

# STREAM SAFARI

*An outreach project of NH EPSCoR  
& UNH Cooperative Extension*

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ECOLOGY

## ABSTRACT

Stream Safari is an outreach project of NH EPSCoR Ecosystems and Society, in partnership with UNH Cooperative Extension 4-H Youth Development. Stream Safari is a youth outreach opportunity that is offered to participants in after-school programs, 4-H clubs, and school day settings. It is a multi-week program that seeks to educate youth about river ecosystems and the scientists who study them.

The curriculum involves both indoor and outdoor activities, field work experiences (depending on the season), data collection and analysis, and integration within the science community of EPSCoR and the University of New Hampshire. Examples of activities that students participate in while working on Stream Safari include, building models, learning and practicing field work, collecting macroinvertebrates from a local stream, classifying and identifying biotic components and data analysis. All activities work together to strengthen and diversify the future workforce in STEM disciplines and to expand the research capacity in New Hampshire.

Providing outreach to after-school programs throughout the state engages populations that are underrepresented in STEM and are critical to developing the workforce needed for a technologically advanced economy.

## LONG TERM GOALS FOR STREAM SAFARI PARTICIPANTS

- Students will become **Citizen Scientists**
- Expand their **Ecological Knowledge and Literacy**
- Develop a **Sense of Place** within the river ecosystem

## LEARNING OBJECTIVES: CORE CONTENT KNOWLEDGE ALIGNED WITH ECOSYSTEMS AND SOCIETY OBJECTIVES

- Ecology
- Habitat
- Interdependence
- Change
- Adaptation and Natural Selection
- Human Impact

## ABOUT STREAM SAFARI

- 21st Century Afterschool program in Manchester, NH
- 9 week session, 1 day/week, for 60 minutes
- Participant information:
  - 9 students in grades 6-8
  - 3 students with learning and behavioral disabilities
  - 4 females and 5 males
  - Participants represented Asian, Hispanic/Latino, African-American demographics
  - Low-income, free and reduced lunch status
- Study site: Piscataquog River in New Boston, NH
- Each lesson was comprised of a hands-on activity, multimedia content, and material manipulation
- 1 teacher trained

## HOW STREAM SAFARI INTEGRATES WITH ECOSYSTEMS AND SOCIETY PROJECT'S OVERARCHING GOAL TO STRENGTHEN AND DIVERSIFY THE STEM WORKFORCE PIPELINE IN NH

- Building relationships and fostering partnerships with after-school organizations and teachers
- Working with students who have learning and behavioral disabilities
- Integrating field experiences to provide different learning environments
- Involving and inviting EPSCoR science team members to participate in outreach

## HOW STREAM SAFARI COULD INTEGRATE FURTHER

- Write a land/wildlife ecology based curriculum
- Revise Stream Safari content to include precipitation topics
- Integrate with EPSCoR research sites; precipitation monitoring
- Identify a core list of scientists and social scientists as Stream Safari Visiting Scientists
- Continue to find ways to work with diverse populations
- Find additional partners, such as YMCA, Boys and Girls Club, Housing Authority Community Centers, Summer camp providers and Science teachers



HABITAT

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INTERDEPENDENCE



CHANGE



ADAPTATION & NATURAL SELECTION



HUMAN IMPACT