


# Sweet Water Hunt

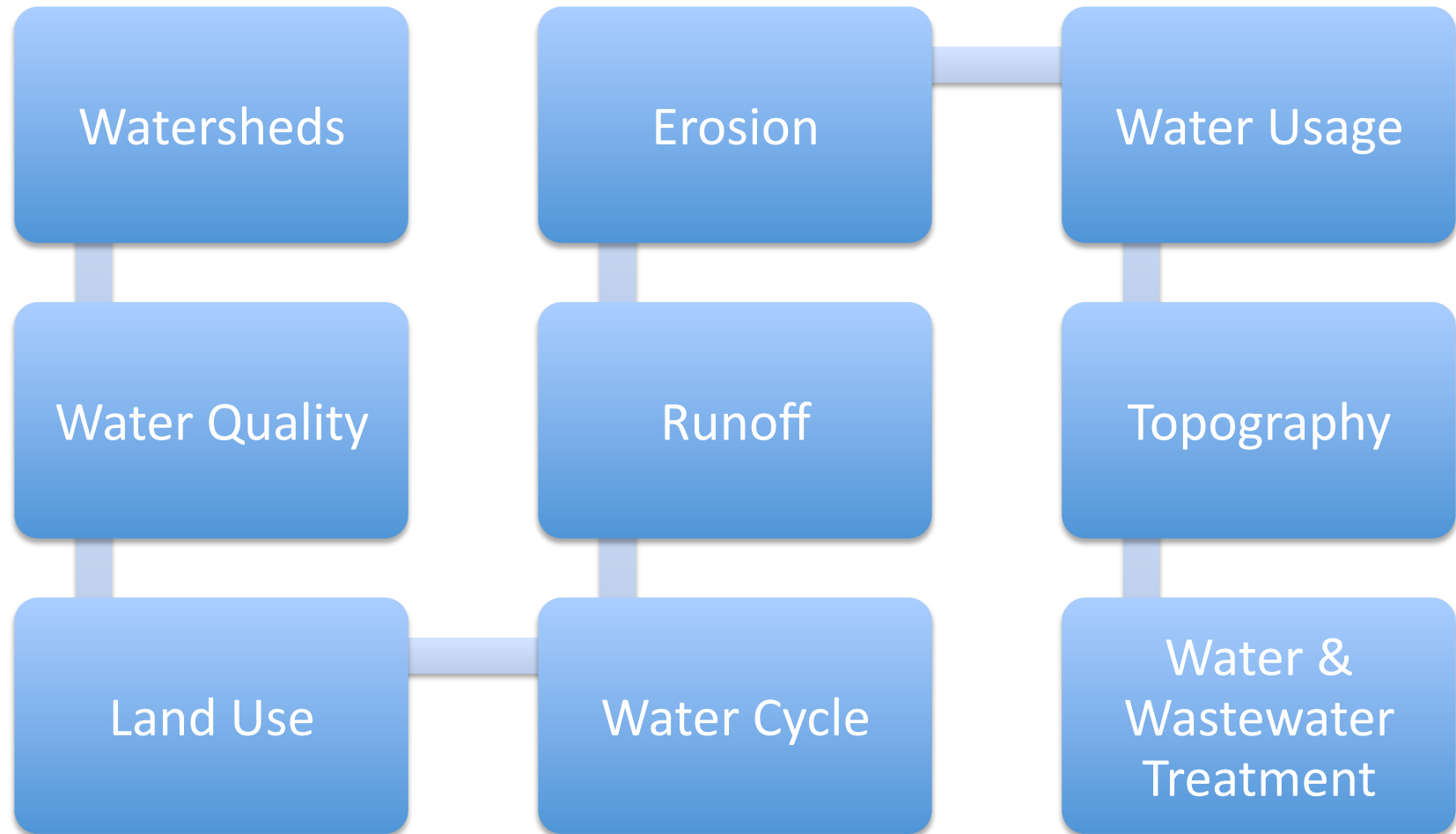
An interactive,  
watershed  
education novel  
by  
Connie Nye



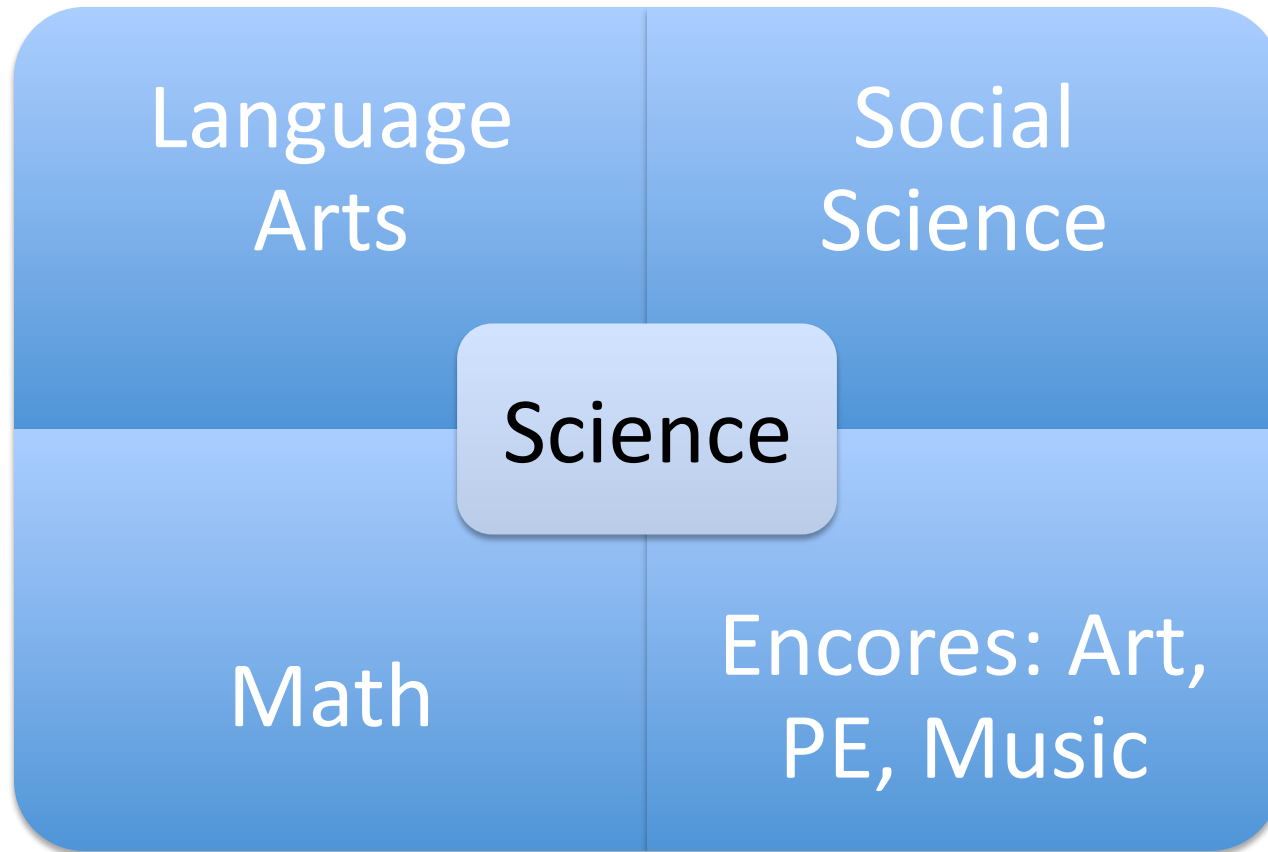
# Sweet Water Hunt

The hunt is on. While playing on a beautiful summer day, Wyatt Nystrom and his dog, Benny, find a tennis ball with a mysterious message. The ball is just the hook to get kids like Wyatt and his cousin, Danni, involved in a journey upstream to unravel the madness of the Brandywine. With the help of “creek pals” throughout the watershed and numerous hands-on activities throughout the story, Wyatt and Danni discover a community of natural wonders, scientific studies, folklore, and crazy characters, all brought together by a remarkable creek. This is a story that not only engages the reader with its plot, but also with its interactive approach. It’s a novel and an entertaining way to learn about watershed science.

# Created to teach watershed dynamics



# Interdisciplinary





# Science

- ✧ Watershed dynamics
- ✧ Nocturnal nature
- ✧ Astronomy
- ✧ Landfills
- ✧ Meta-morphosis
- ✧ Adaptations
- ✧ Scat
- ✧ Agriculture



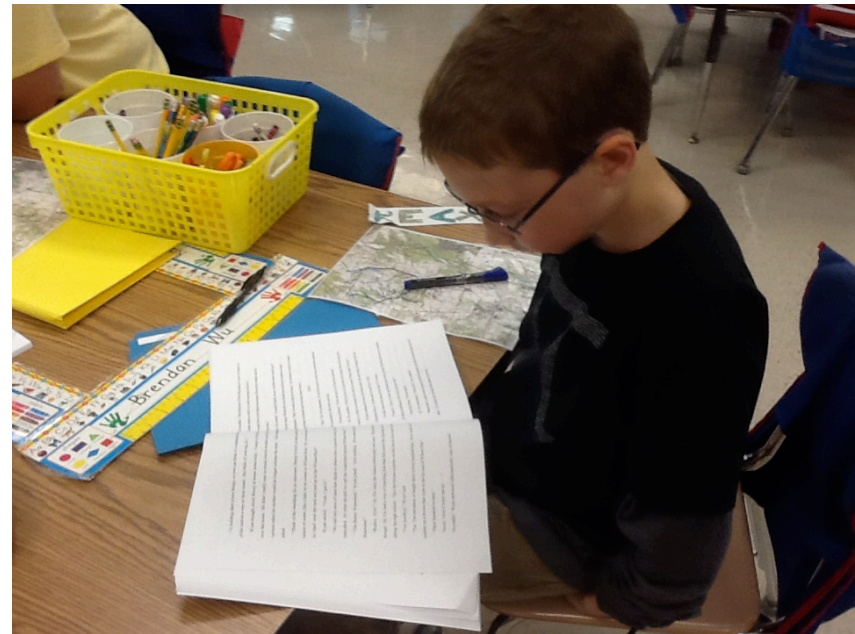
# Social Science

- ✧ Colonization
- ✧ Map reading
- ✧ Landforms
- ✧ Water bodies
- ✧ Municipalities
- ✧ History
- ✧ Lenape Indians
- ✧ Local folklore
- ✧ Revolutionary War (Battle of the Brandywine)
- ✧ Underground railroad
- ✧ Local industries past and present (i.e. DuPont, Lukens)



# Language Arts

- ✿ Letter writing
- ✿ Lenape language and prophecy
- ✿ Symbolism
- ✿ Ted Browning's essays
- ✿ Picture books





# Math

✿ Physical measurements of stream: width, depth, velocity, volume of flow

✿ Bat Math

✿ Light Year Math



# Encores

- ✿ Art: Rain barrel painting; Wyeth country; crayon rubbings
- ✿ Music: Scat Rap; classic oldies
- ✿ Physical Education: hiking; canoeing



# Interactive

*Map It!    Check It Out!    Sticker It!    Try It!    Field Trip!*

Knuckle Mountain:

A simple way to understand contour lines on topographic maps.  
Hands-on, literally!





# Interactive

*Map It!    Check It Out!    Sticker It!    Try It!    Field Trip!*



Looking at aerial  
views of the  
watershed to  
see  
development

# Interactive

*Map It!    Check It Out!    Sticker It!    Try It!    Field Trip!*

Getting ready to catch macroinvertebrates





# Chapters & Field Trips



# Field Trip Opportunities

- ✿ Kalmar Nyckel replica ship
- ✿ Brandywine Park/Brandywine Zoo
- ✿ Alapocas Woods Park
- ✿ Hagley Museum
- ✿ Brandywine Creek State Park
- ✿ Brandywine River Museum
- ✿ Longwood Gardens
- ✿ Brandywine Battlefield
- ✿ Myrick Conservation Center (Brandywine Valley Association)
- ✿ Stroud Preserve
- ✿ Chester County Historical Society
- ✿ Embreeville/ChesLen Preserve
- ✿ The Laurels
- ✿ Paradise Farm Camps
- ✿ Struble & Uwchlan Trails
- ✿ Water and Wastewater Treatment Plants
- ✿ Lukens National Historic District
- ✿ Saalbach Farm (Brandywine Valley Association)
- ✿ Marsh Creek State Park
- ✿ Hibernia & Springton Manor
- ✿ County Parks
- ✿ Struble Lake
- ✿ Lanchester Landfill

# Sweet Water Hunt Book Club:

## The Pilot Program at Beaver Creek Elementary



# Sweet Water Hunt Book Club Pilot Program

- ✧ Beaver Creek Elementary after-school book club
- ✧ Directed by Connie Nye
- ✧ Led by high school juniors from the STEM Academy
- ✧ Weekly club from September through May
- ✧ 5 field trips taken
- ✧ 2 rain barrels produced
- ✧ Pre to Post Assessment:
  - ✧ 4<sup>th</sup> graders' scores rose by 41 %
  - ✧ STEM juniors' scores rose by 22%.



# Kalmar Nyckel

Students went for a ride on this replica of the first ship to bring settlers to Wilmington to hunt for beaver pelts



# Hagley Museum



Seeing how  
water was  
harnessed for  
power to make  
gunpowder by  
the du Ponts



# King Ranch/The Laurels



Where Buck  
and Doe  
Runs merge,  
heading to  
the West  
Branch of the  
Brandywine

# Downingtown Municipal Water Authority & Downingtown Regional Water Pollution Control Center



Inside at the water treatment plant



Downstream at the wastewater  
treatment plant



# Lanchester Landfill



A view of the  
Brandywine  
Watershed

# Rain Barrels Service Project

Sweet Water Hunt is a perfect springboard for students to implement stream quality service projects



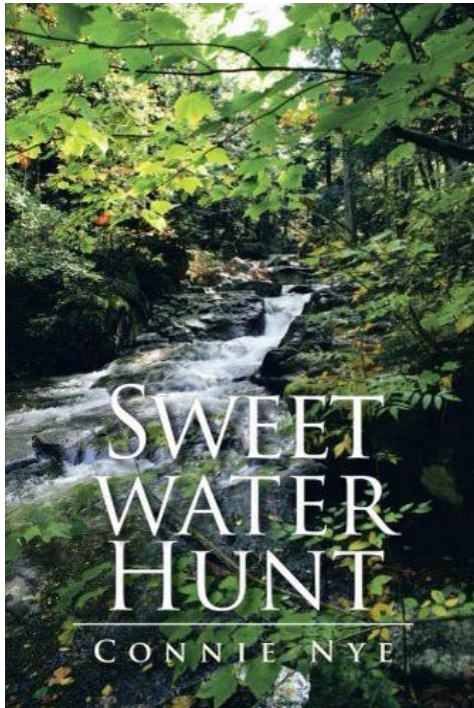
Rain barrels conserve water and help reduce runoff





# The Ultimate Watershed Learning Experience

- ✧ Read Sweet Water Hunt
- ✧ Participate in a Red Streams Blue Program

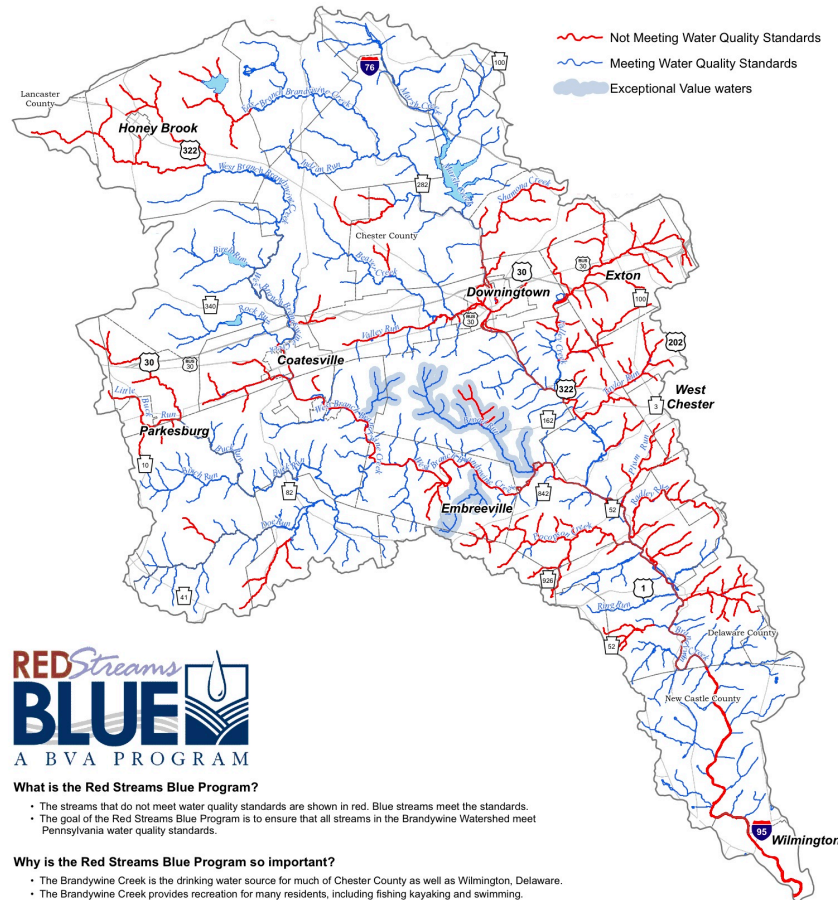


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## BRANDYWINE CREEK WATERSHED

Impaired Streams based on 2010 Pennsylvania Integrated  
Water Quality Monitoring and Assessment Report



### What is the Red Streams Blue Program?

- The streams that do not meet water quality standards are shown in red. Blue streams meet the standards.
- The goal of the Red Streams Blue Program is to ensure that all streams in the Brandywine Watershed meet Pennsylvania water quality standards.

### Why is the Red Streams Blue Program so important?

- The Brandywine Creek is the drinking water source for much of Chester County as well as Wilmington, Delaware.
- The Brandywine Creek provides recreation for many residents, including fishing kayaking and swimming.
- The Brandywine Creek and its tributaries provide habitat and natural corridors for wildlife.
- The beauty of the Brandywine Watershed is an important natural resource.

### Background of Pennsylvania's Assessed Waters Program

The Commonwealth of Pennsylvania has an ongoing program to assess the quality of waters and identify streams and other bodies of water that do not meet water quality standards as impaired. Water quality standards are comprised of the uses (including antidegradation) that waters can support and goals established to protect those uses. Periodic reports on the quality of waters are required under section 305(b) of the federal Clean Water Act. Section 303(d) of the Act requires states to list all impaired waters not supporting uses even after appropriate and required water pollution control technologies have been applied.

#### Mapping Support Provided by



Chester County Water Resources Authority  
CHESTER COUNTY - PENNSYLVANIA  
601 Westtown Road, Suite 200  
P.O. Box 2747  
West Chester, PA 19380-0990

August 19, 2011



0 1 2 4 6 Miles

#### Sources

Pennsylvania Department of Environmental Protection, 2011.  
2010 Pennsylvania Integrated Water Quality Monitoring and Assessment  
Report (<http://www.depweb.state.pa.us>)  
Chester County Bureau of Land Records, 2011  
Brandywine Valley Association, 2011

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## About the Watershed

✿ 210,000 acres of land

✿ 60 miles of creek

✿ Includes Honey Brook, Coatesville, Downingtown, West Chester, Chadds Ford, Wilmington

✿ Goes to Christina River, Delaware River, Delaware Bay, Atlantic Ocean

✿ Source of drinking water for many of us

✿ Red streams are impaired

✿ Blue streams are healthy

✿ A concern to us all





# About the Author

Connie Nye (formerly Shapiro) lives in Downingtown, Pennsylvania, and has been working with children for thirty years in environmental, science, and outdoor education. She has developed numerous workshops and programs for elementary, middle, and high school students, including Indoor Out School, Brandywine FLOWS (the Future/the Legacy of Our WaterShed) and the Red Streams Blue School Program. As the mother of two daughters, an avid outdoor person, and a writer, Ms. Nye couldn't think of a better way to spend her days than exploring the Brandywine watershed. This is her first novel.

# Purchasing the Novel

✧ Available through SWEET or  
Connie Nye; discounts may apply

Paperback = \$20

Hardback = \$30

A portion of the purchases made from SWEET goes to 1) Chester County Fund for Women and Girls and 2) Cave Bird Coffee Cup of Life. These non-profits help to improve the lives of families in Chester County and in Uganda

✧ Also available through  
[www.authorhouse.com](http://www.authorhouse.com)

✧ Also available through  
[www.amazon.com](http://www.amazon.com)





# SWEET

## Sweet Water Education Events Training



For more programs related to Sweet Water Hunt,  
visit [www.sweetwatered.com](http://www.sweetwatered.com)