PA Trout In the Classroom: Overview of implementation &

Acknowledgement of resources compiled for Aquarium Resource Documents

ACKNOWLEDGMENTS

Pennsylvania Trout in the Classroom (PATIC) is provided to classrooms through a partnership between Pennsylvania Fish and Boat Commission, Pennsylvania Trout Unlimited, several state partners, and most importantly, local program partners (e.g. Trout Unlimited Chapters, Conservation Districts, Conservancies, Sportsman organizations).

The PATIC Aquarium Resource Guide documents are a compilation of classroom incubator techniques and ideas shared among schools throughout the United States.

Portions of the following publications were adapted or directly referenced throughout this resource guide.

- New Jersey (NJ) Department of Environmental Protection, Division of Fish & Wildlife and NJ Chapters of Trout Unlimited, 2005 --- New Jersey Activity Guide and Reference for Teachers (Activity guide modified from New York State Trout in the Classroom)
- Smith,Less; Nevada Department of Wildlife, fourth edition January 2006 --- Nevada Department of Wildlife Trout In the Classroom Curriculum Resource Guide
- Virginia Trout Unlimited, 2008 --- Trout in the Classroom, "How to Raise Virginia Trout"

Pennsylvania Fish and Boat Commission biologists, hatchery managers, and members of local Trout Unlimited Chapters have provided input for this guide. The guide is subject to change as Pennsylvania Trout in the Classroom continues to grow and new technologies and techniques become available.

Our gratitude goes to the dedicated Pennsylvania teachers and program partners who implement TIC across the state and continue to share their knowledge and expertise.

PROGRAM PARTNERSHIPS

Statewide, PA TIC is made possible by a unique partnership between the <u>Pennsylvania Fish and Boat Commission</u> (PFBC), <u>Pennsylvania Council of Trout Unlimited</u> (PATU), and curriculum support and development by Asbury Woods. Locally, TIC is made possible by educators and local partners like Trout Unlimited, Conservation Districts, Conservancies, Watershed Associations, and local businesses.

Pennsylvania Trout In the Classroom (PA TIC) is an interdisciplinary environmental education program in which students (grades K-12) learn about current and past impacts, management, and protection and enhancement opportunities of Pennsylvania's watersheds and coldwater resources, while raising trout in the classroom. Throughout the year, students are introduced to the importance of watershed conservation efforts, ecosystems, habitats, natural resources, and management strategies to protect and enhance coldwater resources. They are also introduced to recreational opportunities in which they can enjoy those resources and to the coldwater fish species that call those waters home.

FUNDING FOR PATIC STATEWIDE IMPLEMENTATION

To those of you who purchase a PA Fishing License and Trout Stamp and a Trout Unlimited membership, we THANK YOU!!! You are assisting PFBC and PATU in continuing to support, not only our work statewide for healthy water resources, but also Trout In the Classroom! See below for more details.

PFBC funds that help support TIC

PFBC provides a % of one staff person's time, with assistance from several other staff to coordinate and manage TIC on the statewide level, along with care of the TIC trout for extra fry shipments. The commission also purchases trout eggs, food, and pay for shipment of all TIC eggs to classrooms.

The Commission is a user-funded agency receiving no PA General Fund tax revenue to support its programs. The Commission operates out of two special funds: the Fish Fund and the Boat Fund. Revenue for the Fish Fund is generated from sales of fishing licenses and fees (about 66%) and federal funds (about 22%) obtained from taxes on fishing-related items. Revenue from the Boat Fund is predominantly generated from boat registration/titling fees, refunds of liquid fuels taxes on gas used by motorboats and federal aid.

The Fish and Boat Commission is also generously supported by citizens interested in maintaining and enhancing access to Pennsylvania's waters by donating to the <u>Conservation Acquisition Partnership Program (CAP)</u>.

PA Council of Trout Unlimited (PATU)

PATU assists PFBC with purchases of shipment materials, maintenance of the PATIC webpage, provide food for volunteers and support for egg shipment/food packing day and workshops. Like PFBC, PATU is also a user funder organization. Funds that support TIC from PATU come from Trout Unlimited Memberships.

OVERVIEW

Pennsylvania Trout in the Classroom (PATIC) is an interdisciplinary program that focuses on connecting students with Pennsylvania's cold-water resources. The program offers students and teachers the opportunity to observe the lifecycle of trout firsthand while raising them in the classroom from eggs to fingerlings. The PATIC program offers educational connections not only related to the trout life cycle, but also a wealth of additional topics related to PA's cold-water resources. These topics include, but are not limited to:

- Aquatic Ecology
- Management Practices concerning Conservation and Preservation
- Current and Historical Ecological Threats
- Enhancement Opportunities and Strategies
- Recreational Opportunities

Every PATIC Aquarium is unique in that each teacher tailors the program to fit their needs. The program has applications covering environment and ecology, science, mathematics, social studies, language and fine arts, and physical education.

PATIC STORY

Through 2007, PATIC was an informal program administered by approximately 20 to 40 individual teachers supported by program partners such as sportsmen groups and local Trout Unlimited chapters. Eggs were obtained from local, state or private hatcheries. Formal TIC registration, end of year reports, teacher/program partner workshops, designated release sites for the trout, curriculum connections, and a TIC network for teachers/partners did not exist.

In 2008, PA Fish and Boat Commission (PFBC) partnered with PA Council of Trout Unlimited (PATU) to coordinate and implement TIC statewide. In January, PFBC hired a Trout in the Classroom coordinator to administer and implement TIC statewide and work directly with TIC teachers, program partners, and PA Council of Trout Unlimited's Program Director. The partnership continues to provide the following key resources to make TIC possible statewide:

PFBC provides

- A coordinator to administer and implement TIC efforts with PATU statewide.
- Trout eggs and food at no cost to program participants
- TIC classroom registrations and program reporting
- Designation of agent letters ensuring trout are released into "Stocked Trout Waterways"
- Training, curriculum, technical and resource support
- Content to PATU for PATIC marketing and promotion

PA Trout Unlimited provides

- Coordination and assistance for TIC program partners
- PATIC webpage using content from PFBC and PATU staff
- PATIC grant program for current TIC participants
- Assistance at TIC training and egg/food packing days

LOCAL SUPPORT

In addition to the statewide support from PFBC and PATU, TIC program success relies upon **dedicated teachers** who voluntarily bring the program into their classrooms and the dedicated, **program partners** who support them (e.g. TU, conservancies, conservation districts, sportsmen associations, watershed associations, private organizations, etc.). Partners aid in Aquarium setup, troubleshooting, release days/other field experiences, connections to local watershed impacts/projects, and funding.

THEN AND NOW

PATIC program has grown from 90 participating classrooms in 2008 to over 400 programs in 2024 and continues to grow with each academic year.

TROUT USED FOR PATIC

To conserve and protect PA's native brook trout populations, PFBC provides triploid rainbow trout to all registered TIC participants.

Initially, PATIC participants selected from a local hatchery the species of trout to be raised in the classroom. In response to program popularity and to streamline services and improving fish health and program efficiency, PFBC provided brook trout eggs from one state hatchery and authorized where trout were released.

PFBC continued to provide brook trout (*Salvelinus fontinalis*); however, in 2016-2019 biologists received increased reports of gill lice on brook trout in stocked and native trout waters. As a result, PFBC proactively decreased statewide brook trout stocking as a management strategy to minimize encroachment of hatchery-raised and native brook trout.

IMPORTANT NOTE – The PATIC program is not a stocking program. Meaning the goal/success of each TIC program is not based on raising the most or largest trout to release into approved stocked trout waterways. The goal/success of each TIC program is to utilize the trout in the classroom as a way to connect youth to PA's Coldwater Resources by raising trout from eggs to fingerlings, while learning throughout the lifecycle about impacts to coldwater resources, ways to help those resources, and the importance of those resources.