tests show that the chemicals are getting too high and dangerous for the fish, all we usually have to do is to take out some of the bad water and replace it with some new water. The replacement water cannot be straight from the tap though because it contains a small amount of chlorine which is fine for humans but really bad for fish.  For that reason, we always need to always have several gallons of water sitting around “aging” which lets the chlorine evaporate so it is safe for our fish.  The 4 things we test for in our tank is PH level, Ammonia, Nitrite and Nitrate. The PH tells us if the water is acidic or basic.  The PH is very important because it tells us what type of ammonia to expect when food or fish waste starts to decay and one type of ammonia is really bad for fish.  The benefit of having bacteria starts now that we have ammonia in the water. These bacteria live on ammonia and change it to a chemical called Nitrite which is also really bad for fish but there is a second kind of bacteria that lives on Nitrite. These bacteria change the Nitrite into Nitrate which is not good for fish in large amounts but we can take care of the Nitrate level just by changing the water a little at a time….more about that later.

Once we receive the eggs, they need to go into the tank right away where they can hatch and develop in a healthy, oxygen rich environment. While the tank looks like any other tank you would expect to see fish in right now, before the eggs get here we are going to cover the tank with paper and or cardboard to limit the light getting to the eggs which will more closely mimic the environment the young fish would experience on the bottom of a river.  They will stay protected like this for a few weeks as well as having their movement restricted by keeping them in a small hatching cage suspended in the tank. After a few weeks we can start releasing them into the larger tank and start feeding them.  In the first few weeks after hatching they don’t need to be fed because they are living off the remains of their egg-sack.

After we start feeding these young fish, that is when the chemicals can start to change and we will be glad that we have been testing our water and practicing with our chemical test kit. These fish are just like babies and they depend on us to feed them and clean up after them.  The feeding is the fun part but we have to be careful that we don’t feed them too much especially when they are very small. The clean-up might not be as fun as the feeding but it is just as important and really isn’t all that bad especially when we all take turns helping out.  Testing the water is the third part of caring for these little creatures and is as important as any of the other two needs of our fish.  The very best part about raising these trout happens in early spring.  Unlike caring for a pet at home whether it is a dog or cat or bird or any other kind of animal, the trout are not ours to keep. These are wild fish and we will be releasing them back into the nature where they will swim wild and free in Lake Michigan until it is time for them to come back to the river that we release them into to start another generation of trout.

Check out the TIC photos on our website.