



# Ecoliteracy Project

Place-based educational experiences  
that create ecological literacy

Norton Elementary  
Allen, TX

Kirk Evans

5<sup>th</sup> Grade Science Teacher



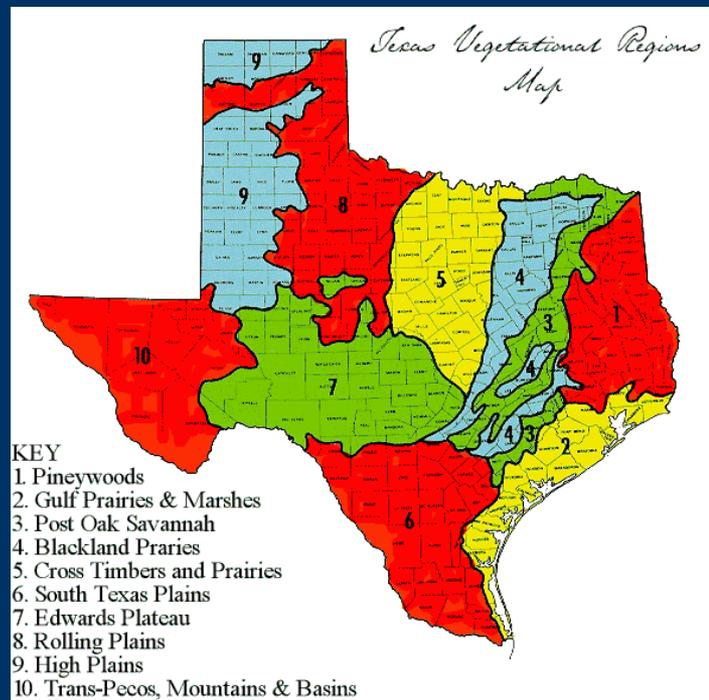
# School Facts

- Elementary
- 638 students – Kindergarten – Sixth grade
- North Central Texas (Trinity Blackland Prairie, Elevation 680', N 33.05°43.4'/W 096.41°39.0')
- Our staff holds the highest expectations of excellence for student achievement. Technology is a key component to this success. Our staff goes over and beyond their typical teaching responsibilities.
- Content Benchmarking, Norm Referenced, State Criterion Assessments (TAKS), School Surveys
- Texas Business and Education Coalition 5-year-award winner, Keep Texas Beautiful Environmental Education award winner

# Our Purpose:

To create or renew our environmental and ecological literacy through experiences that foster a sense of place

## REGION 4: THE BLACKLAND PRAIRIES



- Collin County is 851 square miles.
- 450 to 700 feet above sea level.
- Average annual rainfall ranges from 30 to 40 inches.
- Topography is gently rolling to nearly level and well dissected for rapid surface drainage.
- Collin County is in the (Trinity) Blackland Prairie (except for a small western portion)
- According to the Texas Parks and Wildlife Department, 99.9% of the Blackland Prairie is lost to other land uses. Only a few remnants are protected as hay meadows or conservancy land.

# Components of the Ecoliteracy Project

## Curriculum and Instruction

This component will take classrooms outside our school and into the natural areas – observing, collecting, recording and monitoring the health of our blackland prairie ecosystem.

## Awareness and Stewardship

This component extends learning outside of the classroom and the scheduled school day. It provides environmental and conservation-based projects within our neighborhood and community.

“Liberal education ... calls for somewhat different teaching materials and sometimes even different teachers. The objective is to teach the student to see the land, to understand what he sees, and enjoy what he understands.” (pg. 302)

Aldo Leopold, The River of the Mother of God (1991)

## Curriculum and Instruction

What we are doing to creating ecological literacy and build the sense of place in our classrooms.....

School Environmental Education Team (SEED Team)

11 teachers, over 350 students, monthly meetings and planning, staff development workshops and trainings, monthly field lessons at field stations, and local field trips.

Biodiversity Inventory (06-07 Foundation and Montgomery Farm Grant)

Campus Tree Inventory, Wood Lot and Campus observations and studies.

The inventory is a living document that can be added to yearly with any study

Mapping the community (07-08 EDS Grant).

Studying the watershed (07-08 Foundation For Allen Schools, Keep Allen Beautiful, and REI Grants).

Native plant gardening (06-07 – Leadership Allen Project).

Leadership development program for teachers and students.

"By community I mean, rather, places in which the bonds between people and those between people and the natural world create a pattern of connectedness, responsibility, and mutual need. Real communities foster dignity, competence, participation and opportunities for good work. And good communities provide places in which children's imagination and earthly sensibilities root and grow." (pg. 143) David Orr, *Earth in Mind* (2004)

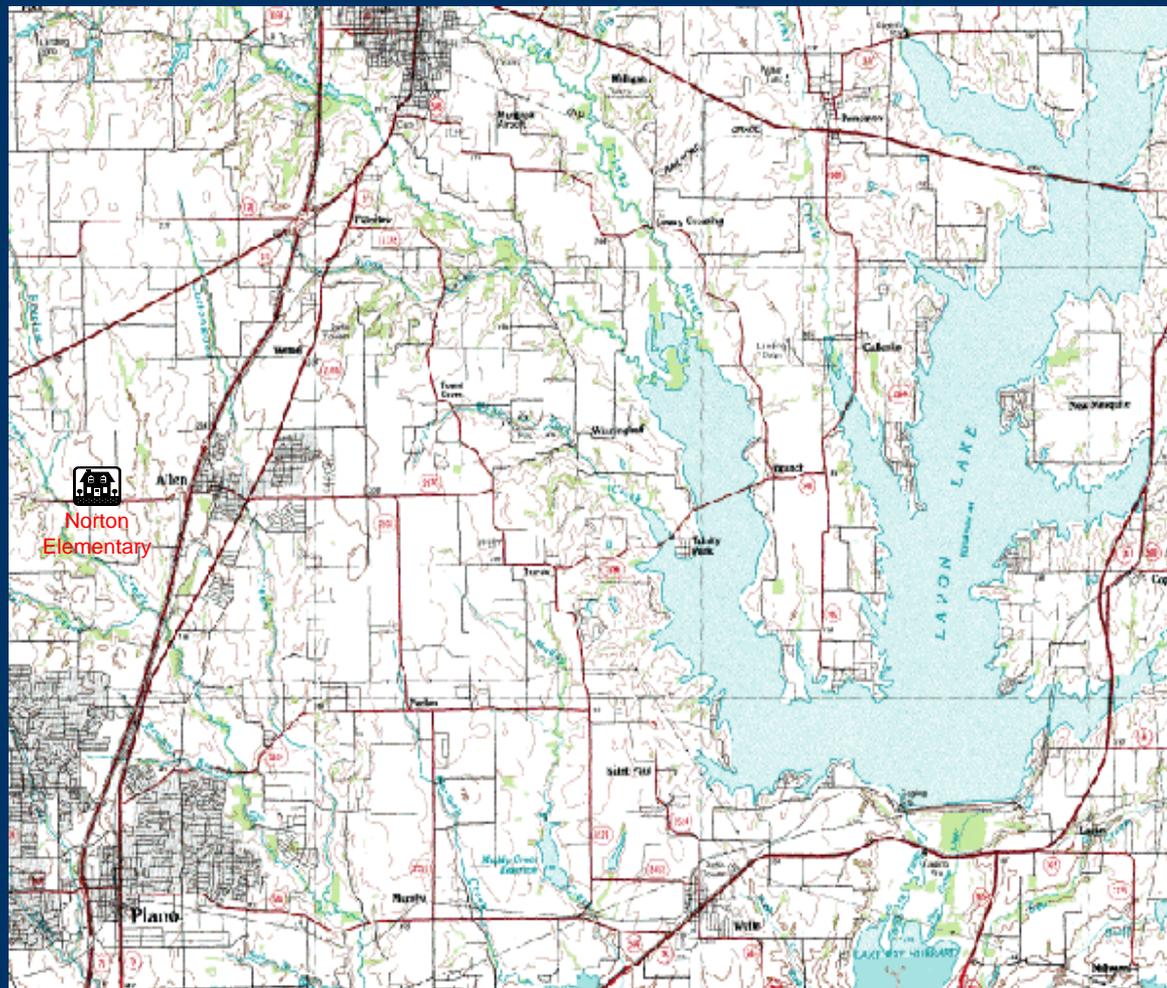
## **Awareness and Stewardship**

Environmental Education Club  
5th and 6th grade students  
Meetings monthly

Programs and Activities: Nest Box building and placement, Classroom Presentations and Lessons (Brochure – soil/erosion, mammals, school wide recycling), REI Adventure Days, Booth at City of Allen Arbor Days, Nest box monitoring, Trash clean-ups on Campus and Watters Creek (Keep Allen Beautiful), Thrift Cart (Book Exchange, T-shirt exchange), and school recycling program

Community-Based Programs (School Brochure)  
Nest Box Monitoring (Connemara Conservancy and Montgomery Farm)  
Creek Clean up (Keep Allen Beautiful)  
Garden maintenance and planting (Leadership Allen Project)  
Invasive plant eradication (Connemara Conservancy)

Watershed study 2007-2008 funded by



Program development for  
2007-2008

Continuation of Roger Tory  
Peterson Institute  
(Professional Development)

Aquatic organisms added to  
the biodiversity inventory –  
monthly fieldtrips  
(Professional Development)

Watershed Survey to acquire  
current knowledge of  
watershed

City of Allen collaborative:

- Adopt-a-Waterway
- Educator Presentations in  
classrooms

Wood Duck Boxes on shared  
waterways for monitoring

# GIS and GPS 2007-2008 mapping program funded by Electronic Data Systems



BURROUGHS WALKWAYS



COLEBY-GREENE

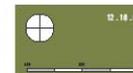
Greener Prospects

Half Associates, Inc.

RICK DARK LLC

LANDSCAPE AND GARDEN CONSULTING

COMMUNITY DEVELOPMENT PLAN



Program Development for 2007-2008

Waypoints at 38 Bluebird Nest Boxes and Wood Duck Boxes

Development of a Geocaching Club

Latitude and Longitude points of field study sites

Enter data into GIS Mapping Database

Development of yearly "Sense of Place" Maps (School, School Boundary, City, County)

# Students in the Field

## Aquatic Study



Students teaching students

## Notes in the Field



## Back in the classroom



# Working in our place

Creek clean up



Setting up nest boxes



Students teaching in Classrooms



Campus Tree Inventory



# Survey Results (handout)

Over 65% of the Surveys were returned –  
(373 families – 265 surveys returned)

- 90% of the people who responded reported that they spend more than 3 hours a week outside.

## What do people do outside?

- 75% involved in team sports (playing or watching)
- 85% exercise
- 60% lawn care and gardening
- 60% bike
- 35% scouting programs

## Conservation Practices

- 90% recycle
- 30% practice soil conservation
- 70% practice water conservation

## Gardening Practices

- 65% landscape with native plants
- 77% plant perennials
- 70% plant annuals

# Survey Results - Continued

## Familiar with Native Plants

- 60% could identify trees
- 50% could identify wildflowers
- 37% could identify grasses
- 25% could identify shrubs
- 5% could identify aquatic plants

## Familiar with Wildlife

- 38% could identify insects and invertebrates
- 52% could identify mammals
- 38% could identify reptiles
- 21% could identify amphibians and fish
- 40% could identify birds

## Who filled out this survey?

- 16.3% Male                      83.7% Female
  
- Age –
- 2% 20 to 29                      54% 40 to 49
- 41.9% 30 to 39                      2.9% 50 to 59
- 1% Other
  
- 55% Kindergarten – 3rd Grade Parent    45% 4th – 6th Grade Parent

# Summary Points

- Devoted to changing the way we teach by creating engaging work through the experiential process
- Creating knowledge of ecology and sense of place by providing opportunities of stewardship
- Building awareness through environmental and ecological literacy while becoming stewards through actions
- Our challenges lie in the continued fiscal support of new programs and maintaining a high level of excellence and success