

Trout in the Classroom (TIC)

Submitted by Chuck Dinkel

Trout in the Classroom (TIC) is a program that was developed by Trout Unlimited (TU) to help connect students to their watersheds. Trout are to clean water as canaries are to the air in mines – an indicator. The abundance of the trout population is directly related to the quality of the water in which they live.

One of the goals of TIC is to ensure native and wild trout survive in the home waters of our children. Students raise trout from eggs in a classroom aquarium set up to provide cold, clean, fresh water. As they care for the trout, students also learn the importance of clean water and how to care for the habitat in which trout thrive. Ultimately connections are made between the trout, the environment, water resources and the students themselves.

During the 2006-2007 school year, three Frederick County schools are participating in TIC – New Market, Windsor Knolls and Urbana Middle Schools. Members of Potomac Valley Fly Fishers (PVFF), with additional support from The Potomac Patuxent Chapter of TU, are assisting the schools with funding, equipment and technical support. Students in each of the schools are responsible for caring for the fish on a daily basis. This includes running chemical measurements (pH, ammonia, nitrites) of the water, cleaning the tanks, changing a portion of the water, and monitoring the water temperature. They feed the fish an accurately measured amount of food every day and remove any fish that do not survive.

In early January, approximately 200 eggs of the Kamloops strain of rainbow trout were placed in a breeder basket in the aquariums of the schools. Several weeks prior to the arrival of the eggs the tanks were set up and checked by members of TU and PVFF. Charcoal and other media were placed in the filters, and bacteria/enzymes added to the water to prepare for the eggs.

In the three months that students have participated, lots of lessons have been learned. For one, it soon became apparent that it is difficult to simulate the type of water environment that eggs and fry experience in the wild. Students learned that there is an ammonia cycle that must be closely monitored in an aquarium. Peaks in ammonia or nitrite levels can seriously impact the survivability of the fish. One aquarium had a failure of the chiller system which keeps the water temperature at a “trout comfortable” 50 -55 degrees. PVFF and TU tech support members saved the fish by chilling the water with ice until a replacement chiller was installed later that day.

Since more eggs were shipped than could be used by the schools, PVFF agreed to take the extras and raise them at the club’s trout rearing pen on Carroll Creek. Because there is a constant supply of spring water at the rearing facility it is possible to raise several

thousand fish. Along with the fish being raised by the schools these will be released into streams in Frederick County later this spring. The Maryland Department of Natural Resources (DNR) will determine which streams will receive the fingerlings. In addition, some of these fish will be given to schools that have suffered losses of eggs or fry.

PVFF is committed to providing students with a “hand on” opportunity to learn about trout habitat. Groups of students from participating schools will have field trips to PVFF’s Carroll Creek trout facility where they will have an opportunity to see first hand how fish are raised by the club for stocking, view the stream restoration project that has been completed on this section of the creek, and participate in stream entomology studies. Members of the club have also volunteered to teach the students basic fly fishing skills.

TIC is a win – win proposition. It is educating a whole new generation of students who are discovering opportunities for working in and improving our environment. It is creating awareness of how fragile our scarce water resources are and ways to protect them. The water quality of Frederick County streams and the fish and other life that inhabit them benefit from the commitment of time and effort of these dedicated TIC students. Not only do residents of Frederick County benefit, but everyone living downstream of us all the way to the Chesapeake Bay will as well.