

# The Biologist-in-Training Program

*National Fish Hatcheries are outdoor classrooms*



## Fostering an Important Connection

The Biologist-in-Training (BiT) program is an experiential environmental education program that promotes National Fish Hatcheries as unique outdoor classrooms. The program centers on fostering direct interactions with fish and aquatic environments. Upon completion of the program, students will have gained not only an enlightened, first-hand understanding of aquatic resources, but also a link to a mentor and empowerment to act to help conserve aquatic resources.

A growing body of research documents the dire need for opportunities to connect children and the outdoors. Children are more disconnected from nature than ever before, and it has had a devastating impact on their physical and emotional well-being. National Fish Hatcheries are ideal centers for providing those invaluable opportunities to connect.

## Hatcheries as Centers of Learning

Fourteen National Fish Hatcheries across the southeast provide unique places for children to experience a close look at fish and other aquatic species and to witness first-hand the wonder of nature's cycle of life. At these places, bubbling springs, mountain streams and rippling ponds bring to life millions of fish hatched from tiny eggs every year. Fisheries Program employees at these hatcheries and six additional Fisheries Resource Offices are passionate about their work and have the expertise and the desire to share their knowledge with children. The BiT program takes advantage of the unique opportunities presented by hatcheries to build lasting connections between children, the outdoors, and the U.S. Fish and Wildlife Service.

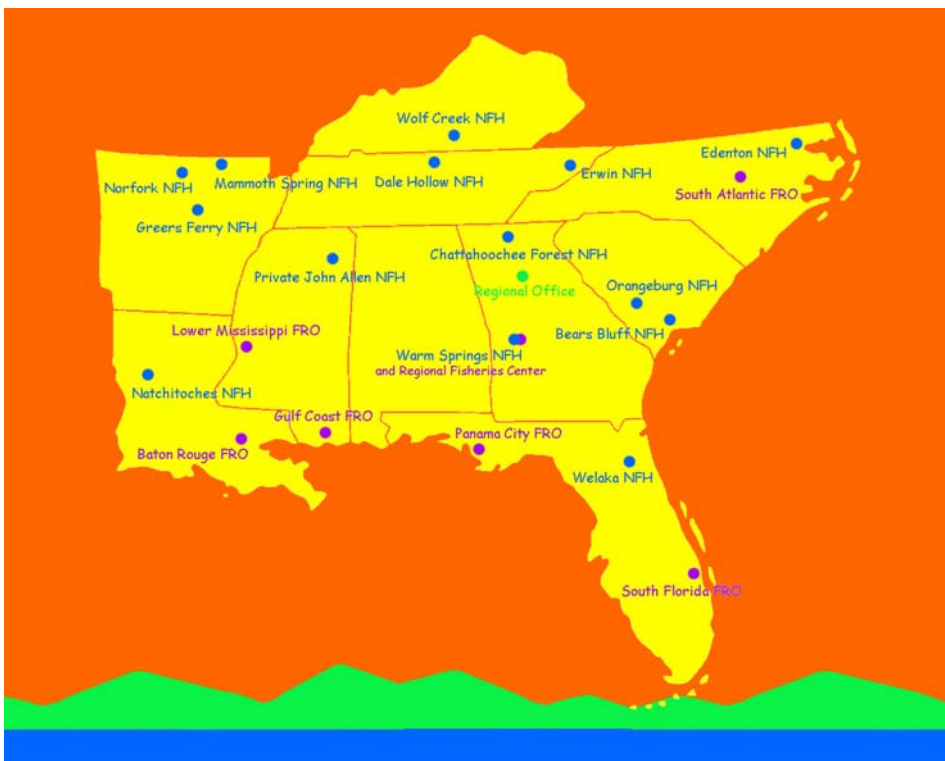
## Fulfilling Many Needs

The BiT program is designed to be accessible to every child. It may be accomplished at any National Fish Hatchery in the southeast, but also anywhere that water flows. The activities are aligned with national education standards for upper elementary age students; however, the program is designed to be open-ended and appropriate for lower elementary and middle school students. The program is flexible, as it may be used by groups of students and by individuals. It can be self-guided or enhanced with adult interpretation. BiT materials are offered through 21 stations across the southeast, and are also downloadable through the U.S. Fish and Wildlife Service's website. BiT program materials are provided at no cost to anyone who is interested.

## Experiential Environmental Education Through the BiT Program

Through participation in the BiT program, students will:

- 1) become involved fully and openly in the experience of exploring and observing fish and aquatic environments
- 2) reflect on and interpret these experiences and observations
- 3) develop concepts and ideas to integrate their observations logically
- 4) use their learning to make future decisions and meet new challenges



*BiT is in your backyard! The Southeast is home to 14 National Fish Hatcheries (NFHs) and 6 Fisheries Resource Offices (FROs) that provide BiT program materials and guidance. Visit [www.fws.gov/southeast/fisheries](http://www.fws.gov/southeast/fisheries) to learn more.*



USFWS/Jim Rothschild

*BiT offers children the opportunity to have meaningful interactions with aquatic creatures and habitats.*

curricula. Participants may obtain BiT bins from any of the southeast's 21 Fisheries offices. They are perfect for use at hatcheries but can also be appropriately used elsewhere.

BiT workshops provide Fisheries staff, volunteers and educators with information and tools to more effectively teach the program and reach out to schools and students. Workshop dates and locations are dependent upon demand.

A BiT website offers additional support materials for teachers and students, and also an email contact for immediate assistance.

Program monitoring and evaluation are conducted by BiT points-of-contact at each Fisheries field station. With this input, the program will be continually shaped by its user groups to be as effective as possible in achieving its goals.

**For more information, contact:**

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The BiT program specifically addresses Section 6 of the **National Fish Hatchery System Volunteer Act of 2006**. In it, Congress outlined guidance for the development of a hatchery education program with the following goals:

- providing outdoor classroom opportunities for students on fish hatcheries that combine educational curricula with the personal experiences of students relating to fish, aquatic species, and their habitat, and to the cultural and historical resources of the hatcheries
- promoting understanding and conservation of fish, aquatic species, and the cultural and historical resources of the hatcheries
- improving scientific literacy in conjunction with both formal and nonformal education programs

**BiT Program Components**

An engaging 20-page activity booklet guides children through five interactive explorations of fish and aquatic environments. Each of the activities promotes stewardship and the intrinsic value of fish and habitats, builds skills of observation, and teaches different methods of acquiring, organizing and assessing biological information. In the final activity, children will link with a mentor in the field of biology. Upon completion of the activities, students will receive an official certificate of accomplishment and a patch or sticker. This incentive provides a sense of pride, ownership, and empowerment to act to help conserve and protect aquatic resources.

The BiT activity guide can be enhanced through the use of extension activities and supplemental materials available in BiT bins. These extension activities are carefully selected from nationally recognized environmental education