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Let's Talk Trash!

Kassidy Wirick, Guide -- Butternut Valley Nature Center

According to some measures, the average American creates about seven pounds of garbage every day. That adds up to more than a ton of trash in a single year, per person! For most of us, that trash is forgotten as soon as it hits the curb or drops into a dumpster. As our trash trucks on to the landfill, we are always making more: tossing aside empty packages, leftover food, broken things, outgrown clothes, paper plates, and napkins.

We all know that recycling can cut down on waste. Separating out aluminum, plastic, glass, and paper packages and getting them to a recycling center really changes the amount of trash that winds up in the landfill. A lot of food ends up in the trash, which could be composted into the soil, or fed to farm animals. Outgrown clothes and toys are accepted

by many charitable groups or can be handed down to little brothers, sisters, and cousins!

Here at Butternut Valley, we have put some extra thought into our daily trash output. Not so long ago, we gave out two paper cups to every student, every day. Now, we have reusable plastic cups, which are washed and dried every night and returned

clean for the next day's class. We also have a big, blue recycling tub for your drink bottles and cans. Another bin is used to collect leftover food, which goes home daily with the staff for their various animals. By sorting out your food waste, you are giving treats to horses, dogs, sheep, rabbits, and chickens!

Our last bin is used to collect trash. Anything that can't be sorted out ends up going to the dump. It's very easy to chuck everything in the trash and never think of where it goes, but it takes some time and patience to sort everything into four different containers. We know that reducing waste takes some work, and we want to reward you for your effort! At the end of every field trip that

includes lunch, we weigh the bag that goes to the dump and calculate the trash average per student. The group with the least trash per person gets a special pizza party at the end of the season and bragging rights as the least wasteful class! Can you think of any ways to improve your chances of winning?

Kelli Foster & Kristy Parsley's 2nd grade classes won the competition with 0.152 lbs/student!

So how can your class reduce waste at Butternut Valley and win a pizza party?

Put cans and plastic bottles in the recycling bin.

Put leftover food in the food container.





Melissa Squirlock, Coordinator
 Allison Mains, Web Curator
 Helga Thompson, Lead Guide
 Bobby McCormick, Property Mngr
 Alison Harris, Guide
 Cassidy Wirick, Guide
 Scott Schlarbaum, Professor

Butternut Valley Nature Center
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 Dept. of Forestry, Wildlife & Fisheries
 274 Ellington Hall
 Knoxville, TN 37996

To schedule a field trip:
 865-974-4733 (phone)
 865-946-1163 (fax)
 msquirlo@utk.edu

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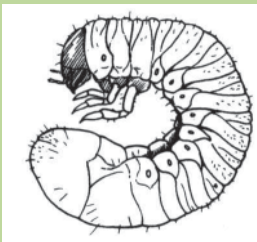
Fall 2008

September

- 1: Labor Day (no school)
- 3: Field trips begin
- 22: Fall Equinox

October

- 10-17: Fall Break
- 31: Halloween & last day for field trips



Staff Profile: The Healing Stones Foundation

Allison Mains, Web Curator -- Butternut Valley Nature Center

Witness the smiling, excited faces of students and teachers at the Butternut Valley Nature Center (BVNC) and you will see evidence of a realized dream. Trace the history and goals of Healing Stones since its beginning 17 years ago and you will see that the inception of BVNC seems inevitable. Healing Stones was initially created as the land holder of a 1200-acre site situated on the Upper Dry Creek and accompanying ridge. Largely buffered by protected forest, the area affords an opportunity to be immersed in nature with little exposure to traffic and development.



Butternut Valley's spectacular views leave a lasting impression for every visitor. photo by Allison Mains

The area included homes for such families as the Snows, Hildreths, Georges, Estes, Cripps, as well as others. The Foundation's hope was to honor this human element, the people who lived and died there, and are nearly forgotten.

As a Wildlife Sanctuary, the Healing Stones property is not only a place to honor human communities, but also plant and animal communities. The large tracts of forest provide a home for a variety of wildlife where they can live and thrive. Dry Creek, which bisects the property, is one of the cleanest creeks in DeKalb County since its spring fed headwaters are virtually unexposed to common pollutants. You can find aquatic plants and animals there that you would not be able to find downstream. These successful biotic communities are evidence of the Foundation's goal of promoting healthy wildlife management practices.



As an outdoor classroom, Butternut Valley provides students with an up close and personal interaction with the natural world. photo by Allison Mains

University of Tennessee Forestry Professor, Scott Schlarbaum worked with the Foundation and advised on the possibility of an environmental education program centered at the Healing Stones property. The program would be offered to DeKalb County K-12 Schools and would be named Butternut Valley Nature Center, an acknowledgment of the largest known concentration of butternut trees in the southeast located there. For Healing Stones, it was a perfect fit. The program offered a way of offering the gifts of the Dry Creek property in an educational platform, while sharing the rich historical traditions, preserving the land, and promoting environmental stewardship. It seems that the Butternut Valley Nature Center is one rare example when all the pieces fall into place and "life works."





A Brief Timeline of Butternut Valley History

Helga Thompson, Lead Guide -- Butternut Valley Nature Center

History is a series of events lived by ordinary people like you and me. We are living in what one day will be recorded as important history. Dates and events give us an outline to help understand the story of people at the time. The headwaters of Dry Creek, or as we call it, Butternut Valley, also has its own history. And that history is part Tennessee's history, which is part of U.S. history. Here is a brief outline:

- 10 BCE to 1540** Native Americans of various tribes live and hunt in the area
- 1540** First Europeans explore the area (explorer Hernando de Soto)
- 1776** United States of America declares independence from England
- 1777** The area that is to be Tennessee is part of the newly formed state of North Carolina
- 1796** Tennessee becomes a state
- 1797** The first settlers arrive in what will be Liberty.
- 1800-1806** First settlers arrive at Dry Creek up to Wilder Hollow which was the Indian Boundary line until 1805. Land sold from \$2 to \$0.12 per acre.
- 1820** Dekalb County's second town of Alexandria is founded.
- 1830's** The Butternut Valley log home is built
- 1837** Dekalb County is formed
- 1838** Trail of Tears or Indian Removal Act
- 1840** Dekalb County Census shows several families living in Butternut Valley
- 1861-1865** Civil War
- 1870** George School built in Butternut Valley
- 1882** Dekalb County begins first telephone service
- 1890** First railroad built through Dekalb County
- 1914-1918** US fights WWI



In this photo, a group gathers to make molasses. photo provided by Jerry Cripps.

- 1916** George School closes
- 1933** TVA is established
- 1941-1945** USA fights WWII
- June 25, 1942** Electricity turned on for the first time on Dry Creek
- 1950** Only 14% of Dekalb County houses had indoor toilets
- 1960** Butternut Valley is no longer inhabited
- 1963** Public schools are integrated
- 1990** Dekalb County's population is 14,360
- 2000** Dekalb County's population is 17,423
- 2003** Dekalb County's population is 18,002

Butternut Says Farewell To Dedicated Guide

Kassidy Wirick, Guide -- Butternut Valley Nature Center

Some visitors to Butternut may know Lee Rockenbach by name. Others would recognize the scraggly face and kind smile. But almost anyone can remember the "Snake Guy" at the Nature Center.

Lee is well-loved along Dry Creek for his easy-going knowledge of snakes and other reptiles. Countless students heard his lectures on snake identification and safety, and many were invited to touch, hold, or examine a harmless specimen

collected from the area. Lee has left a lasting impression in many young minds and has encouraged students to explore the natural world around them with respect.

Now it is extra important that every one of us remembers his lessons, because Lee has moved away to North Carolina. We wish him good luck in his new ventures and look forward to future visits. Thank you, Lee, for your hard work and dedication!



Lee Rockenbach engages students about gardening. photo by Allison Mains





Garden Nook

Kassidy Wirick, Guide -- Butternut Valley Nature Center

It is summer in the garden and my how it grows! The weather is hot and occasionally rainy, with just enough water to go around. Student planters from the spring will be shocked to see the strength and height of their seeds and starts. The pole beans are ten



Our new scarecrow watches over the three sisters. photo by Allison Mains

feet tall. The corn tassels dance in the wind. Okra is ready for harvest and many marigolds bloom in the margins. Marigolds are useful to gardeners because they provide a natural deterrent for insect pests that may eat precious vegetables.

There is a new scarecrow (modeled after our much-missed guide, Lee) watching over the vegetables while our friends, the pollinators, buzz and flit among the flowers. The garden is a place for us all to learn about food plants and their life cycles.

It is also a great place to observe the habits, foods, and life cycles of many an insect! In our herb garden this fall, keep a look out for different types of caterpillars preparing for the winter ahead.

The coming fall promises plenty of garden time.

Students will visit as the plants mature and produce food, and some visitors may even plant winter crops in a new and exciting cold-frame. Cold-frames are like mini-greenhouses, in that they protect hardy plants from killing frosts in the cold season. The Butternut Valley garden will have more growing time than ever before, which means more of our young green thumbs have a chance to participate in the process! Our garden is a great place for students to learn about where their food comes from and how important it is take to take care of the earth.



A group of students is busy testing their green thumbs in the Butternut Teaching Garden. photo by Melissa Squirlock

Scenes From The Valley



A guide shows students what animals may be found in Dry Creek. photo by Kelli Foster



Crane flies were abundant during the spring trips. Students were careful to respect these harmless insects. photo by Melissa Squirlock



A student shares the remains of a snake shed. photo by Kelli Foster



A group of students eagerly explores Dry Creek for aquatic life. photo by Kelli Foster



The herb garden allows students to engage their various senses. photo by Allison Mains





How to schedule a field trip for your class...

- 1) Select three activities from the listing
- 2) View the calendar on our website to see what dates are available (www.butternutvalleynaturecenter.com)
- 3) Select three dates from the calendar that your class may be able to attend (call 865-974-4733 if you need a specific date)
- 4) Complete the form on the back of the newsletter and send or fax (865-946-1163) it to:

Melissa Squirlock, Coordinator
 University of Tennessee/Forestry Dept.
 274 Ellington Hall
 Knoxville, TN 37996



photo by Allison Mains

Virtual Nature Center

Allison Mains, Web Curator -- Butternut Valley Nature Center

We invite you to explore the updated Butternut Valley Virtual Nature Center that was launched last spring. We gave the site a fresh look and added new features to make your visit more valuable. Our newest feature is the “Question of the Week.” We partnered with Kelli Foster’s second grade class at Smithville Elementary to pilot this project. Students were thrilled to see their pictures posted along with a personalized, animated answer for their science related questions. Ms. Kelli reports improved student retention along with pure excitement with this approach. Unfortunately, we were unable to answer every student’s question, since we started near the end of the school year. To address this, we intend to take a full academic year so that we will have time to focus on each question submitted. In years to come, we hope to have other teachers as partners for this project.

Curiosity often drives our young visitors to find interesting organisms during their Butternut Valley field trips, and they want to know more. In our “Being Blurb” feature, we will post photographs and life history information about these discoveries so that the students can learn more.

We continue to develop exercises that can be used in the computer labs. Check out our new “Datasets” feature. Data collected during field trips are posted for computer teachers to use in graphing, spreadsheet, database, and PowerPoint

exercises. Also in development is a computer model simulation of the benefits of camouflage for this same purpose. We hope to evaluate its success this year in Lesa Hayes’ computer lab at DeKalb West.

Suggestions are always welcome as we develop the Virtual Nature Center for use in the DeKalb County School system. If you have a special need or just a great idea for technology in the classroom and we can help, please contact us and we can develop it together.

Teachers, We Need Your Help!

We would like to include articles, pictures, and artwork from both students and teachers. Please contact Melissa at 865-974-4733 or msquirlo@utk.edu for more information. Submissions for the spring newsletter will be accepted until November 30, 2008.





Fall 2008 Activity Offerings *Corresponding standards listed for each activity*

Little Ones (Pre K & K)

Tree Parts

In this activity, students will collect items from the forest floor and utilize their senses in order to identify their findings. (2.2)

Tiny Worlds

Come along this journey as we “shrink” ourselves to become part of tiny worlds like soil, blades of grass, and underground. (2.2)

Seek and Find

Using observation skills, we will play “hide and seek” with some items from the habitat around us. (2.2)

Sensing Shapes

On this scavenger hunt, we will be looking for similarly-shaped items along the cave trail. (2.2)

Bark Match

By examining different types of bark, we can find similarities and differences that are as unique as the trees at the nature center. (2.2)

Follow Your Nose

Whose nose knows best? In this activity, students will use their sense of smell to find and mark all of the peppermint scented trees they can find along the creek. (2.2)

Food Web

In this activity, we will explore what different animals eat, how plants are important to animals, and how everything is connected within a food web. (3.1)



Elementary School (1 - 5)

Ethnobotany 4th - 5th grade

Ethnobotany is a field that combines botany, geography, social studies, and economics. It is the study of how people interact with plants and use them for everyday purposes. (2.1, 3.1, 3.2, 1.01, 2.01)

It All Starts With a Seed 1st - 2nd grade

In this activity, students will explore a habitat to find a variety of seeds and learn what a seed is, where it comes from, and why it is important to a plant. (5.1, 5.2, 3.1, 2.3)

Leaf Match 3rd grade

Students will use their observation skills to determine how trees vary in two different habitats by collecting fallen leaves and matching their findings to a field guide. (5.1, 5.2)

Cabin Adventure 3rd - 5th grade

Join us as we discover how early settlers made a life for themselves in Butternut Valley. In this activity, students will explore different tools and practices used by the pioneers before the modern conveniences of electricity. (1.01, 1.02, 1.03, 1.04)

Spiders 1st grade

Students will explore the basic anatomy of spiders and understand what characteristics define them. Students will also discover the different types of webs that spiders make. (1.1, 1.2, 2.2, 3.1, 5.2)

There's No Place Like a Nest 4th - 5th grade

In this activity, students will explore nest construction and learn why birds make nests. This activity includes a craft portion that allows students to make their own nest. (2.1, 2.2, 4.2, 4.3, 5.2)

Traveling, Seed Style! 4th - 5th grade

People travel by plane, train, car, bus, foot, or bike. Seeds also have many forms of transportation. In this activity students will explore the many ways seeds travel. (5.1, 5.2, 2.1)

Creek Critters 1st - 2nd grade

In this activity, students will use sampling nets, magnifying glasses, and viewing trays to explore a creek ecosystem. Students will explore how animals are specially adapted to live in a specific aquatic ecosystem and how these animals utilize their senses for this aquatic lifestyle. (2.1, 2.3, 2.3, 2.4, 5.2)





Middle School (6 - 8)

Mad About Metamorphosis 8th grade

Students will explore the life cycles of common insects, with a special focus on complete and incomplete metamorphosis. In this activity, students will also examine the different body parts of insects and sample insect diversity from different habitats. (5.2)

Geology 6th - 8th grade

Dry Creek is an excellent area to examine a variety of fossils and rock formations. While students discover local geology, they will learn about the rock cycles, three basic types of rocks, and the unique geology of the area. (9.1, 9.2, 10.1, 10.2, 10.3)

Intermediate Eco Monitoring 6th - 8th grade

This is the beginning of a long-term, student monitoring program of the health of our section of Dry Creek. This activity turns students into scientists as they gather data on the health of this changing ecosystem. (5.1, 6.3, 10.3, 12.2).

Backyard Habitats 6th - 8th grade

As habitats are at a greater risk than ever from disappearance, the importance of building a 'backyard habitat' is rising. In this activity, students will learn how to help wildlife. (2.2, 3.1, 5.1)

Elements of an Ecosystem 6th grade

Students will learn the different elements that make up an ecosystem in a natural setting. They will observe and measure many non-living factors in order to understand how an ecosystem works. (2.1, 2.2).

Habitat Detectives 6th - 7th grade

In this activity, students will examine several different habitats and record the plants and animals they find. This investigation will allow students to determine how adaptations help organisms live in certain habitats. (2.2, 5.1)

Incredible Insect Inspectors 8th - 9th grade

By sampling insects in different habitats, students can learn about the diversity within this complex Kingdom. Students will learn how to use keys in order to make correct identifications of their findings. (2.1, 5.2, 5.1)

Cabin Adventure 6th - 8th grade

Join us as we discover how early settlers made a life for themselves in Butternut Valley. In this activity, students will explore different tools and practices used by the pioneers before the modern conveniences of electricity. (1.01, 1.03, 1.04, 1.05, 1.06)

High School (9 - 12)

Ethnobotany 9th - 12th grade

How do plants affect your life? Ethnobotany is an interdisciplinary field combining botany, geography, social studies, and economics. It is the study of how people interact with plants and use them for everyday purposes. In this activity, we will explore how plants were used by the Native Americans and pioneers of this area. (2.2, 2.5, 1.0, 2.0)

Advanced Eco Monitoring 9th - 12th grade

This is the beginning of a long-term, student monitoring program of the health of our section of Dry Creek. This activity turns students into scientists as they gather data on the health of this changing ecosystem. Opportunities exist for classroom data analysis. (5.1, 6.3, 10.3, 12.2).

Barf Bag 9th - 12th grade

Usually when we throw something up, it means we are sick. But owls and other birds of prey do it for different reasons. Join us as we examine some owl pellets to determine what they had for lunch using a dichotomous key! (5.3)

Water Worlds 9th - 12th grade

Students will explore the characteristics of two freshwater ecosystems and learn about the unique adaptations of animals living in each. (2.1/2.2, 2.3, 2.4/2.5, 2.6/2.7)

Incredible Insect Inspectors 8th - 9th grade

By sampling insects in different habitats, students can learn about the diversity within this complex Kingdom. Students will learn how to use keys in order to make correct identifications of their findings. (2.1, 5.2, 5.1)

Name That Tree 8th - 10th grade

Students will learn how plants and animals are classified using a dichotomous key to determine the species of common trees. (5.1, 5.2, 5.3)

Walking Along a Food Web 9th - 12th grade

In this activity, students will explore how energy moves through an ecosystem.





Field Trip Request Form

GENERAL INFORMATION

Teacher name(s): _____

School: _____

Grade: _____

Number of students: _____

Phone number: _____

Email: _____

ACTIVITY SELECTION

Activity #1: _____

Activity #2: _____

Activity #3: _____

Check here if you have no preferences and would like us to choose!

RAIN DATE OPTIONS (select one)

Please come to my classroom with an alternative activity

Please reschedule me

PREFERRED DATES (please see calendar on our website for a listing of availability)

Choice #1: _____

Choice #2: _____

Choice #3: _____

TIME SELECTION (select one)

9:00 am - 1:30 pm

9:00 am - 12:00 pm

9:00 am - 11:00 am

Other information (please let us know about any known allergies or difficulties any of your students may have so that we may better accommodate them): _____

