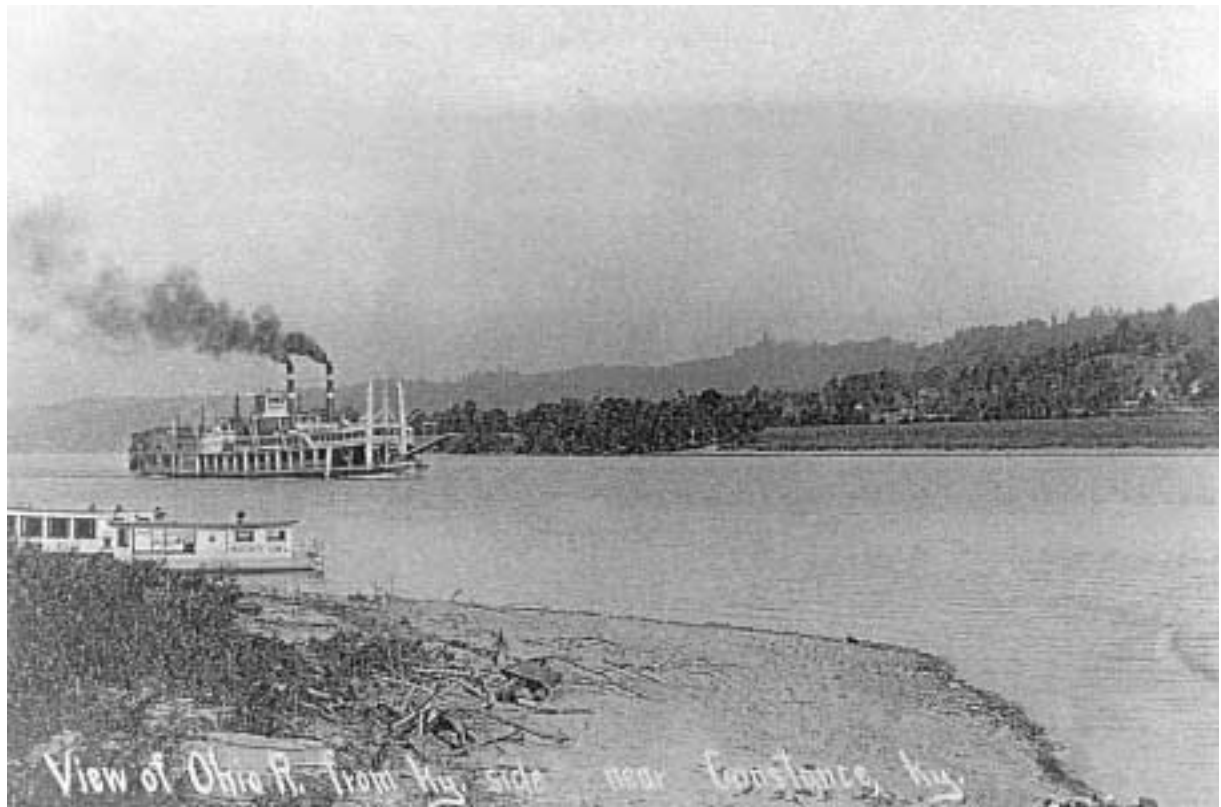


BOONE COUNTY: RIVER BORN, KENTUCKY BRED

FOURTH GRADE HERITAGE EDUCATION UNIT



JULY 31, 2001

BOONE COUNTY HISTORIC PRESERVATION REVIEW BOARD

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PROJECT PURPOSE AND HISTORY

The purpose of this standards-based fourth grade unit is to help students become more aware of the natural and cultural history embodied in their daily surroundings and to provide the students with a clearer sense of how Boone County history relates to our state and national history.

Boone County: River Born, Kentucky Bred is a realization of two years of planning and research for a heritage education curriculum. It is the first of a number of curricula that will be developed based on Boone County history. The 1999 Boone County Preservation Plan emphasized heritage education and outlined the development of a local history curriculum for use in all Boone County schools. Although *River Born, Kentucky Bred* is designed to be taught at the fourth grade level, future curricula will be developed for other educational levels, including adult continuing education classes.

River Born, Kentucky Bred was sponsored by the Boone County Historic Preservation Review Board and funded by Boone County Fiscal Court and a grant through the Kentucky Heritage Council. The unit was developed by educational consultant Jan Garbett and guided by an advisory group made up of local educators, Review Board members, preservation professionals, and interested citizens. The Advisory Group determined program priorities, reviewed and applied unit format requirements of the Kentucky Department of Education, developed a list of potential sites and topics, and formulated a pragmatic approach to the utilization of *River Born, Kentucky Bred* in Boone County schools.

River Born, Kentucky Bred explores the development of Boone County from 500 million years ago when it lay beneath the ocean to just before the Civil War, when slavery was still legal in Kentucky. Individual lessons focus on Boone County geology, the paleontology of Big Bone Lick, Native Americans, early settlers, Kentucky statehood and the formation of Boone County, river life and making a living along it, river travel, river commerce, and slavery. Many unique locations are used to tell the story of Boone County's development. In addition to Big Bone Lick, *River Born, Kentucky Bred* explores the Dinsmore Homestead, Gunpowder Creek, river towns like Petersburg, Belleview, and Constance, and Maplewood Farm, which served as the backdrop for Toni Morrison's novel *Beloved*.

Each lesson includes introductory text and supplementary reading materials. Teacher instructional strategies and student objectives are steered by a series of guiding questions such as "Why is the Boone County Courthouse an important structure?" Students are engaged through reading, writing, hands-on activities, and field trips. Each lesson comes with a learning kit, which includes teaching resources, supplementary texts, videos, and period objects ranging from replicated stone tools to ink wells. *River Born, Kentucky Bred* is an ambitious beginning to what will be an ongoing commitment to heritage education by the Boone County Historic Preservation Review Board.

ACKNOWLEDGEMENTS

The strengths of this unit are the sum total of the dedication of those individuals who gave generously of their time and insight. The flaws of the unit belong to me. These will be addressed during the school year as teachers use and evaluate the unit. *Jan Garbett, 31 July, 2001*

The following people have unselfishly shared their talents on behalf of the Boone County Heritage Education Unit:

Matthew Becher, Boone County Rural/Open Space Planner

Heritage Education Curriculum Advisory Group:

Jenny Lynn Varner, Social Studies Consultant, Kentucky Department of Education

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Boone County Historic Preservation Review Board members: Bob Maurer, Chairman; Don Clare; Pat Fox, Vice-Chair; Lisa Huston; Ted Bushelman; Mike Moreland; and Phyllis Sparks

Kevin Costello, Executive Director, Boone County Planning Commission

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Susan Cabot

Vicki Middleswarth, Kentucky Historical Society

Kathy Ronay, consultant

*** A special thank-you is due Jordan O'Rylee who went far beyond the extra mile in contributing materials, hosting the teacher workshop of June 19, and spending hours assembling lesson binders and kits.**

INTRODUCTION

River Born, Kentucky Bred is a hybrid curriculum framework. The unit employs the KERA (Kentucky Education Reform Act) Academic Expectations and Core Content standards, and components of *Teaching With Historic Places*. The unit also incorporates some of the language of Integrated Thematic Teaching. Please use the unit as it best suits you – in one fell swoop or by selecting one or two lessons. Feel free to pick and choose, cut and paste, adapt and modify. The heritage education unit is for *all* citizens of Boone County, not solely for the public schools.

The unit is not a traditional standards-based unit. The ideal standards-based unit is taught within a two-week period and is narrow in scope. *River Born, Kentucky Bred* covers a broad base of topics and will take a least a full month of school days to present if taught in sequence. Each lesson could be developed into a unit in its own right. *River Born, Kentucky Bred* provides a stepping-stone for future units. The development of such units is a major goal of the vision of heritage education in Boone County.

The following topics outline the framework and provide explanations of the terms used throughout the lessons. The master list of KERA Academic Expectations and Core Content for Assessment follows the introduction.

THEME: The Ohio River is the binding thread in *River Born, Kentucky Bred*. Each lesson includes at least one reference to the river and its role through the prehistoric or historic periods of Boone County geography and history.

FRAMEWORK: Each lesson has a preview page listing the lesson topic, the main goals and objectives for the students, a brief statement of the lesson activities, and a mini- table of contents showing the page numbers for the lesson background, KERA standards, activities, lesson kit description, and bibliography.

The lessons are arranged this way:

- Introduction and Setting the Stage
- KERA standards and guiding questions
- Descriptions of activities, assessments; websites
- Contents of the lesson binder and lesson kit; bibliography

The components *Introduction* and *Setting the Stage* are intended for the teacher. A simpler version of each of these has been compiled in a student booklet.

Framework terms and language:

- Introduction: the “grabber”, the invitation to read on
- Setting the Stage: the background facts
- Locating the Site: the physical location of Boone County places
- Visiting the Site: E-mail address and other contact data
- Student Objectives: KERA goals and objectives
- Guiding Questions: the questions presented at the beginning of the lesson that guide the student activities and assessments
- Activities (Inquiries): what the students do, the way they approach the activity, and the instructional strategies
- M.I.: Notation that an activity addresses Multiple Intelligences, i.e. the various learning styles and strengths of individual students
- Lesson Connections: the extra activities that are not necessarily tied to the guiding questions; intended for enrichment
- Putting It All Together: the assessment at the end of the lesson time frame (ranging from one to four days)
- Lesson binder and kit: The binder contains the lesson guide and additional information for the teacher. The lesson kit houses the binder and other resources, e.g. hands-on materials, student and teacher resource books.

Multiple Intelligences:

- Verbal/Linguistic
- Logical/Mathematical
- Spatial
- Bodily/Kinesthetic
- Musical
- Interpersonal
- Intrapersonal
- Naturalist

Bloom’s Taxonomy: levels of thinking, from lowest to highest

- Knowledge
- Comprehension
- Application
- Analysis
- Synthesis
- Evaluation

Suggestions for teaching the unit:

- ❖ Craft questions before teaching the unit. These questions should be specific to the reading materials and separate from the guiding questions. Think of specific students' needs when writing the questions, e.g. develop one or two each for struggling readers, middle-of-the-road students, and high achievers. A question station, based on Bloom's Taxonomy, could be established as a learning station. Children could contribute questions to the station.
- ❖ Use cardboard cubes to address diverse learners, e.g. create a set of three cubes. One has questions based on the first two levels of Bloom's Taxonomy (knowledge and comprehension), another, the next two levels (application and analysis), and the third, the two highest levels (synthesis and evaluation).
- ❖ Use the learning kits with gifted/talented and top scholars in mind. The kits should allow those students to "explore laterally", that is, to enrich their learning experiences and to probe a topic in depth.
- ❖ Use a variety of reading strategies (see the Standards-Based Unit helper in the Appendices). Again, use varying questions. Direct their reading. Create anticipation before reading. State the purpose for reading.
- ❖ Write the guiding questions on chart paper and display them throughout the lesson time frame. Review the guiding questions from the previous lesson if teaching the unit in sequence. Allow sufficient space on the charts for students to write in facts and experiences related to the guiding questions.
- ❖ Use the graphic organizers that are in the lesson binders. There are a variety of these.
- ❖ There is a sample of a double-entry learning log prompt. When reviewing the students' learning logs, respond to them in positive ways. Avoid assessing them. The learning log should be a low-risk activity, a way of processing learning, writing to learn. If note taking is a part of the writing to learn experience, then notes should be summarized that day to promote the retention of learning.¹
- ❖ Students can walk and talk with a partner after the lesson activities. Each shares two things learned during that activity. The teacher can pose questions to prompt the students' reflections.²
- ❖ The teacher and students create a class museum and/or a river spotlight bulletin board.
- ❖ The teacher and students brainstorm possible culminating projects.

¹ Robin Fogarty. *Human Graphs*, "Brain Compatible Classroom", Brain Expo; San Diego, CA: January, 2001

² Fogarty

The unit will be revised during the 2001-2002 school year. There are three Boone County teachers scheduled to use *River Born, Kentucky Bred*. The unit will be available through the Boone County government web site, www.boonecountyky.org. Anyone wanting to preview or check out the lesson kits should contact Matt Becher, 334-2111.

Thank you for your interest in the heritage education unit, *River Born, Kentucky Bred*. If you have questions or comments please contact:

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OUTLINE OF LESSONS

Lesson Title and Number

Time Span

(allowing one to two hours per lesson)

Overview Lesson	two days, field trip
Geology, Lesson # 1	two days, field trip
Paleontology, Lesson # 2	two days, field trip
Native Americans, Lesson # 3	two-three days
Salt and Settlers, Lesson # 4	one-two days
Kentucky Statehood, Boone County, Lesson # 5	four days, field trip
Making a Life, Making a Living, Lesson # 6 Rabbit Hash, Belleview, Petersburg	two days, field trip
Homesteading, Dinsmore, Architecture, Lesson # 7	three days, field trip
Farming, North & East Bend Bottoms, Constance, Lesson # 8	one-two days
Water Travel, Lesson # 9	one-two days
The River & Free Enterprise, Lesson # 10	one-two days
Slavery, Lesson # 11	two- three days

MASTER LIST OF *KERA* GOALS AND STANDARDS

ESSENTIAL QUESTIONS:

1. Why is it important for me to learn and understand the geography and history of Boone County?
2. What role do fossils and erosion play in Boone County?

Major Content: Social Studies, Science, and Language Arts

GOAL #1: Students are able to use basic communication and mathematics skill for purposes and situations they will encounter throughout their lives.

Academic Expectation: 1.2 Students make sense of the variety of materials they read.

Core Content:

RD -E 2.0.6 Use text features (e.g. pictures, lists, tables, charts, graphs, tables of contents, indexes, glossaries, captions) to understand a passage.

RD -E 2.0.8 Identify main ideas and details to understand a passage.

RD -E 2.0.9 Make predictions and draw conclusions based on what is read.

RD-E 2.0.10 Connect the content of a passage to students' lives and /or real world issues.

RD-E 4.0.9 Identify specialized vocabulary (words and terms specific to understanding the content) found in practical/workplace passages.

Academic Expectation: 1.11 Students write using appropriate forms, conventions, and styles to communicate ideas and information to different audiences for different purposes.

*** The writing and reading standards will follow the unit throughout; they will not be listed with each lesson.**

GOAL #2: Students shall develop their abilities to apply core concepts and principles from mathematics, the sciences, the arts, the humanities, social studies, practical living, and vocational studies to what they will encounter throughout their lives.

Academic Expectation: Science 2.2 Students identify, analyze, and use patterns such as cycles and trends to understand past and present events and predict possible future events.

Core Content:

SC-E 2.1.3 Fossils found in Earth materials provide evidence about organisms that lived long ago and the nature of the environment at that time.

SC-E 2.3.1 The surface of the Earth changes. Some changes are due to slow processes such as erosion and weathering.

Academic Expectation: Social Studies 2.15 Students can accurately describe various forms of government and analyze issues that relate to the rights and responsibilities of citizens in a democracy.

Core Content:

SS –E 1.2.1 The three levels of government are local, state, and national.

SS -E 1.2.2 The three branches of government at each level are legislative, executive, and judicial

SS –E 1.2.3 Every level of government has specific offices associated with each branch that vary in title but contain similar duties (e.g. executive branch: local – judge-executive; state-governor; national-president).

SS -E 3.4.2 The government provides goods and services and pays for them with taxes. Private businesses offer similar goods and services.

Academic Expectation: 2.16 Students observe, analyze, and interpret human behaviors, social groupings, and institutions to better understand people and the relationships among individuals and among groups.

Academic Expectation : 2.17 students interact effectively and work cooperatively with the many diverse ethnic and cultural groups of our nation and world.

Core Content:

SS –E 2.1.2 Elements of culture (e.g. language, music, art, dress, food, stories, folktales) serve to define specific groups and may result in unique perspectives.

Academic Expectation: 2.18 Students understand economic principles and are able to make decisions that have consequences in daily living.

Core Content:

SS -E 3.1.2 Consumers use goods and services to satisfy wants and needs.

SS -E 3.2.3 The U.S. economic system is based on free enterprise where businesses seek to make profits by producing or selling goods or services.

SS –E 3.3.1 A market exists whenever buyers and sellers exchange goods and services. Prices and availability are determined by supply and demand.

SS -E 3.3.2 The direct exchange of goods and services is called barter. Money has generally replaced barter as a more efficient system for exchange.

SS –E 3.4.1 Producers create goods and services; consumers make economic choices about which ones to purchase.

SS -E 3.4.3 Producers who specialize create specific goods and services.

Academic Expectation: 2.19 Students recognize and understand the relationship between people and geography and apply their knowledge in real life situations.

Core Content:

SS –E 4.1.1 Simple physical, political, and thematic maps, globes, charts, photographs, aerial photography and graphs can be used to find and explain locations and display information.

SS –E 4.1.2 Every point on Earth has an absolute location defined by latitude and longitude, and a relative location as compared with other points on Earth’s surface.

SS-E 4.1.4 After looking at spatial factors, decisions are made about where to locate human activities on Earth’s surface.

SS-E 4.2.1 Every place is unique and can be described by its human and physical characteristics (e.g. landforms, climates, water).

SS-E 4.3.1 Human populations gather in groups of different sizes and in different locations in the world.

SS-E 4.3.2 Humans usually settle where there are adequate resources to meet their needs.

SS -E 4.4.2 People adapt or modify the environment (e.g. produce food, build shelter, make clothing) to meet their needs.

SS –E 4.4.3 The physical environment both promotes and limits human activities.

SS –E 4.4.4 People may have different perspectives concerning the use of land.

Academic Expectation: 2.20 Students understand, analyze, and interpret historical events, conditions, trends, and issues to develop historical perspective.

Core Content:

SS –E 5.1.2 History can be understood by using a variety of primary and secondary sources and tools.

SS-E 5.1.3 Historical events have multiple causes.

SS-E 5.2.1 Native American cultures, in Kentucky and in the United States, had similarities and differences.

SS-E 5.2.2 People explored and settled America and Kentucky for multiple reasons.

SS -E 5.2.3 The way we live has changed over time for Kentucky and America because of changes in many areas.

SS-E 5.2.4 The study of United States history is categorized into broad historical periods and eras.

SS -E 5.2.5 Symbols, slogans, monuments/buildings, patriotic songs, poems, and selected readings are used to describe or illustrate important ideas and events in Kentucky and American history.

SS –E 5.5.1 History can be understood by using a variety of primary and secondary sources and tools.

THE OHIO RIVER

A BRIEF HISTORY

“The Ohio has been described, as ‘beyond all competition, the most beautiful river in the universe,’ whether we consider it for its meandering course through an immense region of forests, for its clean and elegant banks, which afford innumerable delightful situations for cities, villages, and improved farms: or for those many other advantages, which truly entitle it to the name originally given it by the French, of ‘*La Belle Riviere*,’ that is, ‘the Beautiful or Fair River.’ This description was penned several years since, and it has not generally been thought an exaggerated one. Now the immense forests recede, cultivation smiles along the shores, and it is not extravagant to suppose, that the day is not far distant when its whole margin will form one continued village.

The reasons for this supposition are numerous—the principal ones are, the immense tracts of fine country that have communication with the Ohio by means of the great number of navigable waters that empty into it; the extraordinary fertility, extent, and beauty of the river bottoms, generally high, dry, and with few or no exceptions, remarkably healthy, and the superior excellence of its navigation, through means of which, the various productions of the most extensive and fertile parts of the United States, must eventually be sent to market.”

Zadoc Cramer, *The Navigator*, A.D. 1811 ¹

Millions of years ago, seas covered much of what is now the North American continent. After the seas receded, an ancient river, the Teays, flowed across present-day Ohio, far north of the “modern” course of the Ohio River. As the temperature of the Earth changed, glaciers moved over the face of the continent, pushing as far south as Northern Kentucky. The glaciers blocked rivers and served as natural bulldozers, moving gravel, rock, and soil. ²

The four continental glaciers were named the Nebraskan, the Kansan, the Illinoian, and the Wisconsinan. It was the Kansan that touched the tip of Boone County; melting glacial waters eroded the layers of rock to expose the geological feature known as Boone Cliffs.

During the Illinoian Glaciation, a portion of the Teays was blocked by glacial ice. It was during this glacial period that the Ohio River assumed its present course. As the climate changed, rains fell, glacial ice melted. The rain and runoff helped form the waters of the present-day Ohio River. Floods of glacial water broke through old channels and established new ones. Today, some sections of the Ohio River still follow the path of the Teays. ³

¹ Zadoc Cramer. *The Navigator*. Pittsburgh, PA. 1811

² *Always a River*. United States Environmental Protection Agency, 1991, pp. 2,8

³ *Always a River*, pp. 4-5

Before the last glacier, the Ohio River had its headwaters about fifty miles south of Rabbit Hash. The river flowed much farther south than its present junction with the Mississippi River at Cairo, Illinois. Today, the Ohio River originates near western Pennsylvania where the Monongahela and Allegheny rivers meet. The Ohio River flows mainly west for 981 miles, through six states.⁴

The river drains 203,900 square miles of watershed. A watershed is an area of land that is drained by a water system. Many tributaries, some of them sizeable rivers, drain water from states that receive considerable rainfall. These tributaries empty into the Ohio River. Examples of these are the Scioto River, the Great Miami, the Licking, the Kentucky, and the Cumberland Rivers. Although the Ohio River is one-third the length of the Mississippi, it carries twice the volume of water.⁵

When there are changes in the watershed, the Ohio River is affected. Snow that melts in Pennsylvania can carry chemicals to the river flowing past Boone County. Silt from erosion, and pollution from industries can find their way from Pittsburgh to Cairo.⁶

The river is as significant historically as it is geographically. For centuries, it served as an important waterway for Native American groups. When the Iroquois Indians met French explorers in the seventeenth century, the Iroquois spoke of the great river “which rose to the south of their land and flowed west,” eventually reaching salt water. This raised false hopes that a quick route to China would be discovered, the assumption being that this river emptied into the Pacific Ocean. The Iroquois called the river the “Ohio”; the French named it “La Belle Riviere” or “*the beautiful river.*” Other fitting descriptions are the “white” or “sparkling” river.⁷

The Ohio River was the main transportation route for early Kentucky settlers as they traveled west of the Appalachian Mountains on flatboats. Settlers piled personal belongings, tools, and livestock onto a wooden float-bottom boat as small as twelve feet by twenty feet (roughly the size of a modern-day one car garage). When they reached their destination, the flatboat was then dismantled and the lumber used for building a rough cabin.⁸

The first Boone County river settlement was known as Tanner’s Station. In 1785, a group of Pennsylvania settlers made their home in northwestern Kentucky County, which was still a part of Virginia. Forty acres were cleared by John Tanner on a site later named Petersburg.¹⁰

The advent of the steamboat created a freeway of river traffic in the nineteenth century. River towns grew quickly into cities, for example, Covington, Newport, and Louisville. The steamboat connected the Deep South with the northern states. Cotton became king and the river was the queen.¹¹ Traditional Southern dishes such as fried chicken and ice cream became popular in the North. Mansions, built by the wealth of river commerce, graced the Ohio River.

⁴ R.E. Banta in *The Ohio*, 1941, p.11 and Charles E. Parrish in *The Kentucky Encyclopedia*, p. 690

⁵ *Always a River*, p. 2

⁶ *Always a River*, pp. 2-3

⁷ Banta, p. 8

⁸ Charles Parrish in *The Kentucky Encyclopedia*, p. 690

¹⁰ From the Petersburg files of the Boone County Historic Preservation Review Board

¹¹ Don Demming, *Steamboats* video, 1994.

The steamboat culture brought glamour to the Ohio River. Fancy hats, silk dresses, and long gloves were fashionable steamboat attire. Steamboat phrases such as “letting off steam” and “blowing her stack” became part of our everyday language.

The steamboat era had its heyday until the late 1850s when the railroad surpassed the steamboat in speed and efficiency of schedule.¹² Cargo and passengers could travel quickly inland. Trains left steamboats in the dust. Thriving communities developed in the central areas of counties and states. River towns that had once bustled with river commerce became bedroom communities of larger inland cities.

Today, the airport, interstate highways, and an extensive commercial trucking system allow overnight shipping service in this age of expediency. Still, the Ohio River flows peacefully past the banks of western Boone County, reminding us of a time when people were willing to meander the course of the beautiful Ohio.

¹² John Briley, Leonard Curry in *The Kentucky Encyclopedia*, pp. 852-53

OVERVIEW LESSON

Lesson Preview:

Students will state what they presently know about the geography and history of Boone County. They will:

- **Brainstorm** ideas for the **know** and **want to learn** columns on a **KWL** chart.
- **Listen to** and **observe** a slide presentation of Boone County
- **Focus** on specific topics and objects during the visit to the Behringer Crawford Museum.
- **Write** to respond to a prompt for a double entry learning log.
- **Identify** the location of Boone County.

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OVERVIEW LESSON

Introduction:

The introduction to this lesson is a slide presentation script. It differs from the format of the other lesson introductions. This overview is meant to be short and sweet, to the point. If you are going to the Behringer Crawford Museum, look through the museum materials in the lesson binder. Cue the students before the field trip to look for specific objects and listen for selected topics. The Behringer Crawford Museum covers every lesson topic in this unit except for farming. The field trip guide in the Appendices of the unit will also be helpful.

SLIDE PRESENTATION SCRIPT

(Slide 1, view of the Ohio River from State Hill, above Belleview/McVille area)

THE HISTORY OF THE OHIO RIVER IS MILLIONS OF YEARS OLD. GLACIERS ONCE TOUCHED THE TIP OF OUR COUNTY. THE RIVER BED TODAY IS THE WORK OF A NATURAL BULLDOZER.

(Slide 2, Split Rock)

SPLIT ROCK WAS FORMED BY THE KANSAN GLACIER, WHICH MOVED ROCK, SAND, AND GRAVEL AS IT ADVANCED INTO THIS AREA. SPLIT ROCK IS A CONGLOMERATION, LIKE A LARGE CHUNK OF CEMENT.

(Slide 3, Boone Cliffs)

THE KANSAN CLACIER WAS TWO MILES THICK IN SOME PLACES. WHEN YOU LOOK AT BOONE CLIFFS, IMAGINE THAT THE SHEET OF ICE IS STILL THERE. THE TOPS OF THE CLIFFS WAS THE TOP OF THE GLACIER. WHEN THE ICE BEGAN TO MELT, AFTER THOUSANDS OF YEARS, THE WATER ERODED THE ROCK, EXPOSING THE LAYERS OF ROCK FORMED MILLIONS OF YEARS IN THE PAST. THE GUNPOWDER CREEK NATURE PARK SHOWS THESE SAME KINDS OF FORMATIONS.

(Slide 4, Big Bone Lick)

BIG BONE LICK HAS BEEN CALLED A DIAMOND IN THE ROUGH. IT SHOWS THE HISTORY OF BOONE COUNTY OVER 12,000 YEARS. THE SALT SPRINGS ARE EVIDENCE OF SEA WATER TRAPPED LONG AGO.

(Slide 5, Mammoth)

THE SALT WATER DREW LARGE AND MAGNIFICENT ANIMALS THAT ARE NOW EXTINCT. EARLY HUNTERS OR PALEO INDIANS FOLLOWED THE ANIMALS HERE TO BIG BONE LICK. THE FOSSILS OF MAMMOTHS, MASTODONS, GIANT GROUND SLOTHS AND GIANT BISON HAVE BEEN FOUND AT BIG BONE.

(Slide 6, Kentucky History Center Mural)

THE OHIO RIVER VALLEY WAS HOME TO SEVERAL NATIVE AMERICAN CULTURES. WE WILL BE LEARNING MORE ABOUT PALEO INDIANS, AND ARCHAIC, WOODLAND, AND FT. ANCIENT INDIANS.

(Slide 7, The River Bank)

ONE OF THE MOST DRAMATIC STORIES IN AMERICAN HISTORY TOOK PLACE HERE ALONG THE RIVER. SHAWNEE INDIANS CAPTURED MARY DRAPER INGLES, HER TWO SONS, AND HER SISTER-IN-LAW FROM THEIR VIRGINIA HOME IN 1755. MARY WAS SEPARATED FROM HER SONS AND SENT WITH A GROUP OF INDIANS AND FRENCH TRADERS TO BIG BONE LICK. MARY ESCAPED AND FOLLOWED THE RIVER BACK HOME TO DRAPER'S MEADOW WHICH IS NOW BLACKSBURG, VIRGINIA.

(Slide 8, Salt Spring)

THE SALT SPRINGS AT BIG BONE LICK WERE AN ATTRACTION FOR EARLY SETTLERS. HUNDREDS OF GALLONS OF WATER WERE BOILED TO PRODUCE SALT. IT WAS NEEDED TO PRESERVE MEAT.

(Slides 9. 10. 11)

RABBIT HASH, BELLEVIEW, AND PETERSBURG ARE BOONE COUNTY RIVER TOWNS THAT HAVE COLORFUL HISTORIES. EACH HAD BUSINESSES THAT ARE NOT SEEN TODAY, FOR EXAMPLE, SAW MILLS, BLACKSMITHS, AND BASKET FACTORIES.

(Slide 12, Dinsmore Homestead)

THE DINSMORE HOMESTEAD IS LOCATED IN BELLEVIEW BOTTOMS. IT IS A 160 YEAR OLD MEMORIAL TO FIVE GENERATIONS OF ONE FAMILY. THE HOMESTEAD TELLS THE STORY OF 19TH CENTURY BOONE COUNTY AND KENTUCKY FARMS.

(Slide 13, East Bend Bottoms)

THE OHIO RIVER WAS VERY IMPORTANT TO BOONE COUNTY FARMERS. THIS SLIDE OF THE KIRTLEY LANDING IN EAST BEND BOTTOMS SHOWS FARMERS LOADING TOBACCO.

(Slide 14, Steamboat)

IF YOU HAD LIVED ALONG THE OHIO RIVER IN THE 1800S YOU WOULD HAVE SEEN SEVERAL KINDS OF WATER VESSELS. THE STEAMBOAT CARRIED BOTH GOODS AND PASSENGERS. SOME OF THE STEAMBOATS WERE FANCY. THE TALLSTACKS CELEBRATIONS THAT HAVE BEEN HELD IN THE LAST TEN YEARS HAVE SHOWN THE GLAMOUR AND EXCITEMENT OF THE STEAMBOAT ERA.

(Slide 15, African American, Aunt Nancy, at Dinsmore)

THERE ARE CHAPTERS IN THE HISTORY OF BOONE COUNTY THAT REVEAL HUMAN SUFFERING. BOONE COUNTY HAS A HISTORY OF SLAVERY. THIS FORMER SLAVE, KNOWN AS AUNT NANCY, LIVED AT THE DINSMORE HOMESTEAD. SHE WAS EVIDENTLY WELL-TREATED FOR SHE REMAINED AT DINSMORE LONG AFTER SLAVES WERE FREED. UNFORTUNATELY, NOT ALL SLAVES WERE TREATED KINDLY BY THEIR OWNERS.

(Slide 16, Boone County Courthouse)

BURLINGTON IS THE COUNTY SEAT. THERE ARE RECORDS DATING BACK TO 1799. OLD WILLS, MARRIAGE RECORDS, AND SLAVE RECORDS ARE EXAMPLES OF THE KINDS OF RECORDS THAT CAN BE RESEARCHED.

(Slide 17, the Former Clerk's Office)

THIS BUILDING IS OLDER THAN OUR COURTHOUSE. THE COUNTY GOVERNMENT IS LOOKING FOR WAYS TO USE IT. ONE POSSIBILITY IS TO USE IT AS A HERITAGE EDUCATION CENTER FOR CHILDREN. WHAT IDEAS DO YOU HAVE FOR ITS USE?

(Slide 18, the Ohio River at State Hill)

THE HISTORY OF BOONE COUNTY INCLUDES MAMMOTHS, NATIVE AMERICANS, SALT TRADERS. STEAMBOATS, AND SLAVES. YOU ARE A PART OF THE HISTORY OF OUR COUNTY. THERE ARE MANY STORIES TO BE TOLD.

OVERVIEW LESSON

KERA STANDARDS

Unit title: Boone County: River Born, Kentucky Bred

Essential Questions:

1. Why is it important for me to learn and understand the geography and history of Boone County?
2. What role do fossils and erosion play in Boone County?

Guiding Questions:

1. What do I know about the geography and history of Boone County?
2. Where is Boone County?

Student Objectives:

Academic Expectation: 2.19 Students recognize and understand the relationship between people and geography and apply their knowledge in real life situations.

Core Content for Assessment:

SS –E 4.1.1. Simple physical, political, and thematic maps, globes, charts, photographs, aerial photography, and graphs can be used to find and explain locations and display information.

SS –E 4.1.2 Every point on Earth has an absolute location defined by latitude and longitude and a relative location as compared to other points on Earth’s surface.

SS - E 4. 2.1 Every place is unique and can be described by its human and physical characteristics (e.g. landforms, climates, water).

Academic Expectation: 2.20 Students understand, analyze, and interpret historical events, conditions, trends, and issues to develop historical perspectives.

Core Content:

SS 5. 1.3 Historical events have multiple causes.

Academic Expectation 2.2 Students identify, analyze, and use patterns such as cycles and trends to understand past and present events and predict possible future events.

Core Content:

SC - E 2. 1.3 Fossils found in Earth materials provide evidence about organisms that lived long ago and the nature of the environment at that time.

OVERVIEW LESSON

ACTIVITIES (INQUIRIES)

The most important field trip the students can take during the course of this unit is to the Behringer Crawford Museum in Devou Park. If no other field trips can be taken, this one is *the one* to fund. The museum traces the history of the Ohio Valley from the Ordovician period to the twenty-first century. Exhibits show fossils dating back 450 million years, Pleistocene mammals and evidence of Paleo Indians, artifacts from other prehistoric native peoples (including artifacts from Boone County sites), historic settlement in Northern Kentucky, steamboats, native animals, and regional folk art. It is also recommended that this field trip be repeated after the completion of the unit as an informal means of assessment. The museum listing of school programs and learning kits is found in the Overview lesson binder. Behringer Crawford Museum is located at 1600 Montague Road in Devou Park, between Park Hills and Covington.

Graphic Organizer:

KWL

What do students **know** about Boone County?

What do they **want** to learn?

(At the end of the unit) What have they **learned**?

See the organizer in the Appendices section.

Students will complete the *know* and *want to learn* sections of the KWL graphic organizer. Post the organizer on chart paper and leave it up throughout the unit.

This could also serve as a double entry learning log prompt.

Mini-Lesson: Absolute and relative location; latitude and longitude

Writing: Students write five clues specific to a location in the classroom or school.

(M.I. verbal/linguistic)

Graphic Organizer: Students create a classroom grid to show the absolute location of students, teachers, and furniture. (M.I. spatial)

Small Groups (Learning Clubs): Students work in small groups and use the large map of Boone County. The teacher uses varying questions, based on the map key, grid, political boundaries, and relative and absolute location, that define the location of Boone County.

Putting It All Together:

Open Response:

If the class has visited the Behringer Crawford Museum, give this prompt.

*You have seen a lot today. We visited several rooms of exhibits and you have been able to touch and examine some of the artifacts. Choose one room or one topic that especially interested you. Write on **what** was interesting to you and **why** it was interesting.*

Websites:

<http://www.uky.edu/KGS/coal/webgeoky/kygeolgy.htm>

<http://www.uky.edu/KGS/coal/webfossil/pages/fossilbi2.htm>

<http://www.ohio.edu/southeastohio/marhcives/archives4.html>

OVERVIEW LESSON

Lesson Kit:

Lesson Binder:

- Lesson Guide
- Graphic Organizers
- Photo of Children Bathing in the River
- Culminating Projects and Assessment for the Unit
- Unit Appendices
- Newspaper article, “Ohio River Renewal”, *The Cincinnati Enquirer*; July 9, 2001
- Water Quotes and Facts
- What is History? Who is History?
- Kentucky Kids Then and Now
- Worksheet: Describing an Exhibit
- Oral History Questions
- Boone County Watershed Map
- History Mysteries; Using Community Heritage Resources
- Behringer Crawford Information (including Traveling Suitcase Exhibits)
- Reuben Thwaites, *On the Storied Ohio*
- *Ohio River Traffic*, 2001
- *Discovering Ohio’s Best Kept Secret*; Fall, 1984
- *Oral History in the Classroom*, National Council for Social Studies
- *Artifacts*, Middle Tennessee State University

Additional Resources in the Kit:

- Video Tapes:
 - *Always a River*, Story of the Ohio River; KET, Sept. 1999
 - *Kentucky Geoquest*, an overview of prehistoric Kentucky; KET
- Trade Books:
 - *Geography A to Z*, Jack Knowlton. Harper Collins Publishers, 1988
 - *River Life*, Barbara Taylor. DK Publishers; New York, NY: 1992
- Student written history book, *Ancestry: Our Ohio River Heritage*, Kelly Elementary Students and Kelly Elementary PTA; Windmill Publications, Mt. Vernon, IN: 1996

- Teacher Resource books:
 - *Always a River*, U.S Environmental Protection Agency; Office of Research and Development. Cincinnati, OH: 1991
 - *Artifacts As a Source for Studying History*. The Center for Historic Preservation, Middle Tennessee University, Murfreesboro, TN: 1981
 - *Documents* (Historic Records as a Teaching Resource), Center for Historic Preservation, Middle Tennessee State University; Murfreesboro, TN
 - *Exploring Social Studies*. Margaret Michel, Editor- in –Chief. The Education Center, 1994
 - *From Mastodons to the Millennium*. Jennifer Warner for the Boone County Bicentennial Committee. Windmill Publications; Mt. Vernon, IN: 1998
 - *Graphic Organizers*, Kris Flynn. Creative Teaching Press; Cypress, CA: 1995
 - *Map Skills*, Jan Kennedy. Instructional Fair, TS Denison; Grand Rapids, MI: 1998
 - *Multiple Intelligences*, M.C. Hall. Frank Schaeffer Pub. Inc.; National Council for Social Studies, Sept. 22, 1978.
 - *Oral History in the Classroom*, George Mehaffy, Thad Sitton, O.L. Davis.
 - *OYO*, Don Walls. Volume #1. Yellow Springs, OH; 1987
 - *Social Studies Made Simple*, Barbara Adams. Frank Schaefer Publications; Torrance, CA: 1997
 - *Teaching Units on Kentucky Cultural History*. Kentucky Humanities Council and United Parcel Service; Lexington, KY: 1995
 - *The Ohio*, R.E. Banta. Rinehart and Co., Inc.; New York, NY: 1949
 - *U.S. History Maps*, Don Blattner. Carson-Dellosa Publishing Co., Inc.; 1999
- 14 sets of complete student booklets (covering all the lessons)
- Set of slides for the lesson Introduction

Listing of Additional Sources:

- *Program of Studies, Core Content for Assessment, Standards –Based Unit Guide, Transformations*. The Kentucky Department of Education
- *Teaching With Historic Places*. National Register of Historic Places Interagency Resource Division; Volume 16, #2, 1993.
- *The Kentucky Encyclopedia*, John E. Kleber, Editor-in –Chief. University Press of Kentucky; Lexington, KY: 1992

LESSON # 1***GEOLOGY: Boone Cliffs, Gunpowder Creek
Nature Park, Split Rock*****Lesson Preview:**

Students will identify the evidence of glaciers in Boone County.
They will:

- **Observe** signs of erosion in Boone County
- **Identify** glacial erosion as a slow process
- **Analyze** the effects of glaciers
- **Read** geology and glaciers

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<i>Lesson Preview</i>	<i>L 1.1</i>
<i>Introduction</i>	<i>L 1.2</i>
<i>KERA Standards</i>	<i>L 1.4</i>
<i>Activities, Assessment; Websites</i>	<i>L 1.5</i>
<i>Learning Kit, Bibliography</i>	<i>L 1.7</i>

LESSON # 1

Introduction:

“Once upon a time, there was a glacier. It covered a lot of North America with ice. In some areas, the ice was two miles thick. The southernmost edge of the glacier reached what is now Northern Kentucky. As the ice moved the area, it moved the earth ahead of it like a giant bulldozer. Under tremendous pressure along with tremendous heat from the friction of moving rocks and earth, huge formations of rocky cliffs and hills were formed by this giant bulldozer. These formations look something like concrete. The most famous formations in this area of Boone County are Boone Cliffs and Split Rock, but there are smaller deposits all along the riverbanks. This glacier also created all the sand and gravel deposits.”¹

Setting the Stage:

The geology of northern Kentucky shows weathering and erosion. Layers of rock from the *Ordovician* period (about 450 million years ago) are found in Boone County.² The Gunpowder Creek Nature Park is the best place to see the geological history of our county.

As the earth went through changes over millions of years, other layers of rock formed. During the glacial periods, continental glaciers advanced and retreated, leaving behind deposits of gravel, sand, and clay. Deposits of rock material are called glacial outwash.³

The glacier that entered the Northern Kentucky region was called the *Kansan Glaciation*. This massive sheet of ice reached into northwestern Boone County, leaving several distinct glacial formations. Three of these features, Split Rock, Boone Cliffs, and Gunpowder Nature Preserve, are monuments to glacial erosion and deposits.⁴

Split Rock: This conglomeration of rock is located along the river between Petersburg and Belleview Bottoms. It is not accessible by land because it is on the backend of private property. Split Rock is a feature left by the *Kansan Glaciation*.

Boone Cliffs: the The Nature Conservancy manages Boone Cliffs Nature Preserve and the Kentucky State Nature Preserves Commission. The cliffs are layers of rock exposed by glacial erosion 700, 000 years ago. High ridges or cliffs tower over the creek beds and forest. The rare red back salamander makes its home here.

Gunpowder Creek Nature Park: This 120 acre nature preserve along Gunpowder Creek is located 1.5 miles south of Burlington and will open to the public sometime in 2002. Rock outcrops from all stages in the geological development of Boone County are visible in the preserve, which straddles Boone County’s largest and deepest stream valley. The creek valley reveals the same kinds of rock layers seen at Boone Cliffs. Visitors to the Gunpowder Creek Nature Park will be able to walk a Geology Trail down to the stream.

¹ Callie and Caitlyn Clare in *Ancestry: Our Ohio River Heritage*, "The History of Rabbit Hash", p.28

² Garland Dever, Jr. in *The Kentucky Encyclopedia*, PP. 369-370

³ *Always a River*, pp. 3-4

⁴ Dr. Bill Bryant, interview, July 9, 2001

Locating the Site:

- Gunpowder Creek Nature Park; map showing the relationship to Burlington and local roads; aerial photograph of the preserve with trails.
- Split Rock: Topographical relationship to the Ohio River; picture postcard from 1913
- Boone Cliffs: Middle Creek Road off Kentucky 18 or Burlington Pike

Visiting the Site:

- Gunpowder Creek Nature Park, set to open sometime in 2002. A video may be prepared in the meantime. Contact Matt Becher, 334-2111 or the Boone County Parks.
- Boone Cliffs: Open to the public dawn to dusk. Hiking and other passive recreation allowed.
All visitors are asked to stay on the trails and to refrain from removing anything from the preserve. See the Nature Preserve information for more details.
- Split Rock is accessible only by river.

LESSON #1

KERA STANDARDS

Essential Questions:

1. Why is it important for me to learn and understand the geography and history of Boone County?
2. What role do fossils and erosion play in Boone County?

Guiding Questions:

1. What is erosion?
2. What is a glacier?
3. What evidence can I see that glaciers touched Boone County?

Student Objectives:

Academic Expectation: Science 2.2 Students identify, analyze, and use patterns such as cycles and trends to understand past and present events and predict possible future events.

Core Content:

SC -E 2. 3.1 The surface of the Earth changes. Some changes are due to slow processes such as erosion or weathering.

Vocabulary:

Glacier: a slow moving mass of snow-covered ice that traps and moves loose material such as clay, dirt, rock, silt, and boulders

Outwash: materials washed from the end of a glacier, e.g. clay, sand, pebbles, boulders

Weathering: the breaking down of rock

Erode: to loosen and carry away the debris left from weathering

LESSON #1

ACTIVITIES (INQUIRIES)

Guided Reading: Students read to discover the nature of glaciers and how they are like giant bulldozers.

Hands-On (Being There): Students take a neighborhood walk to look for signs of erosion on hillsides and on stream banks. (M.I. naturalist)

Hands-On (Being There): Students visit Gunpowder Creek Nature Park or Boone Cliffs. They will identify the signs and effects of erosion. They will also generally identify layers of rock. (M.I. naturalist)

Hands-On (Being There); Paired Activity: Students work in pairs to observe how glaciers erode the area through which they move. The students use chilled soap bars, precut into thin slices by the teacher. They also use ice cubes, sand, and pebbles. (M.I. kinesthetic; logical)

Procedure: Use a large tray. Arrange the soap slices in one end. Cover the rest of the tray bottom with sand and pebbles (mixed together). Push an ice cube down and across the sand and pebble mixture into and across the soap pieces. Observe the bottom of the ice cube and topside of the soap slice.

This can be a paired activity or a teacher-only demonstration.⁵

Ice cubes of water, sand, and pebbles can also be used in place of having the ingredients separate.

Answer these questions in the double-entry log after completing the activity

What changes were observed in the bottom surface of the ice?

What is the shape of the path left by the ice?

What evidence was left on the soap that the glacier model has passed?

⁵ *Earth and Space Science*, p. 60

Putting It All Together:

Open Response: Compare what was observed at Gunpowder Creek Nature Park or at Boone Cliffs to the geological displays and activities at the Behringer Crawford Museum.

Lesson Connections:

- **Hands-On(Being There):** “Making a Glacier”: Students make a glacier using ice cream, cookies, and chocolate syrup. (in the lesson binder)
This activity demonstrates a process that is similar to that of glacial movement in the in the Ohio River Basin. (M.I. kinesthetic)
- **Write:** Students start and keep an ongoing card file of geographical terms. Each card can also be illustrated. (M.I. verbal)

Websites:

<http://www.agiweb.org/>
The American Geological Institute homepage

Lesson # 1

Lesson Kit:

Lesson Binder:

- Lesson Guide
- Graphic Organizers
- Postcard Photo of Split Rock
- Map of Gunpowder Creek Nature Park
- Unit Culminating Projects and Assessment
- Unit Appendices
- Copy of the Student Booklet Readings for Lesson # 1
- Information: Boone Cliffs State Nature Preserve
- Activity: Cupcake Geology
- Information:
 - Erosion, Weathering, Glaciers
 - Geological Periods
 - Ordovician System
 - Fossils

Additional Resources in the Kit:

- Teacher Resource Books:
 - *Big Bone Lick*, Willard Rouse Jillson. Standard Printing Co., Louisville, KY:1936; Reprinted, Rabbit Hash Historical Society. Windmill Publications, Mt. Vernon, IN: 1998
 - *Earth and Space Science*, David Wiley, Christine Royce. TS Denison, Grand Rapids, MI: 1999
 - *Earth Science*. Instructional Fair, Grand Rapids, MI: 1991
- Student Written History- *Ancestry: Our Ohio River History*, Kelly Elementary Students and PTA; Windmill Publications, Mt. Vernon, IN: 1996
- Trade Book- *Icebergs and Glaciers*, Seymour Simon. Mulberry Paperback Books; New York, NY: 1987
- Two Laminated Maps

Listing of Additional Sources :

- *Always a River*, U.S. Environmental Protection Agency; Office of Research and Development. Cincinnati, OH: 1991
- *America By Rivers*, Tim Palmer. Island Press, Washington, D.C.: 1996
- Ranger Rick's Nature Scope-*Geology the Active Earth*. National Wildlife Federation, Washington, D.C.: 1998
- *The Kentucky Encyclopedia*, John E. Kleber, Editor-in-Chief. University Press of Kentucky, Lexington, KY: 1992

LESSON #2

PALEONTOLOGY: Big Bone Lick

Lesson Preview:

Students will name the unique characteristics of Big Bone Lick and demonstrate an understanding of the types of fossils found there. They will:

- **Visit** Big Bone Lick and look for fossils in the stream bed
- **Read** about Big Bone, its prehistory and history
- **Create** plaster fossils

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<i>Lesson Preview</i>	<i>L 2.1</i>
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LESSON # 2

Introduction:

Big Bone Lick is Boone County's unpolished gem or diamond in the rough when it comes to history and prehistory. It is Kentucky's own segue to our young nation's search for its own natural history identity and pride. It is a 12,000 plus year continuum of human activity and occupation. It is the home of Pleistocene vertebrate paleontology.

Big Bone was commonly spoken of and referred to in conversations of such elite leaders as Thomas Jefferson, Benjamin Franklin, John Adams, George Washington, long before Washington D.C. or Capitol Hill ever existed. It was the intended destination in the wilderness for adventurers like Meriwether Lewis, William Clark, George Rogers Clark, William Henry Harrison, Christopher Gist, and numerous others. Even Daniel Boone and Simon Kenton knew Big Bone Lick. It was the origin of the greatest escape from Indian captivity epic which ever took place, repeated, handed down, and held dear by all Kentuckians. It is the story of prehistoric and historic animal and human life and subsistence. How could a place like this be so significant, yet not be a Wonder of the World or a National Heritage Site or an International Heritage Site? Misunderstanding and lack of education, that's how!

The unit focuses on all these topics and ties them all together to reveal a clearer picture of Big Bone Lick's role in the history of our nation, our state, our country, and our world. At Big Bone Lick a time continuum depicts the evolution of animal and human life styles and forms, and a knowledge continuum depicts evolving science and philosophy. Exploring and understanding Big Bone Lick, involves many disciplines—natural history, general biology, paleontology, archaeology, geology, mathematics, history, philosophy, and even religion and political science. When all these pieces are fitted together, the essence of Big Bone Lick comes to light.

Two books will put Big Bone Lick into the right perspective, one written in 1936 and the other in the year 2000—quite a time span but well worth the wait. These are Big Bone Lick by Willard Rouse Jillson and Paul Semonin's American Monster.

In a nutshell, about 12,000 years ago, Pleistocene mammals made their way into North America by way of Beringia, a landmass between Asia and North America. This land bridge was exposed when the ocean water levels dropped as the two-mile thick glacier of that time developed. As the megafauna (large animals) made it down this far to Big Bone, they were followed by the Paleo Indians who depended on these animals for their subsistence, that is, food, clothing, and shelter. The animals were drawn to the lick for the salt (ancient ocean water, trapped in the geological features below, which surfaced as salt springs) and humans were drawn to the animals. So it continued, millennium after millennium, and the bones of these animals

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were deposited. In the time of recorded history, these bones were” discovered” and written about. Then they were collected, coveted, and studied. Notations by the French as early as 1729 and again in 1739 and 1749 by French explorers and military campaigns were recorded.

Obviously there were humans before this who knew about the bones. They just didn’t or couldn’t write about them.

Up East in the Hudson River valley in the summer of 1705, a huge fist-sized tooth was found and after much study and debate, was determined to be from a giant human who existed on the before Noah’s great flood and who was exterminated in the great deluge. The religious leaders and antediluviansists thus propagated the “Claverack Gyant” theory. Years passed and after much debate, conjecture, and study, it became accepted that these teeth and bones belonged to some type of elephant-like mammal, eventually termed the American *Incognitum*. More debate about its being carnivorous or herbivorous took more time.

Now during all this time, young America had an identity crisis. It had no ancient Roman or Greek history or heritage. It had no ancient ruins or artifacts as a source of national pride. While Europe had a very lo history, we did not. Enter Thomas Jefferson. It was his relentless ambition to prove to European philosophers and naturalists that the animals and native humans of America were not inferior to those of their continent, and they were indeed superior. This was the basis for writing his Notes on the State of Virginia. The bones of the *American Incognitum* became a source and an identity of our national pride. Big Bone became famous as the source for these highly treasured resources.

This was going on at a time when the leading men of science worldwide did not even consider the possibility of extinction occurring in any species. Darwin’s theory of evolution was a long time away. Thomas Jefferson gave specific orders to Lewis and Clark to keep an eye out for these large mammals and to see where they had migrated. This occurred years before the first dinosaur bones or even the concept of dinosaurs existed in this country. The leading world scientists and naturalists were all aware of the Pleistocene mammals and had no idea that such creatures as dinosaurs even existed. This is another story. There were no dinosaurs at Big Bone!

Scientific fascination with Big Bone has continued uninterrupted to this day. Read about Big Bone; visit it, ask questions. Use the scientific method and learn about Big Bone. Its historic and prehistoric significance and importance are as big as its bones!

Courtesy of Donald E. Clare, Friends of Big Bone

Setting the Stage:

Big Bone Lick has a history as old as the hills surrounding it. Seas once covered the area. Salt water from those seas was trapped below a layer of stone called Saint Peter sandstone. The salty water pushed its way to the surface through cracks in the layers of stone. The flow of the salty sulfur springs has been continuous.³

12,000 years ago, mastodons, mammoths, giant bison, and musk ox were drawn by sulfur-saline water to Big Bone Lick.⁴ The bogs in the marshland or mud flats drew the animals to their final resting place.

Zadoc Cramer described Big Bone Lick in his 1811 narrative, The Navigator:

Animal bones of enormous size have been found here in great numbers. Some skeletons nearly complete were not long since dug up 11 feet under the surface in a stiff blue clay. These appeared to be the bones of different species of animals, but all remarkably large. Some were supposed to be those of the mammoth, others of a non-descript. Among these bones, were two horns or fenders, each weighing 150 pounds, 16 feet long, and eighteen inches in circumference at the big end; and grinders of the carnivorous kind, weighing from three to ten and an half pounds each; and others of the graminivorous species, equally large, but quite differently shaped, being flat and ridged. Ribs, joints of the backbone, and of the foot or paw, thigh and hip bones, upper jaw bone, &c &c. [and so on] were also found, amounting in the whole to about five tons weight.

These bones were principally discovered by Mr. Goforth and Mr. Reeder of Cincinnati, who sent them by water to Pittsburgh, with an intention to transport them to Philadelphia, and make sale of them to Mr. Peale, proprietor of the museum of that city. They were however while in Pittsburgh, discovered by an Irish gentleman, a traveler, who purchased them, reshipped them down the Ohio, and thence to Europe, where no doubt he will accumulate a handsome fortune by exhibiting them to the different courts of that continent.

Of the history of the mammoth we are much in the dark. Of animals having once existed carrying these enormous bones, there can be no doubt. Their present existence is much doubted; and the only proof we have to the contrary, is a curious tradition of the Indians, handed down to them by their fathers, which being delivered by a principal chief of the Delaware tribe to the governor of Virginia during the American Revolution, is recorded in the following words:

‘ That in ancient times a herd of these tremendous animals came to the Big-bone licks, and began an universal destruction of the bear, deer, elk, buffaloes, and other animals which had been created for the use of the Indians: that the Great Man above, looking down and seeing this, was so enraged, that he seized his lightning, descended on the earth, seating himself on a neighboring mountain, on a rock of which his seat and the print of his feet are still to be seen, and hurled his bolts among them till the whole were slaughtered, except the big bull, who presenting his forehead to the shafts, shook them off as they fell; but missing one at length, it wounded him in the side; whereon, springing

³ Willard Rouse Jillson in *Big Bone Lick*, P. 113

⁴ National Register of Historic Places, nomination form *Big Bone Lick*. April, 2001, section 7, pp. 3-5

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round, he bounded over the Ohio, over the Wabash, the Illinois, and finally over the Great Lakes where he is living at this day.' *Jefferson's Notes on Virginia*."⁵

In 1729 Captain Charles LeMoyne de Longueil in command of a "contingent" of French troops, came south from Canada. Their mission was to squelch an uprising of Chickasaw Indians in the Louisiana Territory. The troops traveling the Ohio River camped at Big Bone. Massive bones and teeth were strewn everywhere. A collection of these giant bones and teeth was sent to Paris to the Jardin du Roi (the equivalent of the Cincinnati Natural History Museum). Top French scientists studied the fossils.⁶

Stories of these remains reached the English colonies. In 1766, fossils were collected by George Croghan and sent to Benjamin Franklin. Dr. William Goforth collected five tons of bones that were sent to Britain.⁷ Thomas Jefferson learned of this and sent William Clark to investigate and collect the fossils. (Presently, there are more Big Bone fossils in Europe and in states other than Kentucky than there are at the Big Bone Lick museum.)

Salt traders traveled the Ohio River, stopping near the present-day Big Bone landing. Salt production was a booming business at Big Bone Lick. Buffalo traces converge around Big Bone. The ground was so hardened by the thundering herds of bison that it was like a cobblestone roadway. One trace led traders to Big Bone Lick.⁸ They came up Big Bone Creek to the numerous salt springs. Salt production was an arduous, time-consuming task. Around 1812, salt production at Big Bone Lick dwindled and then fell off to nearly nothing. There were greater concentrations of salt elsewhere and more efficient ways to produce it.

There has been a human presence at Big Bone from at least 10,000 B.C. to the present day, ranging from Paleo Indians to salt traders to last week's family picnic. Big Bone Lick has been no stick-in-the mud when it comes to attracting both man and beast. As Don Clare said, "Visit it, ask questions, and learn about Big Bone."

Locating the Site:

22 miles southwest of Covington on Kentucky 338, off U.S. 42/127, and Interstate 71/75.

Two miles east of the Ohio River; 450 to 650 feet above mean sea level

Big Bone Lick State Park covers 512 acres along Big Bone Creek, which is a tributary to the Ohio River. Eighty acres are listed on the National Register of Historic Places and the entire 520-acre park is being nominated as a National Register Archaeological District.

⁵ Zadoc Cramer in *The Navigator*, pp. 117-120

⁶ Jillson, p. 102

⁷ National Register Nomination, Section 7, p.2

⁸ Johnathan Barker, naturalist, interview May, 2001

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Big Bone Lick is in the floodplain of Big Bone Creek, which is fed by mineral springs, and Gum Branch Creek. Both creeks are tributaries of the Ohio River.

Visiting the Site:

3380 Beaver Road
Union, KY 41091
(859) 384-3522

LESSON # 2

KERA STANDARDS

Essential Questions:

1. Why is it important for me to learn and understand the geography and history of Boone County?
2. What role do fossils and erosion play in Boone County?

Guiding Questions:

1. What are fossils?
2. Why are fossils important?
3. What kinds of fossils are found in Boone County?
4. Why are these kinds of fossils found here?
5. What parts of an organism are most likely to become fossilized?
6. Why is salty water found at Big Bone Lick?

Student Objectives:

Academic Expectation 2.2 Students identify, analyze, and use patterns such as cycles and trends to understand past and present events and predict possible future events.

Core Content for Assessment

SC - E 2. 1.3 Fossils found in Earth materials provide evidence about organisms that lived long ago and the nature of the environment at that time.

Academic Expectation: 2.19 Students recognize and understand the relationship between people and geography and apply their knowledge in real life situations.

Core Content:

SS – E 4. 2.1 Every place is unique and can be described by its human and physical characteristics.

Academic Expectation: 2.20 Students understand, analyze, and interpret historical events, conditions, trends, and issues to develop historical perspectives.

Core Content:

SS – E 5. 2.4 The study of United States history is categorized into broad historical periods and eras (for this lesson- Land and People Before Columbus).

Vocabulary:

Fossil: the remains or impression of a living thing (plant, animal) of a past geologic age

Mammoth: a large, elephant-like mammal from the Pleistocene Period, with curved tusks and a long, heavy covering of hair

Mastodon: another large mammal of the Pleistocene Epoch; elephant-like just as the mammoth but without the high head; tusks shaped differently from the mammoth

Pleistocene Epoch or Period: also called the Ice Age, beginning over one million years ago and ending about 10,000 years ago

Salt Lick: a place where animals are drawn to salt springs or deposits

Prehistoric: occurring or living before written records were kept in a specific region or area

LESSON # 2

ACTIVITIES (INQUIRIES)

*Teachers, before beginning the activities, assess your students' prior experience with fossils.

Guided Reading: Students use the student booklet to read about Big Bone Lick, its prehistoric significance, and its unique characteristics.

Hands-on (Being There): Visit Big Bone to discover why Big Bone is named as it is, and to go into the streambed to find fossils (an experience guided by the park naturalist). Observe and ask questions about the existing salt spring. (M.I. naturalist)

Paired Activity: Use two ½ gallon containers. One contains fresh water, the other, salt water with blue food coloring. The containers are placed end-to-end. The salty water is allowed to move into the fresh water. (The fresh water will rise to the top, the salt water will fall). Note: Although this does not address the core content, it should help the students understand the unique characteristics of Big Bone Lick.

Hands-on (Being There): Students create plaster fossils. (M.I. bodily/kinesthetic)

Materials: plastic fossil models or other clean objects (e.g. a bone). Modeling clay, plaster of Paris, nonstick cooking spray, unsharpened pencils.

Procedure: Make two clay pancakes from modeling clay. Lightly coat the plastic model or object with nonstick cooking spray. Lay the fossil model on one pancake. Place an unsharpened pencil on the pancake so that one end extends off the pancake. Press the pencil and fossil model into the clay. Cover the model and pencil with the second pancake. Press the second pancake so that the fossil model and pencil are imprinted on the inside of the pancakes. Carefully open the pancakes and remove the fossil model and pencil. Gently press the pancakes together and seal the edge. Be sure to press around the location of the fossil and pencil molds, and then open the end of the pencil mold into a funnel shape. Carefully pour prepared plaster of Paris into the mold and allow it to harden. When hardened, open the pancakes to find the plaster fossil forms.⁹

⁹ *Earth and Space Science*, pp. 61-62

Putting It All Together:

Open Response: Situation: We have been learning about fossils and erosion in Boone County.

Question: What do you know about the prehistory of Boone County? Include fossils and erosion in your answer.

Website:

<http://rbc1.rbcm.gov.bc.ca/hhistory/mammoth/mammothstory.html>

LESSON # 2

Lesson Kit:

Lesson Binder:

- Lesson Guide
- Maps
- Photos, Salt Spring, Bath House, Methodist Church
- Unit Culminating Projects
- Unit Appendices
- 1 copy of Student Reading Materials
- Letters Concerning Big Bone Lick State Park
- Newspaper Articles on Big Bone Lick
- Conclin, *New River Guide*
- Information: Bison
- Information: Big Bone Lick
- Information: Paleo Indian Period
- Teacher Resource Materials: Big Bone Lick
- Friends of Big Bone
- University of Nebraska, *Big Bone Lick*
- A.M. Yealey, *Big Bone Lick*
- Letter from London, England to Asa Rouse, re: Mastodon bone
- Photos, Big Bone Lick
- Croghan's Journals

Additional Resources in the Lesson Kit:

- Replicated Mastodon Tooth
- Video, *Big Bone Lick*, KET
- Teacher Resource Books:
 - *American Monster*, Paul Semonin. New York University Press, New York, NY: 2000
 - *Big Bone Lick*, Willard Rouse Jillson. Standard Printing Co., Louisville, KY: 1936. Reprinted Rabbit Hash Historical Society. Windmill Publications, Mt. Vernon, IN: 1998
 - *Big Bone Lick State Park*
- Trade Books:
 - *Fossil*, Dr. Paul Taylor. Dorling Kindersley, NY: 2000
 - *Prehistoric Life*, William Lindsay. Dorling Kindersley, NY: 2000
 - *The Mystery of the Mammoth Bones*, John Giblin. Scholastic Books, NY: 1999

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- *Wild and Woolly Mammoths*, Aliko Brandenberg. Harper Collins, 1996
- Two Laminated Maps

Listing of Additional Sources:

- National Register of Historic Places Nomination, Michael Striker, Matthew Becher, and Jeannine Kreinbrink. August 28, 1997, April 1, 2001
- *The Navigator*, Zadoc Cramer. Cramer, Spear, Eichbaum, Pittsburgh, PA: 1811. Lithographed by Young and Klein, Cincinnati, OH: 1979

LESSON # 3

NATIVE AMERICANS: Paleo Indians, Archaic, Woodland, Late Prehistoric, Shawnee presence

Lesson Preview:

Students will identify reasons that Native Americans lived in Boone County; they will also identify the unique characteristics of each group. They will:

- **Read** to learn about the different native groups in Boone County.
- **Respond** to an Anticipation Guide to assess their knowledge and understanding of native groups.
- **Participate** in a group project.
- **Analyze and evaluate** artifacts.

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LESSON # 3

Introduction:

“Picture the past. Imagine looking across Kentucky from a high place. It’s a bright, cloudless day in late summer. The view is very clear. You can see for miles and miles in every direction. The year is 1585...”¹

Setting the Stage:

Kentucky was once a wonderland of canebrakes and forests. Some Native Americans thought Kentucky was a paradise. They came here for the clear streams and rivers, salt licks, and many animals.

The earliest people in Boone County were the Paleo Indians. They were hunters who followed the trail of Ice Age animals to the salt springs of Big Bone Lick. Paleo Indians use the meat and skins of large mammals such as mammoths, mastodons, and giant. This native group most likely sought out wild plants as an additional food source. Paleo Indians crafted spear points and other wood, bone, and stone tools.²

Some historians have called Kentucky a “Dark and Bloody Ground”, but this was not true. Native American groups settled in villages here. The first settlers in the Ohio Valley were the Archaic Indians. By then, most of the Ice Age mammals that had once sought out Big Bone Lick were extinct. The Archaic Indians lived along the river in the Boone County area for several thousand years. The distinctive characteristic of this group was their use of shellfish from the Ohio River and acorns from the local forests. The Indians were less dependent on roaming game; they utilized local food sources.³

Two groups of mound builders left dramatic mementos of their life in the Ohio Valley – the Adena (700 B.C. to A.D. 400) and the Hopewell (200 B.C. to A.D. 500) both Woodland period groups. Both native groups left earthworks or mounds. One unique characteristic of the mound builders was their pottery, created on site and used for cooking and storing food.⁴

The Adena Indians buried their dead in cone-shaped mounds, some reaching seventy feet in height. The Hopewell culture was more complex with a social hierarchy; some mounds were likely reserved for religious leaders and celebrated artisans. The Hopewell were successful in cultivating enough seed from wild plants to feed a population of considerable size. They added fish and forest game to their diet.⁵

¹ Gwynn Henderson in *Kentuckians Before Boone*, p. 1.

² *Kentucky Before Boone*, poster guide.

³ *Always a River*, p. 220

⁴ *Always a River*, p. 221

⁵ *Always a River*, pp. 220-222

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A mound survey completed in A.D. 2000 recorded significant information on Hopewell and Adena mounds in Boone County. The Adena mounds were cone-shaped with at least one individual burial. Each new burial had another layer of soil added; the size of the mound depended on the number of soil layers. In Boone County the Adena mounds were most often found on bluffs overlooking the Ohio River and its tributaries. These mounds were usually not near villages. They may have had ceremonial connections.⁶

The Hopewell mounds were single burials. There was evidence of more goods than in Adena burial sites. Pottery, copper and mica items, and stone knives and points were found. Not all Hopewell mounds contain burials.⁷ Sites may also have additional earthworks with geometric shapes, for example, the Serpent Mound in Adams County, Ohio. (See the Hopewell map in the lesson binder).

Zadoc Cramer described an Ohio River mound this way:

“The appearances of ancient remains at this place [Little Grave Creek near Wheeling, West Virginia] is well worth a visit to every man of observation who may pass near them. The big mound, or grave, as it is called, is an object, which, on approaching it, I will venture to affirm, will surprise and astonish any man more than he is aware of. It is at present in the woods and a quarter of a mile from Mr. Tomlinson’s in a S.W. direction. On coming close to this mound you are surprised at its mountain like appearance, and the darkness occasioned by the height of the trees on its summit over those on the plain below. Its perpendicular elevation is about 75 feet, 180 yards in circumference around its base, and 40 around its flat on the top. Its appears to be a very regular circle, and forms in its rising an angle of about 80 degrees. The center of its top is sunk in perhaps four feet, forming a bason of that depth and about eight or ten feet over. Its summit bears an aged white oak of 4 feet in diameter, and its sides are richly clad with a luxuriant growth of all the different kinds of trees of the forest, and of the same size and appearance. It stands in an extensive plain, having neither ditch nor rising ground near it, nor can it be discovered where the earth of which it is formed has been taken from. East of the big mound, there are several small ones in the open fields, and a number of fortifications, whose dimensions I did not take. I have seen a number of these mounds in Pennsylvania, Ohio, Virginia, and Kentucky, and have heard and read of others, but they all fall short of the size and astonishing magnitude of the one at Grave creek.”⁸

Evidence of a late Woodland roasting pit was discovered at Big Bone Lick in 1993. The erosion of a bank along Big Bone Creek exposed a “reddened band of soil”. Further investigation led archaeologists Don Miller and Ken Duerksen to surmise that a large thermal pit or earth oven once existed at that site. Deer and bison teeth along with projectile points were also found at the oven site. The natural erosion of the creek bank was destroying the fire pit.⁹

Fort Ancient Indians lived in settlements along the Ohio River from A.D. 1200 to A.D. 1500. They were true farmers, planting the “three sisters” -- corn, beans, and squash. The

⁶ , Dr. Donald Linebaugh, Dr. A. Gwynn Henderson in *Prehistoric Mounds & Earthworks in Boone County*. Technical Report 382, January 15, 2001

⁷ Linebaugh & Henderson, pp. 10-12

⁸ Zadoc Cramer in *The Navigator*, 1811

⁹ Don Miller & Ken Duerksen in *Excavation of a Prehistoric Feature at Big Bone Lick*, 1993

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remains of two Fort Ancient sites at Petersburg were studied over a three-year period. The excavation involved the community, avocational archaeological societies (COVAS, WAS), and school children. Petersburg homeowners had found pottery and stone tools and utensils whenever they dug cellars and formed foundations.¹⁰ Three years of excavation and study (1990-1993) revealed the site of two Ft. Ancient settlements, one dated A.D. 1200 to 1400, the other from A.D. 1400 to 1550. The first village was the smallest in geographical area and population. The second village followed the trends of other Ft. Ancient villages of that period,¹¹ having an estimated population of 500 people or more. In 1993, the Prehistoric archaeological sites were considered for nomination for National Register recognition but the Petersburg townspeople objected to the nomination, which was then tabled indefinitely.

The Shawnee Indians who came to Big Bone Lick on salt-making expeditions might have been descendants of the Fort Ancient people but this is not known for certain. The Shawnee did have a presence in the Ohio Valley, especially at Scioto Town in present day Ohio. It was a band of Shawnee Indians who captured Mary Ingles, her two sons, and her sister-in-law at their home in Draper's Meadow (now Blacksburg, Virginia) in 1755. Mary Ingles then accompanied a small group of Shawnee Indians and French traders to Big Bone Lick for salt production. Famous Shawnee leaders include Tecumseh and his brother, The Prophet.

¹⁰ Henderson, Petersburg Report, p. 5

¹¹ Gwynn Henderson, Petersburg Report, p .90

LESSON # 3

Essential Question:

Why is it important for me to learn and understand the geography and history of Boone County?

Guiding Questions:

1. What do I know about Native groups in Boone County?
2. How did Native Americans in Boone County use their physical environment to meet their needs?
3. When did Native American groups hunt, farm, and live in Boone County?
4. What do artifacts tell us about those who used them?

Student Objectives:

Academic Expectation: 2.16 Students observe, analyze, and interpret human behaviors, social groupings, and institutions to better understand people, and the relationships among individuals and among groups.

Academic Expectation: 2.17 Students interact effectively and work cooperatively with the many diverse ethnic and cultural groups of our nation and world.

Core Content for Assessment:

SS – E 2.1.2 Elements of culture (e.g. language, music, art, dress, food, stories, folktales) serve to define specific groups and may result in unique perspectives

Academic Expectation: 2.19 Students recognize and understand the relationship between people and geography and apply their knowledge in real life situations.

Core Content :

SS – E 4. 2.1 Every place is unique and can be described by its human and physical characteristics.

SS – E 4. 3.1 Human populations gather in groups of different sizes and in different locations in the world.

SS – E 4. 3.2 Humans usually settle where there are adequate resources to meet their needs (e.g. water, fertile land).

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Academic Expectation: 2.20 Students understand, analyze, and interpret historical events, conditions, trends, and issues to develop historical perspectives.

Core Content:

SS – E 5. 2.1 Native American cultures, in Kentucky [and in Boone County] and in the United States, had similarities and differences.

SS – E 5. 2.4 The study of U.S. history is categorized into broad historical periods and eras (Land and People Before Columbus).

Vocabulary List:

Archaeology: method of studying past human cultures and analyzing material evidence.

Archaeological site: a place where human activity occurred and material remains were left.

Artifact: any object made or used by humans.

Culture; the set of beliefs, values, and behaviors generally shared by members of a society, that is, what members of a group think, believe, and live. (Intrigue of the Past)

Paleo Indian Period: 10,000 B.C. to 7000 B.C

Archaic Period; 7000 B.C. to 1000 B.C.

Woodland Period: 1000 B.C. to A.D. 1000

Late Prehistoric: A.D 1000 to 1700 (These are from the *Kentucky Before Boone* poster that the students will be using for several activities.)

Shawnee Indians: lived along the banks of the Ohio River A.D. 1700- 1800.

They were defeated at the Battle of Tippecanoe in 1811 and most of the remaining tribe moved west.

LESSON # 3 (INQUIRIES)

Whole group: Before beginning the lesson, use either the Anticipation Guide true/false or agree/disagree set of questions on “Prehistory and Archeology.” The forms are found in the unit Appendices.

This can be extended with a writing prompt, *What is an Indian?* (This question is also suggested as a post-lesson writing prompt in the *Putting It All Together* section at the end of the lesson of the activities).

This pencil / paper activity could be modified to fit Multiple Intelligences, bodily/kinesthetic: Have the students form a human graph: Designate one place in the room for “Agree” responses, another for “Disagree.” Ask each question from the Anticipation Guide, allowing time for the students to arrange themselves in a line at either response spot. Chart the responses for each question.

Graphic Organizer: KWL - Brainstorm questions about Native Americans in Boone County.

Mini-lesson: Show and discuss examples of artifacts. Start first with household items, for example, an apple peeler, empty Coke bottle, staple remover. Include some items that would not be familiar to the students. You can also include one of the replicated Paleo Indians projectile points. Decide as a group on categories to group the artifacts. Group the artifacts and discuss each group according to attributes. The students should by the end of the mini-lesson understand that an artifact is “any object made or utilized by humans.”

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Hands-on (Being There): Students bring ten to twelve items from home in a brown lunch bag. Each item should give a clue about the student’s identity. No name or identification should appear on the bag. Each bag is assigned a “site” number by the teacher. Students work in pairs with the Laboratory Record Form (found in the lesson binder). The students analyze each artifact from the bag and record their observations on the form. The class reconvenes as a whole group; each pairs samples from their “site” and tells whom they think the artifacts belong to and why. Refer to *The Archaeology of Me*, “Story in a Bag”, in the lesson binder. (MI. bodily/kinesthetic; logical/mathematical)

¹² Shirley Schermer in *Discovering Archaeology*

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Small Groups (Learning Clubs): Students divide into five groups (Learning Clubs). Each will take a designated portion of the *Kentucky Before Boone* poster. The groups will report back to the rest of the class after the activity.¹³

A. Paleo Indian Period: One group makes observations about the Paleo Indian Period on the *Kentucky Before Boone* poster. These are recorded on paper. The group then plans a camping trip. Each group member is assigned a task, e.g. who will bring the food, who will set up the tent or find shelter. Plan this as a month – long trip. What personal belongings will be needed? How will the group decide the limits on possessions that can be brought along? The group camping trip will then be compared with that of the Paleo Indian lifestyle as observed on the poster. What kinds of items were needed in the camps of the Paleo Indians? (M.I. spatial and verbal/linguistic)

B. Archaic Period: Group two is assigned the burial scene from the poster. The students list the elements of ritual shown in the scene, e.g. dance, ceremonial costumes, pipes, masks, music, valued goods. These are charted and compared with ritual elements of modern culture in Boone County. (M.I. logical and musical)

C. Woodland Period: Students in this group make coil pottery. They observe the pot maker in the Woodland Period scene. The students form a shallow depression in a lump of clay to make the base of the pot, then take long coils of clay and shape them to form the sides of the vessel. They use the paddle technique as shown in the Woodland scene. They can experiment with carved paddle surfaces and twine or other fibers. The group can also try other designs using a pointed stick or imprinting a shell design. (M.I. bodily/kinesthetic)

D. Late Prehistoric: Students find the weeping eye gorget on the poster. Discuss within the group the feelings that the gorget evokes. How does this image make them feel? What does the gorget show about the person who created it? The group can also research other motifs of this period, e.g. lightning bolts. The students then create their own weeping eye or other motif. Brown craft paper can be used with charcoal. (M.I. intrapersonal)

As an extension of the activity, students can create their own illustrated time of the Prehistoric Native American periods based on the poster. (M.I. logical/mathematical)

Guided Reading: Teacher directs the reading of *Kentuckians Before Boone* to learn about the daily life of Fort Ancient Indians who lived in permanent villages along the Ohio River. Use the companion guide, *Columbian Kentucky*, found in the lesson kit. The students can also be guided in reading the student booklet, Native American materials.

¹³ *Continuing Lifeways*

Lesson Connections:

Research natural products of Native American groups in Boone County then use

Writing to learn: Double entry in Learning Log

What did Native Americans eat?

What do we eat?

What natural products did they harvest or use from their environment?

What do we use from our natural world in Boone County?

(M.I. naturalist; verbal/linguistic)

Write a transactive piece, a “how-to”, based on Native groups’ processes and procedures for accomplishing a task, for example, growing grasses, grinding corn, making simple food dishes. (M.I. logical/mathematical)

Create a directional game based on “Simon Says”. (M.I. verbal/linguistic)

Whole Group: Teacher reads excerpts from Cricket Sings; A Novel of Pre-Columbia Cahokia (relevant to Kentucky and Boone County Native American groups).

This will help in connecting to the building and purposes of mounds.

There are references to kinds of foods, medicines and remedies, trading of goods, religion and ceremonies, and games, esp. “Chunky”.

Simulated dig: (Teacher prepared) Use bread loaf pans. Put in pieces of corn or squash, strands of rope, a peach pit or an acorn, and a broken clay pot. Cover with mud. Bake at 250 degrees for two or three hours, until the mud is “set.” After the pan has cooled, cover the layer of baked artifacts with sand and dirt. The students will use paintbrushes or other appropriate tools to search for and uncover the artifacts. (M.I. naturalist)

Cool Conservation activity: Simulate an archaeological dig by finding the fragments of a broken pot and reconstructing it. Use Cartesian coordinates on a 2’ by 2’ grid (Archaeologists work in meters, however). Paint the grid system on a clear shower curtain. Put the shower curtain over the pot fragments. Students “walk” the grid and plot their findings on a grid sheet. (M.I. logical/mathematical)
See the lesson binder and kit. (dig, June/July 1999).

Research to discover the kinds of housing that each Boone County native group constructed. Compare and contrast how each group used natural elements to create shelter. What architectural styles are evident?

Putting It All Together:

Open Response: (a prompt based on this statement: *The prehistoric Indians in Boone County were primitive and uncivilized.* Purpose: The students will differentiate the terms “primitive” and “uncivilized”; writing should reveal some thought on multi-culturalism, although they will most likely not use that term; writing will show that Indians had their own culture and what some of those cultural components are, e.g. language, kinds of food, art forms); this should lead students away from ethnocentrism and towards multiculturalism.

Alternative Prompt (approaches the same concepts from a simpler angle)

What is an Indian?

Websites:

<http://www.umd.umich.edu/egi-bin/herb>

(Native American Ethno Botany data base; type in the common plant name and find out which tribe use what plants)

LESSON # 3

Lesson Kit:

Lesson Binder:

- Lesson Guide
- Graphic Organizers
- Unit Culminating Projects
- Unit Appendices
- 1 Copy of Student Booklet Readings, Lesson # 3
- Maps:
 - Boone County Watershed *
 - Kentucky Paleo Indian Period Sites
 - Kentucky Archaic Period Sites
 - Kentucky Woodland Period Sites
 - Late Prehistoric Period Sites
- Illustration: Tools and Points from Big Bone Fire Pit
- Map- Ft. Ancient Sites around Petersburg *
- Map-Ft. Ancient Sites at Petersburg *
- Illustration: Bone Points *
- Illustration: Stone Points *
- Illustration: Pottery Fragments *
- Activity: Cool Conservation
- Prehistoric Kentucky Mural
- Illustration: Archaic Hunter
- Information: Archaic Cultures
- Newspaper Article: “Cultural Awakening”, *Lexington Herald Leader*
- Lesson idea- Object Story
- Artifact Interpretation
- What is An Artifact?
- Archaeology of Me
- Activity: Garbage Can Archaeology
- Information & Illustrations: Kentucky Rock Art
- Activity: Pollen Analysis
- Information: Plant Remains
- Information: The Great Hopewell Road
- Map: Hopewell Sites in the Ohio Valley
- Bibliography: Hopewell Culture
- Activity Sheets:
 - Plot the Artifacts
 - Stratigraphy
 - Archaeological Art

- Writing Topics
- Science Connections
- Artifact Boxes
- Game: Tagawatse Tothetsan
- Maze: Mammoth Hunt
- Information: Archaeology
- Sheet: Petroglyph Symbols
- Worksheet: Native American Utensil Match
- Early American Recipes and Remedies
- Teaching Archaeology
- Archaeology and the Law

*From the Technical Report of A. Gwynn Henderson, *Prehistoric Research at Petersburg*

Additional Resources in the Lesson Kit:

- Cordage Sample
- Replicated Projectile Points (6 total)
- Videos: *Adena People; A Native Presence*
- Trade Books:
 - *The Sign of the Beaver*, Elizabeth George Speare. Bantam Books, New York, NY: 1983
 - *These Lands Are Ours*, Kate Connell. Steck-Vaughn, NY: 1993
- Coloring Book: *Culture History of Kentucky*, Virginia Smith. Museum of Anthropology, University of Kentucky; Lexington, KY: 1978
- Multiple Copies, Student Book: *Kentuckians Before Boone*, A. Gwynn Henderson. University Press of Kentucky, Lexington, KY: 1992
- Student Archaeology Journal, *dig*. April/may; June/July 1999
- Teacher Resource Books:
 - *Columbian Kentucky*, Vicky Middleswarth. Kentucky Historical Society, Frankfort, KY: 1992
 - *Cricket Sings*, Kathleen King. Ohio University Press, 1983
 - *Forests, Forest Fires, and Their Makers*, Paul Delacourt, Hazel Delacourt, Cecil Ison, William Sharp. Kentucky Archaeology Survey, Education Series # 4; Lexington, KY: 1999
 - *Intrigue of the Past*, Shelley Smith, Jeanne Moe, Kelly Letts, Danielle Paterson. U.S. Dept. of Interior, Bureau of Land Management, 1996
 - *Mute Stones Speak*, William Sharp & A. Gwynn Henderson, K.A.S. Education Series # 2, 1997
 - *Native Peoples, Continuing Lifeways*, The Native American Project of the 1994 Kentucky State Fair, David Pollack & Stephanie Darst, Editors.

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- *Prehistoric Hunters and Gatherers*, Leon Lane, Eric Schlarb, A.Gwynn Henderson. K.A.S. Education Series # 3, 1998
 - *Prehistory of Man in Kentucky*, K.M.Fraser. Center of Environmental Education, Murray State University, 1986
 - *Slack Farms*, David Pollack, Cheryl Ann Munson, A. Gwynn Henderson.K.A.S. Education Series # 1
 - *Teaching About American Indians: Stereotypes & Contributions*, Tressa Townes Brown. Kentucky Heritage Council, Frankfort, KY: 1999
- Laminated Mural, Prehistoric Kentucky, in the Kentucky History Center
 - Laminated Posters, Native American Month; Kentucky Before Boone

Listing of Additional Sources:

- *Archaeologist Dig For Clues*, Kate Duke. Harper Collins, NY: 1997
- *Archaeology and You*, George Stuart & Francis McManamon. Society for American Archaeology, Washington, D.C.: 1996
- *Archaeology: A Thematic Unit*, Teacher Created Materials. Huntington Beach, CA: 1994
- *Discovering Archaeology; An Activity Guide for Educators*, “Garbage Can Archaeology”, Shirley Schermer. Iowa City, IA: 1992
- *Excavation of a Prehistoric Feature at Big Bone Lick, Boone County, Kentucky*, Don Miller & Ken Duerksen. 3/D Environmental, Cincinnati, OH: 1993
- *Kentucky Before Boone*, Jimmy Railey; poster
- *Prehistoric Earthworks and Mounds in Kentucky*, Technical Report # 382. Program for Archaeological Research, Department of Anthropology, Dr. Donald W. Linebaugh, Director, A.Gwynn Henderson Ph. D., Principal Investigator; January 15, 2001
- *Prehistoric Research at Petersburg, Boone County*, A. Gwynn Henderson. Archaeological Report # 289, December, 1993
- *The Archaeology Education Handbook: Sharing the Past With Kids*, Karolyn Smardz, Shelley Smith, Editors. Alta Mira Press, NY: 2000
- *The Navigator*, Zadoc Cramer. Cramer, Spear, Eichbaum, Pittsburgh, PA, 1811

LESSON # 4

Salt and Settlers

Lesson Preview:

Students will identify reasons why traders and settlers come to Boone County. They will:

- **Read** to learn why and how salt was produced at Big Bone Lick
- **Observe** and **Analyze** salt water in three stages of production
- **Read** to gain a perspective of the challenges of early U.S. settlements
- **Role play** the story of Mary Draper Ingles

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LESSON # 4

Introduction:

John Alexander Thom brought to life the story of Mary Draper Ingles who became a captive of the Shawnee Indians in the summer of 1755. Follow the River dramatizes the tale of Mrs. Ingles who was taken from her home in what is now western Virginia to a Shawnee settlement along the Ohio River. She was sent with a small party of Shawnee Indians and French traders to Big Bone Lick where she cooked and helped in boiling hundreds of gallons of water to produce salt. Mrs. Ingles escaped, following the river back home to Draper's Meadow.

The salt making process at Big Bone Lick is described in Follow the River:

“Mary (Ingles) and the widow Stumpf were put to work at dawn the first morning at the big bone lick and they worked until the sun had set. They scooped out a shallow well at a place where the brine bubbled vigorously out of the ground, and here they dipped pails to fill a row of kettles kept steaming over hardwood fires on a rise of firmer ground. They also gathered the wood for the fires, and scraped the salt from the bottom of the hot kettles when it was done.”¹

Setting the Stage:

Zadoc Cramer, in The Navigator, relates this about the salt springs and salt-making at Big Bone Lick in A.D. 1810:

“There are places at the Big Bone Lick, where the salt water bubbles up through the earth, that are rendered a perfect quagmire, admitting nothing heavier walking over them than geese or other light footed fowl. Cattle dare not venture nearer than to their edges. One of these places appears bottomless, for no soundings have ever been found; throw in a ten feet rail endwise and it buries itself without any other force than its own weight; May it not be reasonable to account for many of the mammoths bones being deposited at this place, by presuming that in their seeking the salt water, and venturing a little too far, or otherwise that their own enormous weight pushing them forward too far for recovery, and sinking, thus were buried one after another to the number we now find their remains. The places where their bones are now found are tolerably hard from filling up by the washing of the small stream, which runs through them, and from having been much dug up and the mud exposed to the sun.

Mr. Colquohon, a Scotch gentleman, resides at, and owns this singular spot of ground, and has two extensive salt furnaces at work, which are able to make about 69 bushels per day, notwithstanding the weakness of the water. Mr. Colquohon has been at much labour and expense in fixing his furnaces in a superior stile, particularly in the retention of the heat, and saving half the size at bottom that they are at top; they hold about 12 or 15 gallons, and are fixed close together in a double row, having sides their edges covered with sheet lead lapped down closely on all sides, so as to prevent any heat from escaping; the fuel is introduced into a grated furnace

¹ John Alexander Thom in *Follow the River*, p. 141

whose mouth is closed by an iron door- The kettles rise gradually from the front to the chimney, so as to occasion a sufficient draught of air. The first kettle in the furnace is round and contains about 100 gallons, and as this receives the greatest degree of heat, and evaporates the water much faster than the smaller ones, they are partly supplied from those near the front. The kettles are filled with the salt water in the first instance from a wooden pipe, running over the middle of the furnace, having coil pipe running over the middle of the furnace, having spoil holes on each side; this is supplied by a pipe from the general reservoir.

Mr. Colquhoun was engaged (Sept. 1810) in boring for salter water, and had got 150 feet through the solid rock with an inch and a half auger, and was determined to bore 50 feet further. If he failed here, to try two other places, embracing the three important points of the tract where the salt water was supposed to be embowelled.”²

Compare that account with another describing a salt-making venture near present-day West Virginia:

“Seventy miles above the mouth of the Big Kanhawa [sic] (a considerable river of Virginia) and a little below the falls of that river are a number of salt works lately put into operation, and which yield an immense quantity of excellent salt. In August, 1810, there were 11 furnaces at work, each containing 60 kettles, and making at the rate of from 35 to 50 bushels of salt daily, averaging in all about 400 bushels per day. Since which (Dec. 1810) we learn there have been five furnaces more erected, and make an equal quantity with the others; hence we may calculate the quantity now to be about... 174,000 bushels annually; and it can be freighted to Pittsburgh, 283 miles up the Ohio... These salt furnaces are immediately on the beach or edge of the river, and extend on both sides for six miles distance. In the first place they have to dig about 10 or 15 feet through sand and mud, when they come to the rock, then the boring commences with a two and a half or three inch auger, with which they bore from 60 to 90 feet through the solid rock, passing perhaps several veins of fresh water in that distance, which is kept from the salt by means of tin pipes introduced into the holes from bottom to top and tightly caulked at top where they enter the *gum* as it is called. This gum though made of a hollow sycamore, answers as a *coffer dam*, within which a man works through the mud and sand, while it sinks with him to the surface of the rock, where its lower edge is tightly secured all round, admitting neither mud nor water from below and extending upwards beyond high water mark. Into this gum enters the tin pipes introducing the salt water from its hidden reservoir. Into the gums pumps are then fixed, which are neither worked by man or horse power, and the water conveyed from these in open troughs to the kettles, which are placed in a double row under a shed, and over a long hole cut in the ground, into which wood is cast for boiling them and evaporating the water. A furnace of 60 kettles when ready for operation, costs about 1500 dollars, and four hands are sufficient, when the water is pumped by hand, to keep a furnace of this going night and day, besides two or three engaged in cutting and hauling wood.”³

The salt licks of Kentucky were “an attractive feature” for early settlers⁴
Salt was needed for the preservation of meat. Game was also attracted to the salt licks; therefore, settlers could find both salt and the food to preserve. Big Bone Lick is close to the Ohio River

² Zadoc Cramer in *The Navigator*, p. 119-120

³ Cramer, p. 96-96

⁴ Thomas D. Clark & Tom Pack in *The Kentucky Encyclopedia*, p. 793

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and was easily accessible to traders and settlers by either water (Big Bone Creek) or by land over the hardened bison traces.

Early European-American settlers dug wells by hand to retrieve salt water. A narrow trench, lined with slate, served as a furnace. Heavy kettles were put on top of the furnace; sometimes there were as many as fifty kettles in a row. Salt water boiled in the kettles until nothing was left but salt grains. The salt was stored for home use or sold to other settlers.⁵

⁵ Clark and Pack, p. 794

LESSON # 4

KERA STANDARDS

Essential Question:

Why is it important for me to learn and understand the geography and history of Boone County?

Guiding Questions:

1. How does the story of Mary Ingles help us to understand the life of early U.S. settlers?
2. Why was salt manufactured/ produced at Big Bone?
3. What role did the river play in the settlement of Boone County?

Student Objectives:

Academic Expectation: 2.18 Students understand economic principles and are able to make economic decisions that have consequences in daily life.

Core Content For Assessment:

SS – E 3. 2.3 The U.S economic system is based on free enterprise where businesses seek to make profits by producing or selling goods or services. [salt making]

Academic Expectation: 2.19 Students recognize and understand the relationship between people and geography and apply their knowledge in real life situations.

Core Content:

SS – E 4.3.2 Humans usually settle where there are adequate resources to meet their needs.

SS – E 4.2.1 Every place is unique and can be described by its physical and human characteristics.

SS –E 4.4.2 People adapt to or modify the environment (e.g. produce food, build shelter, make clothing) to meet their needs.

Academic Expectation: 2.20 Students understand, analyze, and interpret historical events, conditions, trends, and issues to develop historical perspectives.

Core Content:

SS – E 5.2.2 People explored and settled America and Kentucky for multiple reasons.

SS – E 5.2.4 The study of U.S. history is categorized into broad historical periods and eras, e.g. Colonization.

SS - E 5.5.1 History can be understood by using a variety of primary and secondary sources and tools.

Vocabulary:

Captive: a prisoner

Produce: (verb) to make, manufacture, or supply

Settlement: a small community, village, or group of homes

LESSON #4

ACTIVITIES (INQUIRIES)

Guiding Reading: The teacher reads portions of *Follow the River*, to help the students gain a perspective of early U.S. settlements and the challenges of frontier life, and for the references to Big Bone Lick and salt-making. There are multiple copies of the book for paired or small group *guided* reading. The selections from the book need to be carefully guided. It is not recommended as an independent reading text.

Suggested passages:

Pages 1-2 description of settling at the Allegheny “divide”

Pages 137-141-traveling by canoe to Big Bone Lick, “The Lick of the Giant Bones”, for salt making (after Mary was captured).

Pages 151-153 Mary’s decision to leave camp

Pages 156-158 going along the Big Bone Creek to the river

Pages 359-363 the return home to Draper’s Meadow in Virginia

Guided Reading: Read the John Ingles’ book on the captivity and escape of Mary Draper Ingles (especially in reference to Big Bone Lick).

Independent Reading: Students use the student booklet or packet from the booklet for information on 1) salt production and 2) the Ohio River as the “Great Westward Flowing River” that brought settlers to this part of the United States; use the 1930 *Boone County Recorder* to gain a perspective of late 18th and 19th century Boone County.

Role Play: The students are divided into groups based on the sets of guided reading passages from *Follow the River*. Each group creates its own script based on the specific passage. The group creates or gathers props for the skit. (M.I. interpersonal)

Observe and Record: The students observe the process of evaporation of salt water. They observe and taste the salt concentration in a full pot of salt water, a half pot, and the grains of salt left after all the water has evaporated. (This is a teacher prepared and directed activity.)

Graphic Organizer: Students first brainstorm basic human needs, then list those we need today and those of early U.S. settlers. In the last column, similarities and differences are noted.

Lesson Connections:

Research nonstandard measurements, e.g. hogs heads. Students will make transactions using the odd measurements.

Write and Present a news broadcast on the escape of Mary Ingles from Big Bone Lick and her journey home, or create a survival game based on Mary Ingles).

(M.I. interpersonal)

Write: Keep a journal on the possible hopes, fears, joys, and doubts of the early Kentucky and Boone County settlers. (M.I. intrapersonal)

Problem Solve: “Pioneers Making a Home in the Wilderness,” in the lesson binder. Students plan the lists of needs for a new home in Boone County in the late 18th or early 19th century. (M.I. naturalist; logical/mathematical)

Research early land grants, their advantages and disadvantages, disputes and problems especially those that Daniel Boone and Simon Kenton encountered with land grants.

Investigate early Boone County settlements that no longer exist, e.g. Garrison Creek, Tousey Town, Idlewild. Connection: Research the origin of town names, e.g. Rabbit Hash, McVille.

Whole Group: Video, KET # 609; an early Kentucky Farm; includes archaeology

Putting It All Together:

Informal: If the unit is being presented sequentially, have the students create a trivia game based on the first four lessons, i.e. geology, paleontology, Native Americans, salt licks and settlers. Each student writes four to five questions that require no more than a sentence to answer. The teacher checks the questions and answers for accuracy. The students write the question on one side of a 3” by 5” index card, the answer on the other side. The cards can be colored-coded according to lesson number or other categories and topics, e.g transportation, shelter, food, tools. The students and teacher brainstorm together to create the game format and rules.

Websites:

<http://familytreemaker.genealogy.com/519facd.html?Welcome=994294957>

LESSON #4

Lesson Kit:

Lesson Binder:

- Lesson Guide
- Photos, Big Bone Lick
- Graphic Organizers
- Unit Culminating Projects
- Unit Appendices
- 1 Copy of the Student Booklet Reading Materials
- Information: Riverside, The Farnsley-Moreman Landing; see the KET video, #609, in the lesson kit
- Information: Early Kentucky Settlers

Additional Resource Materials in the Kit:

- Teacher Resource, *Big Bone Lick*, Willard Rouse Jillson. Standard Printing Company, Louisville, KY: 1936. Reprinted, Rabbit Hash Historical Society, Windmill Publications; Mt. Vernon, IN: 1998
- Teacher Resource, *Follow the River*, John Alexander Thom. Ballantine Books, NY: 1981 (There are multiple copies of this book.)
- Multiple Copies, Student Reading, *Escape From Indian Captivity*, as told by John Ingles. Edited by Roberta Ingles Steele & John Lewis Ingles, Radford, VA: 1969
- KET Video, Program # 609, Riverside, the Farnsley-Moreman Landing
- *Boone County Recorder*, 1930 Historical Edition
- 1 Laminated Map of Early Boone County
- *Food for the Settler*, Bobbie Kalman. Crabtree Publishing Co., NY: 1992

Listing of Additional Sources:

- *Project Archaeology*, training, Frankfort, KY: June 21-22, 2001
- *The Navigator*, Zadoc Cramer. Cramer, Spear, Eichbaum, Pittsburgh, PA: 1811. Lithographed by Young & Klein, Cincinnati, OH: 1979
- *The Kentucky Encyclopedia*, John E. Kleber, Editor-in Chief. University Press of Kentucky; Lexington, KY: 1992

LESSON # 5

BEGINNINGS: Kentucky Statehood; The Formation of Boone County

Lesson Preview:

Students will identify the various forms of government and describe relationships between simple and more complex political systems. They will:

- **Examine** primary sources.
- **Create** time lines.
- **Research** levels of government
- **Participate** in a field trip.

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<i>Activities, Assessment; Websites</i>	<i>L 5.6</i>
<i>Lesson Kit, Bibliography</i>	<i>L 5.9</i>

LESSON # 5

Introduction:

“From Kentucky’s hills and valleys, from the grassy
dells and plains,
Hear the notes of joyous welcome she extends,
From her wealth of bud and blossom growing in the
sun and rain;
You’ll find all that hospitality commends,

You will catch the scent of lilacs and of violets and mint;
When the reddening sky foretells the coming night,
And your heart beats fast and faster in the gloaming
and the glint
As we holler to you, “Stranger, stop and light.”
(From “A Kentucky Welcome” G. Allison Holland
All That’s Kentucky)

Setting the Stage:

Kentucky, the fifteenth state, admitted to the Union in June 1, 1792.

Nickname: The Bluegrass State

Song: My Old Kentucky Home

Motto: United We Stand, Divided We Fall

Flower: goldenrod

Tree: the yellow or tulip poplar

Bird: Kentucky cardinal

{Please let it be known that, in 1792, when several sites were considered as the future state capital, that Petersburg in Boone County was *not* among the sites. It was Petersburg in Woodford County, near Frankfort, which was considered for that honor. Several Boone County sources have perpetuated this myth.} ¹

Boone County, the thirtieth county formed

Officially separated from Campbell County on 1 June, 1799

First court held 17 June, 1799

There have been three Boone County courthouses. The first was a log structure, constructed circa 1800. The second courthouse was built in 1817. It faced Jefferson Street

¹ Carl Bogardus, M.D. article “General Charles Scott”, in the *Northern Kentucky Heritage Magazine*, p. 45

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(see the drawing in the lesson binder). The 1817 structure was remodeled in 1875. The façade then faced Washington Street. That courthouse was demolished in 1888 amidst considerable controversy; a new courthouse was constructed, the existing Boone County Courthouse (there is a 20th century addition to the courthouse).

*Teachers: Please ensure that your students know the difference between the Courthouse and the Administration Building. There is also a new Justice Center under construction.

Locating the Site:

Boone County is located in Northern Kentucky along the Ohio River. It covers 252 square miles and borders Kenton, Gallatin, and Grant counties.

The Ohio River forms much of Kentucky's natural boundaries. The river follows Kentucky west for 665 miles. Kentucky borders Ohio, West Virginia, Virginia, Tennessee, Missouri, Illinois, and Indiana

LESSON # 5

KERA STANDARDS

Essential Question:

Why is it important for me to learn and understand the geography and history of Boone County?

Guiding Questions:

- 1.How does government affect my community and me?
- 2.What kinds of things are used to make and show political boundaries?
- 3.Why is our county seat Burlington?
- 4.How are my home and school like the county, state, and national levels of government?
- 5.Why is the county courthouse an important structure?

Student Objectives:

Academic Expectation: 2.15 Students can accurately describe various forms of government and analyze issues that relate to the rights and responsibilities of citizens in a democracy.

Core Content for Assessment:

SS – E 1. 2.1 The three levels of government are local, state, and national.

SS – E 1. 2.2 The three branches of government at each level are legislative, executive, and judicial.

SS – E 1. 2.3 Every level of government has specific offices associated with each branch that vary in title but contain similar duties (e.g. executive branch; local-judge executive; state- governor; national- president).

SS –E 3.4.2 The government provides goods and services and pays for them with taxes. Private businesses offer similar goods and services for profit.

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Academic Expectation: 2.19 Students recognize and understand the relationship between people and geography and apply their knowledge in real life situations.

Core Content for Assessment:

SS – E 4. 1.1 Simple physical, political, and thematic maps, globes, charts, photographs, aerial photography, and graphs can be used to find and explain locations and display information.

SS – E 4. 1.2 Every point on Earth has an absolute location defined by latitude and longitude, and a relative location as compared to other points on Earth’s surface.

Academic Expectation: 2.20 Students understand, analyze, and interpret historical events, conditions, trends, and issues to develop historical perspectives.

Core Content for Assessment:

SS – E 5. 2.5 Symbols, slogans, monuments/ buildings, patriotic songs, poems, and selected readings are used to describe or illustrate important ideas and events in [Boone County], Kentucky, and American history.

Vocabulary:

Legislators: state or national lawmakers

Branch: a division of government

Legislative: makes the laws

Executive: carries out the laws

Judicial: interprets the laws

Constitution: the laws or rules of a government system

Capital: the state capital is the city where the government carries out its business.

Capitol: the building where the lawmakers meet

*Refer to the lesson binder for architectural vocabulary and illustrations.

LESSON # 5

ACTIVITIES (INQUIRIES)

Whole Group: The teacher posts a map of Kentucky so that all students can view it (or prepares an overhead transparency). The students use the copy of Littell's Laws in their booklet to highlight and identify the political boundaries given to Boone County in December, 1798. A recorder lists the boundary identifications on chart paper.

Small Group (Learning Clubs): Groups gather facts on Kentucky and Boone County, each with a focus; e.g. one group- Kentucky branches of government and leaders; next group- Kentucky symbols; continue grouping with Boone County government and symbols; one group on the Shawnee Indian Constitution (a copy is in the lesson binder). Each group shares their research orally after preparing a computer-published report to include in the student booklet. The teacher follows the reports with varying questions based on the students' research of county and state government. (M.I. verbal/linguistic)

Technology: The group that is researching the Boone County government can use the county Website, www.boonecountky.org

Read the 1930 historical edition of the *Boone County Recorder* to gain a perspective of late 18th and 19th century Boone County.

Technology: Use the microfilm reader at the Boone County Public Library, Florence main library, to research 19th century editions of the *Boone County Recorder*. Particular years to research are 1875, 1887, and 1888. The 1875 issues address the remodeling of the courthouse. The 1887 and 1888 issues record the controversy over the new courthouse and its location. Find Sept. 23, 1875, Nov. 11, 1875, also.

Read the lesson kit student books on Kentucky.

Hands-on (Being There): Use primary and secondary sources to examine Boone County. See the lesson binder for the primary document recording the minutes of the first court held in Boone County, 17 June, 1799. See also the photographs in the binder.

Graphic organizer: Create an illustrated time line of Boone County and Kentucky early developments. (M.I. logical/mathematical)

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Graphic Organizer: Use the 1930 edition of the *Boone County Recorder*, and Petersburg and Big Bone background information to create a parallel storyboard. Use the storyboard example in the lesson binder. Students write Kentucky events in the top storyboard row and Boone County events in the bottom row. The students could choose five or ten year increments to note the events, e.g. 1790-1795 Kentucky becomes a state; John and Edward Tanner were captured by Shawnee Indians at Tanner's Station (Petersburg).

Graphic Organizer: Use varying questions. Compare home "government" with county or state government. For example, what are your home rules? Who sets them? How are your parents like the governor? What are the purposes of rules and laws?

Visit community sites that are funded by tax money, e.g. the courthouse, firehouse, library, parks.

Hands-On (Being There): Do this before visiting the courthouse. Students use the container of building materials and sort them. The students record their classification method, i.e. did they classify by shape? texture? composition? function?

When the students visit the courthouse, they use pages 4-7 of the architectural terms and descriptions in their booklet. They look for similar features in the exterior of the courthouse, e.g. does it have a portico? columns? What is the composition of the courthouse—Brick? Glass? Tile? Stone? Plaster? (M.I. spatial; bodily/kinesthetic) This activity could be adapted to a visual scavenger hunt format.

Lesson Connections:

Research early Boone County demographics.

Identify the characteristics of Boone County climate, vegetation, wildlife, and industry.

Demonstrate the Kentucky symbols through body signs. (M.I. bodily/kinesthetic)

Hands-On: Students make a relief map of Boone County. (M.I. bodily/kinesthetic)

Hands-On: Students make mini-bricks with red self-drying clay. Use small, shallow containers (about 2" X 4" or 3" x5"). Students personal their bricks by inscribing a pattern.

Interview Elderly Boone County residents to discover how the courthouse has changed to serve the people. Resource person, Susan Cabot, could help with this.

* Teachers: Use the separate binder in the lesson kit:
Building a Society; Kentucky Life From Settlement to Statehood
Kentucky Historical Society, 1992

Putting It All Together:

Open Response: The students are given a copy of the legislative branch of the United Tribe of Shawnee Indians as described in their Constitution. The students also have the group report on the legislative branch of the Boone County Fiscal Court (the three County Commissioners and the Judge/Executive.) The students write to compare the legislative branches of the Shawnee Indians and the Boone County Fiscal Court. They need to include standards of eligibility for office, length of terms, number of representatives, and frequency of meetings.

Websites:

www.boonecountyky.org

<http://www.mtsu.edu/%7ethen/Architecture/page28.html>

<http://www.mtus.edu/-then>

<http://www.whyy.org/aie/index.html>

LESSON # 5

Lesson Kit:

Lesson Binder:

- Lesson Guide
- Photos, Courthouse, Contract for 1889 Courthouse, Burlington Log School
- Graphic Organizers
- Unit Culminating Projects
- Unit Appendices
- Shawnee Constitution
- Architectural Information
- Kentucky Landmarks
- Postcards and Brochures: Kentucky Places
- Kentucky State Anthem
- Kentucky Fish
- Kentucky Historical Society
- Littell's Laws of Kentucky
- Primary Source: copy of the Minutes of the First Boone County Court
- Early Maps of Boone County
- Sketch: 1817 Boone County Courthouse
- William Fitzgerald, Boone County and Kentucky History
- Newspaper Articles: Hugh Steers, Zebulon Pike
- Kentucky Counties
- Brochure: Boone County Public Library
- Websites
- Architecture in Education

Additional Resource Materials in the Kit:

- Five pieces, native cane
- Video: *Geoquest*- Kentucky Geography
- Game: *Booneopoly*

- Teacher Resource Books:
 - *1883 Atlas, Boone, Campbell, Kenton Counties*, D. J. Lake & Co. Philadelphia, PA: 1883. Reprinted by the Boone County Historic Preservation Review Board, 1998
 - *Building a Society*, Kentucky Historical Society, 1992
 - *Country Roads*, Mary Augusta Rodgers. Country Roads Press, Castine, ME: 1993

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- *From Redhot to Monkey's Brow*, Robert Reneck. University Press of Kentucky, Lexington, KY: 1997
- *History Mysteries*, James Klotter. University Press of Kentucky, 1989
- *Kentucky*, Dottie Brown. Lerner Publications, NY: 1992
- *Kentucky*, Kathleen Thompson. Steck-Vaughn, Austin, TX: 1996
- *Kentucky Folklore*. R. Gerald Alvery. University Press of Kentucky, 1989
- *Kentucky Ghosts*, William Lynwood Montell. University Press of Kentucky, 1994
- *Liberty For All?* Joy Hakim. Oxford University Press, 1994
- *Our Kentucky, A Study of the Bluegrass State*, James E. Klotter, Editor. University Press of Kentucky, 1992, 2000
- *The Little House*, Virginia Lee Burton. Houghton Mifflin, NY: 1942
- *The Little Shepherd of Kingdom Come*, a novel by John Fox, Jr. Charles Scribner's Sons, NY: 1906. Reprinted by Jan Garbett & Jenna Rogers. Windmill Publications, Mt. Vernon, IN: 1997
- *The Little Shepherd of Kingdom Come*, Picture Book by Jan Garbett & Jenna Rogers. Windmill Publications, Mt. Vernon, IN: 1998
- *Three Kentucky Tragedies*, Richard Taylor. University Press of Kentucky, 1991

- Student Written Histories:
 - A Peek into the Past*, Ryle High School PTSA, with contributions from New Haven Elementary and Gray Middle School. Windmill Publications, Mt. Vernon, IN: 1997
 - Look at Our Yesterdays: Burlington Hometown*, Burlington Elementary PTA. Windmill Publications, Mt. Vernon, IN: 1997

Listing of Additional Sources:

- *A New History of Kentucky*. Lowell H. Harrison & James C. Klotter. University Press of Kentucky, 1997
- *Boone County Recorder*, 1930 Historical Edition
- *Kentucky's Statehood*, Lowell Harrison. University Press of Kentucky, 1992
- *Northern Kentucky Heritage Magazine*, Volume V, #1; Autumn/Winter 1997-98
- *The Kentucky*, Thomas D. Clark. University Press of Kentucky, 1942. Reprinted by arrangement with Henry Holt & Co., Inc.; Bicentennial Edition, University Press of Kentucky, 1992

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- *The Kentucky Encyclopedia*, John Kleber, Editor-in-Chief. University Press of Kentucky, 1992
- *Through the Eyes of Your Ancestors*, Maureen Taylor. Houghton Mifflin, Boston, MA; 1999

LESSON # 6

MAKING A LIFE, MAKING A LIVING ALONG THE RIVER River Towns: Rabbit Hash, Belleview Bottoms, and Petersburg

Lesson Preview:

Students will identify reasons why early settlers established river towns in Boone County and ways those river towns have changed in 200 years. Students will:

- **Read** to learn about Rabbit Hash, Petersburg, and Belleview.
- **Examine** and **use** primary sources to identify unique features of each town.
- **Manipulate** hands-on materials to discover how lifestyles have changed in 200 years.

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<i>Lesson Kit, Bibliography</i>	<i>L 6.8</i>

LESSON # 6

Introduction:

“People have lived and loved and died for ages past,
And we come in our turn and live our life
And only leave behind some token of our love or strife
For later hands to find.”¹

Setting the Stage:

The Ohio River and old bison trails led settlers to the Petersburg area. Petersburg was the site of Native American villages long before John Tanner and his band of Pennsylvanians settled there in 1786.² Forests of oak, birch, sugar maple, hickory, and poplar once lined the hills. Willows, sycamore, and sweet gum flourished in the floodplains.³ Glaciers of eons past left deposits of gravel and sand that are now quarried.

John Tanner traveled down the Ohio River from Pennsylvania with three flatboats laden with household goods, livestock, and Negroes. Tanner’s Station was the first settlement in Boone County (remember that Boone County was not officially a county until 1799). Reverend Tanner operated a keelboat from Tanner’s Station to Mt. Washington (Ohio).⁴

Edward Meeks founded Belleview in 1815. The town was first named Mt. Vernon. In 1816, a Cincinnati newspaper, *The Western Spy*, advertised lots for sale in Belleview. The site was described as “located in [the] midst of a high fertile bottom and inhabitants wealthy and industrious with their surplus products such as wheat, flour, tobacco, cheese, and butter sold”⁵ In the 19th century, there were mills for carding wool, grinding grain, and sawing lumber. There was a shingle mill, basket factories, a distillery, and the Church at Middle Creek (now Belleview Baptist Church).

Rabbit Hash was once considered a sister city to Rising Sun, Indiana. Before the era of locks and dams, the river level was considerably lower between these towns. People crossed the Ohio River at Rabbit Hash and Rising Sun just as if they were crossing the main street in town. Ferries ran between the towns. However, the main channel of the Ohio River hugged the Indiana side; a large sandbar near the Kentucky riverbank prevented steamboats from docking at Rabbit Hash. Consequently, river commerce benefited Rising Sun while Rabbit Hash “had no choice but to hide and watch”.⁶

¹ Julia Stockton Dinsmore. *Verses and Sonnets*, “The Arrowhead”.

² A. Gwynn Henderson in *Prehistoric Research at Petersburg*, p. 2

³ Henderson, p. 3

⁴ Merrill Caldwell in a paper given before the Boone County Historical Society, 1957

⁵ From the files of the Dinsmore Homestead, “A Treasure in Our Own Backyard”

⁶ Don Clare in *Ancestry: Our Ohio River Heritage*

Rabbit Hash was an established town before the opening of the general store in 1831. In 1989, the Rabbit Hash General Store was listed on the National Register of Historic Places.

The Rabbit Hash “Old Timers’ Day “ is celebrated Labor Day weekend.

Locating the Sites:

Rabbit Hash is 38 miles from Cincinnati and 95 miles up river from Louisville, Kentucky.

Bellevue is eight miles southwest of Burlington, Boone County, eight miles south of Aurora, Indiana.

Petersburg is located on the Ohio River, twenty- two miles below Covington.

LESSON # 6

KERA STANDARDS

Essential Question:

Why is it important for me to learn and understand the geography and history of Boone County?

Guiding Questions:

1. Why do river towns such as Rabbit Hash, Belleview, and Petersburg exist?
2. How did the Ohio River affect the lives of early settlers in these three river towns?
3. How did settlers change the environment along the river?
4. What characteristics define each town as a unique place?
5. How have life styles changed from the nineteenth to the twenty first century?

Student Objectives:

Academic Expectation: 2.16 Students observe, analyze, and interpret human behaviors, social groupings, and institutions to better understand people and the relationship among individuals and among groups.

Academic Expectation 2.19 Students recognize and understand the relationship between people and geography and apply their knowledge in real life situations.

Core Content for Assessment:

SS – E 4.1.4 After looking at spatial factors, decisions are made about where to locate human activities on Earth’s surface.

SS – E 4.4.2 People adapt or modify the environment to meet their needs.

SS – E 4. 2.1 Every place is unique and can be described by its human and physical characteristics.

SS – E 4. 3.1 Human populations gather in groups of different sizes and in different locations in the world.

SS – E 4. 3.2 Humans usually settle where there are adequate resources to meet their needs.

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Academic Expectation: 2.20 Students understand, analyze, and interpret historical events, conditions, trends, and issues to develop historical perspectives.

Core Content:

SS – E 5.1.2 History can be understood by using a variety of primary and secondary sources and tools.

SS – E 5.2.2 People explored and settled America and Kentucky for multiple reasons.

SS –E 5.2.3 The way we live has changed over time for Kentuckians and Americans because of changes in many areas.

LESSON # 6

ACTIVITIES (INQUIRIES)

Read in the student booklet, lesson # 6, and the *Boone County Recorder*, 1930 Historical Edition.

Groups (Learning Clubs): Students divide into groups. One group uses *Ancestry: Our Ohio River Heritage* and the Rabbit Hash story; another group, the newspaper articles on Petersburg; the third group uses photographs of the three towns. Each group will choose a format to show recognition of continuity and change in their assigned river town, and connections to the Ohio River. (Students with the photographs can use the “Photo Detective” guide sheet in the lesson binder). Groups report to the class afterward. (M.I. verbal/linguistic)

Hands-on (Being There): Students take a walking tour of the towns and take photographs.

Writing: Take notes on features of each town during the walking tour.

Double-Entry Learning Log: What could people do without television?

Listen to a story told by a Boone County old-timer to gain perspective about the past.

Graphic Organizer: Students create a time line of their life from birth to fourth grade. (M.I. intrapersonal)

Lesson Connections:

Hands-on (Being There): Examine quilt patterns, especially the log cabin pattern, in art class. Create 6” x 6” quilt squares on paper or cloth. (M.I. bodily/kinesthetic)

Hands-on (Being There): Students use the ‘kid stuff’ in the lesson kit, e.g. the ox yoke puzzle, Jacobs’ Ladder. There is also a metal hoop and wooden stick with the lesson materials to play “Hoop-la”. See the list of old-fashioned games and instructions in the lesson binder. (M.I. bodily/kinesthetic; logical/mathematical)

Hands-On: Use the heritage food recipes and make a food dish to share with the class. Demonstrate a craft of the past, e.g. stitch a sampler, demonstrate a dance, dry flowers or fruit. (M.I. bodily/kinesthetic)

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Group Projects: Students work in small groups (learning clubs). Each group designs and builds a “water-crossing conveyance” from natural materials. Students need to brainstorm their options first before building their conveyance (ferry, raft, flatboat). Once the conveyance is built, the students will put an egg or tennis ball in the center and float their “cargo” for two minutes. (Use a washtub or large dish pan.). The structure must hold together for two minutes without cracking or capsizing.⁷ (M.I. bodily/kinesthetic & logical/mathematical)

Putting It All Together:

Open Response: In looking back at *Kentuckians Before Boone*, compare and contrast the Ft. Ancient village at Petersburg, circa 1500, with the town of Petersburg in the 1800s, and today.

⁷ Activity from Project WET, PP. 421-424

LESSON # 6

Lesson Kit:

Lesson Binder:

- Lesson Guide
- Photos of Rabbit Hash, Belleview, Petersburg
- Map of the Area
- Graphic Organizers
- Unit Culminating Projects
- Unit Appendices
- 1 Copy of the Student Booklet Reading Materials, Lesson # 6
- Northern Kentucky Heritage Magazine, Volume IV, # 2
(in the front pocket)
- Information: Early Petersburg
- Newspaper Article: Petersburg Jail
- Map: Petersburg
- Exploring Community Heritage
- Making Butter
- Heritage Foods
- Corn Husk Dolls

Additional Resource Materials in the Kit:

- Children's Games and Hands-On Items:
 - Cat's Cradle and Other String Games
 - Slate Board and Slate Pencils
 - Ox Yoke Puzzle
 - Weaving Cards
 - Jacob's Ladder
 - Tiddlywinks
 - Dominos
- Examples of Household Items:
 - Ink well
 - Quill pen
 - Tin cup
 - Rug beater
 - Butter paddles
 - Hourglass
 - Flower Sack Towel
 - Feed Sack Panel
 - Oatmeal Soap

- Children's Books:
 - *Ancestry: Our Ohio River Heritage*, Kelly Elementary Students and Kelly PTA. Windmill Publications, Mt. Vernon, IN: 1996
 - *Harper's Second Reader*, 1888; Reprinted, Windmill Publications, Mt. Vernon, IN: 1996
 - *Home Place*, Crescent Dragon Wagon. Aladdin Paperback Books, NY: 1990
 - *Homeplace*, Anne Shelby. Orchard Books, NY: 1995
 - *McGuffey's Eclectic Fourth Reader*, John Wiley & Sons Reprint
 - *The Elementary Spelling Book*, Noah Webster. NY: 1857

- Two Copies 1930 Edition *Boone County Recorder*
- One Laminated Map
- KET Video: Rabbit Hash
- Teacher Resource Books:
 - *A One Room School*, Bobbie Kalman. Crabtree Publishing Co., NY: 1994
 - *Children at the Hearth*, Barbara Swell. Native Ground Music, Inc., 1999
 - *Games From Long Ago*, Bobbie Kalman. Crabtree Publishing, NY: 1995
 - *Old Songs and Singing Games*, Richard Chase. Dover Books, NY: 1972
 - *Pioneer Projects*, Bobbie Kalman. Crabtree Publishing, NY: 1997
 - *The Buried Treasure: A Rabbit Hash Mystery*. William Nelson. Reprinted by Rabbit Hash Historical Society, 1997

Listing of Additional Sources:

- *A Brief History of Slavery in Boone County, Kentucky*, Merrill Caldwell. A Paper Presented Before the Boone County Historical Society, June 21, 1957
- *Historic Preservation Review Board Files*, June, 2001
- *National Register Nomination*, "Rabbit Hash", a Draft by Donald E. Clare, 1995
- *Prehistoric Research at Petersburg, Boone County*, A. Gwynn Henderson. Archaeological Report # 289, December, 1993
- *Project WET*, The Watercourse 7& western Regional Environmental Education Council
- *Verses and Sonnets*, Julia Stockton Dinsmore, Doubleday Books, 1910. Reprinted by the Dinsmore Homestead, 1991

LESSON # 7

***HOMESTEADING, ARCHITECTURE:
Dinsmore Homestead*****Lesson Preview:**

Students will identify ways that 19th century families such as the Dinsmores modified their environment and how they used the land in Boone County. They will:

- **Read and work cooperatively** to gain a perspective of 19th century farm life in Boone County.
- **Use Hands-On** activities to discover architectural features and the meaning of architectural vocabulary.

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<i>Lesson Preview</i>	<i>L 7.1</i>
<i>Introduction</i>	<i>L 7.2</i>
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<i>Activities, Assessment; Websites</i>	<i>L 7.6</i>
<i>Lesson Kit, Bibliography</i>	<i>L 7.8</i>

LESSON # 7

Introduction:

“Sweet scent of wild Kentucky mint!
 The poignant perfume brings to me
 Scenes that the rolling years imprint
 On memory’s scroll indelibly:”¹

Imagine a golden Bluegrass day in 1842. Three girls romp and run through the wild Kentucky mint, which abounds by the stream flowing past their Boone County homestead. Isabella, Julia, and Susan Dinsmore enjoy the newness of their Belleview home. They have just arrived from the Deep South, Terrebonne Parish, Louisiana, in fact. The tragedies that will cloud their lives are still several years away. All they know now is the joy of youth, of days along the “winding, rippling creek,” chasing snakes and crawfish, trampling “that ancient mint,” most fragrant when trod upon.”

Who was Julia Dinsmore and what brought her family to Boone County in 1842? The Dinsmore story begins over two hundred years ago in Wyndham, New Hampshire. James Dinsmore was born in 1790 to John and Susanna Bell Dinsmore. One of eight children, James was well educated. He followed in the footsteps of his beloved uncle, Silas Dinsmoor[sic]. Both graduated from Dartmouth College, James with an eye on a career in law.

Uncle Silas was a powerful influence in James’ life. It was Uncle Silas who would lead the way for James to settle in Boone County. Silas was a friend of George Washington. He spent the Christmas of 1798 in the company of the Washington family, just months before the death of the former president. Silas spent many years as an agent for the Choctaw Indians. Somewhere along the way, he settled in Cincinnati and eventually purchased land in Belleview for growing grapes.

James married Martha McComb of New York. Her parents, Jane and Alexander McComb, were also friends of George and Martha Washington. The McCombs rented their home to the Washingtons when New York had the momentary honor of serving as the nation’s capital.

James and Martha spent the first few years of their married life in the bowels of Louisiana. James and a business partner raised sugar and cotton. The South was hot; yellow fever and dysentery reigned. Sugar prices fluctuated. James found the plantation life an unstable

¹ Julia Dinsmore, “That’s For Remembrance” in *Verses and Sonnets*

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one. He corresponded with Uncle Silas, asking him to look for suitable farmland. In 1839, with encouragement from Silas, James purchased 270 acres in Belleview from Israel Clore. The Dinsmore family moved into a newly built house in 1842. By this time, the family of James and Martha included daughters Isabella, Julia, and Susan.

The Dinsmore homestead was handed down through five generations. Its ownership did not leave the family until James' great-great grandchildren, Martha Ferguson Breasted and Jack Greenway, sold the family farm to the Dinsmore Foundation. It was the foresight of the Dinsmore family, which has saved the homestead for generations to come.

Setting the Stage:

The Dinsmore Homestead was placed on the National Register of Historic Places in 1977. It is a two and one-half story wood frame, weatherboarded five bay structure. The house was completed in 1842; it shows a transition from the Federal style to Greek Revival. The floor plan is Federal; the porch and windows are representative of Greek Revival. There are six over six-pane sash windows. The one-story portico has a patterned balustrade. There are three pane sidelights and a multi-paned transom at the front entrance.

Inside, the first floor is two rooms deep with a central hall. Upstairs, there are five bedrooms and a large gathering hall. The house is typical of a Northern Kentucky home of the time period.

The outbuildings at the Dinsmore Homestead are also significant. The log cabin, circa 1838, is a V-notched, single log pen structure. It is the oldest standing structure at the site.

The outbuildings in general are representative of agricultural settings in the period 1800-1865. Other kinds of typical farm buildings at Dinsmore are a smokehouse, chicken coop, wine cellar, privy, barns, and hog slaughtering house.²

Early settlers often built lean-to structures, partly built into a hillside. The next "house" was often a single pen structure with no windows—a log cabin. A cabin could be a twelve feet square or a rectangle up to twenty by twenty four feet. There was usually no weatherboarding or window glass. The chimney was built of stone and mud. The log cabin was meant to be temporary housing, to serve its purpose for a couple of years.

² William MacIntire in *The Pioneer Log House in Kentucky*, p. 3

Locating the Site:

The Dinsmore Homestead is located six and one-half miles west of the Boone County Courthouse in Burlington. It is on Kentucky 18 (Burlington Pike).

Physical address:
5656 Burlington Pike
Bellevue Bottoms

See the map to observe the relationship of the Dinsmore Homestead to Middle Creek Road and Boone Cliffs, Bellevue, and the Ohio River.

Visiting the Site

Email address: info@dinsmorefarm.org
Web Site: www.dinsmorefarm.org
Telephone: (859) 586-6117
Call ahead for school program scheduling.
Education Director: Jordan O'Rylee

*Note: An on-site architectural element can be added to the school program upon request.

LESSON # 7

KERA STANDARDS

Essential Question:

Why is it important for me to learn and understand the geography and history of Boone County?

Guiding Questions:

What brought the Dinsmore family to Boone County?

How does the Dinsmore Homestead represent two kinds of early Boone County architecture?

How did the Dinsmore family modify their environment to meet their needs?

Student Objectives:

Academic Expectation: 2.19 Students recognize and understand the relationship between people and geography and apply their knowledge in real life situations.

Core Content for Assessment:

SS –E 4.3.2 People usually settle where there are adequate resources to meet their needs.

SS – E 4. 4.2 People adapt or modify the environment (e.g. produce food, build shelter, make clothing) to meet their needs.

SS – E 4. 4.4 People may have different perspectives concerning the use of land (e.g. building development, cutting down forests for farming).

* Refer to the lesson binder and the student booklet for architectural terms and illustrations. There are multiple pages.

LESSON # 7

ACTIVITIES (INQUIRIES)

Whole group: Present the six-minute Dinsmore video. Provide three or four pointed questions prior to the students' viewing.

Guided Reading: Students use the student booklet to discover why the Dinsmores came to Boone County from Louisiana, how the Dinsmore homestead or farm was like other Kentucky farms, and how the Dinsmore family history relates the history of Kentucky and the United States.

Pairs (Learning Clubs): Guide students working in pairs to gather facts on Dinsmore as a representative Boone County farm of the 19th century. Use the newspaper articles in the lesson binder. (M.I. interpersonal)

Hands-On (Being There): Visit the Dinsmore Homestead. See the school program information in the lesson binder. (M.I. bodily/kinesthetic)

Mini-lesson: Architectural features of the Dinsmore main house and log cabin. Use the architectural vocabulary and information in the lesson binder as well as the architectural data in *Setting the Stage*. The students have the vocabulary in their student booklet. *The Pioneer Log House in Kentucky* is another excellent resource in the lesson kit.

Writing: Compare the architectural features of the main house (at Dinsmore) to the human body (e.g. face-facade).

Guided Instruction with Manipulatives: The students will devise a way to show geometric figures in architecture (e.g. 3"x 5" drawing, toothpicks, straws). Design two and three-dimensional models that reflect architectural styles at Dinsmore. (M.I. bodily/kinesthetic; spatial)

Hands-On (Being There): Use the Dinsmore main house for an architectural scavenger hunt. List these on a chart divided into a three by five block grid. (M.I. spatial)

Architectural Scavenger Hunt

Put each of these features in one of the blocks on a three block (high) by five block (wide) grid. Note where that feature is found on the Dinsmore façade.

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1. a pattern
2. a set of six window panes
3. sidelights
4. a column
5. a portico
6. an example of change
7. a gable
8. a rectangle
9. something bold
10. something that represents strength
11. something that protects
12. an example of symmetry

Hands-On (Being There): [In the classroom, after the trip to Dinsmore]. Using a continuous length of string, replicate the inside perimeter measurements of the log cabin. How many students can stand comfortably inside the length of string? Extend this activity to estimate the placement of settlers' furniture and belongings. (M.I. spatial)

Putting It All Together

Transactive writing: To be written on-site at the Dinsmore Homestead.

*Focus on the geography of the area. Look at the hills behind and to the side of the house. Visually take in the outbuildings, meadows, and the ravines around the grounds. Why was the geography of the farm and its surroundings important in the development of the homestead? Include the importance of the Ohio River and the river valley in your response.*³

³ David Bishop, PhD. , *Digging Through Dinsmore*, writing workshop, June, 1999

LESSON # 7

Lesson Kit:

Lesson Binder:

- Lesson Guide
- Maps of Dinsmore Farm and Surrounding Area
- Graphic Organizers
- Unit Culminating projects
- Unit Appendices
- 1 Copy Student Booklet Reading Materials
- Brochures: Calendar of Events, School Program
- Photographs of Dinsmore Homestead
- Dinsmore Floor Plan
- Dinsmore Farm Layout
- Newspaper Articles on Dinsmore Homestead
- Dinsmore Genealogy
- Primary Documents:
 - 1839 Deed, Israel Clore to James Dinsmore
 - James' Will, written August 4, 1867
 - Inventory of James' Estate
- Teacher Study Guide, 1992
- Architectural Information

Additional Resources in the Lesson Kit:

- Video: Dinsmore Homestead
- Teacher Resources:
 - *Boone County Recorder*, 1930 Historical Edition
 - *Log Cabin Pioneers*, Wayne Erbsen. Native Ground Music, Inc., Asheville, NC: 2001
 - *Northern Kentucky Heritage Magazine*, volume V, # 1, Autumn/Winter, 1997-98
 - *The Pioneer Log House in Kentucky*, William MacIntire. Kentucky Heritage Council, Frankfort, KY: 1998, Two copies
 - *Verses and Sonnets*, Julia Stockton Dinsmore. Doubleday Books, 1910. Reprinted by the Dinsmore Homestead Foundation, 1991
- Two Laminated Maps

Listing of Additional Sources:

- *Architecture in Education*, Marcy Abhou, Editor. Foundation for Architecture. Philadelphia, PA: 1986
- *Digging Through Dinsmore*, David Bishop, PhD., Northern Kentucky University. Writing Workshop for Teachers, Dinsmore Homestead, June, 1999
- *National Register Nomination*, 1979, Files of the Boone County Historic Preservation Review Board.

LESSON # 8

FARMING: North Bend, East Bend, and Constance

Lesson Preview:

Students will recognize the relationship between Boone County farmers and the Ohio River valley cropland. Students will also identify ways that Boone County farms have changed. They will:

- **Read** to learn about farming in Kentucky and Boone County.
- **Use** technology to show change over time.
- **Analyze** photos of Boone County farms.
- **Interview** a Boone County farmer.

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LESSON # 8

Introduction:

Bob Rogers was buried today. He was laid to rest where he was born seventy-seven years ago, near the banks of the Ohio.

Who was Bob Rogers and why should it matter that he lived and died? He was a farmer, a man of the earth, who loved the fertile ground of the river bottoms almost as much as he loved his family. He lived his life in harmony with the words of Ecclesiastes, “To every thing there is a season, and a time for every purpose under the heaven; a time to be born and a time to die; a time to plant and a time to pluck up that which is planted”. Bob Rogers was attuned to the seasons, the times to plant and the times to reap what had been planted. He was, as his ancestors two hundred years before him, a steward of the Ohio River valley in Boone County. His fields yielded bumper crops of corn, tobacco, and watermelon, just to name a few. One of his greatest joys was to hop in his pickup truck and drive the fields of his farm. Bob was, pure and simple, a farmer.

Bob Rogers was buried today. He was laid to rest where his life began, near the banks of the Ohio.

(taken in part from the sermon of Reverend Steve Alford, Belleview Baptist Church, 3 July, 2001)

Setting the Stage:

“It defies reason that the Commonwealth of Kentucky has for so long and so fervently boasted of its agricultural heritage, yet has no published history of the industry. Much of the story of agriculture still lies buried in original records, government reports, statistical tables, and obscure essays. Earlier authors of Kentucky histories either ignored the subject or gave it short shrift as being too commonplace. Nevertheless agriculture, economically and culturally, has been central to Kentucky’s past, not only in the era of recorded history but even far back into the dim age of Paleolithic human presence in the region. The earlier history is eloquently documented in the generous finds of pipes and cultivating implements on the surface of the land and in excavations of burial places and kitchen areas.”¹

Farming has been the center of Kentucky’s past, reaching beyond the days of Euro-American settlers and back into the cultures of early native peoples whom we call Indians. Kentucky was a paradise, drawing pioneers to its fertile soil. Corn became the “mother” crop for 19th century farmers. Corn, a basic necessity, was the “link between the farmer and his animals, the farmer and the land”.²

¹ Dr. Thomas Clark in *The Kentucky Encyclopedia*, p.6.

² Dr. Thomas Clark in *Agrarian Kentucky*, p.26.

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Boone County farmers depended on access to the Ohio River. There was a bond between Kentucky farms and flatboats. Hogs, cattle, and horses were floated down river on flatboats as commerce on the river grew rapidly. Farming was in every corner of country towns. It was inseparable from the church, cemetery, store, doctor's office, school, and post office.³ The country store was a gathering place for farmers to trade goods and gossip, and to talk farming.⁴

Today, however, the "traditional family farm" is an endangered species. Technology has dramatically changed the nature of agriculture. The number of family-owned farms in Boone County has decreased from 962 farms in 1982 to 691 farms as of 1997.⁵

³ *Kentucky Historic Farms*, pp. 25-26

⁴ Clark in *The Kentucky Encyclopedia*, p. 56.

⁵ Telephone interview with Jerry Brown , Boone County Agricultural Agent. July 6, 2001

LESSON # 8

KERA STANDARDS

Essential Question:

Why is it important for me to learn and understand the geography and history of Boone County?

Guiding Questions:

1. Why do the river bottoms provide good cropland?
2. Why are family farms disappearing in Boone County?

Student Objectives:

Academic Expectation: 2.19 Students recognize and understand the relationship between people and geography and apply their knowledge in real life situations.

Core Content for Assessment:

SS –E 4.3.2 Humans usually settle where there are adequate resources to meet their needs.

SS -E 4. 4.4 People may have different perspectives concerning the use of land.

Academic Expectation: 2.20 Students understand, analyze, and interpret historical events, conditions, trends, and issues to develop historical perspective.

Core Content for Assessment:

SS –E 5.2.3 The way we live has changed over time for Kentuckians and Americans because of changes in many areas.

LESSON # 8

ACTIVITIES (INQUIRIES)

Whole Group: Show the footage of Hempflings' orchards in the North Bend Bottoms. Students should discover why the river bottoms provide good cropland, especially for potatoes and fruit trees. (The video is the second segment of the Rabbit Hash KET video, in the learning kit).

Read the 1930 *Boone County Recorder* to gain a perspective of farming in Boone County. Read the farming article in the student booklet. Although the setting is Bracken County in northeastern Kentucky, there are generalities that relate to Boone County.

Technology: Students generate a graph showing the change in the number of family farms in Boone County from 1972 to 1997 (this information is recorded in five year increments; the county agricultural agent, Jerry Brown, has the data at the Cooperative Extension Office) Suggestion: Use a pictograph format with each farm symbol representing 100 farms. The number of farms for each five years should be rounded to the nearest one hundred. (M.I. logical/mathematical)

Hands-On (Being There): Students use photos from the files of the Historic Preservation Review Board, of farmers and farm scenes of East Bend and North Bend Bottoms, and Constance, and the photo-history of Boone County by Susan Cabot and Michael Rouse. Students use a series of questions listed on the Photo Detectives sheet, found in the lesson binder or the teacher can modify the list of questions as needed.

Oral Communication: Interview a Boone County farmer. Purpose: to investigate how farming has changed in Boone County over the last twenty to fifty years. What are some obstacles to keeping a family farm? What are the changes in the types of crops grown? What kinds of outbuildings are on the farm, why were they built? See also the oral history interview questions in the lesson binder. Students give an oral summation of the interview in class. A recorder (teacher or student) tracks conclusive statements on chart paper, e.g. why farmers are selling land to developers, how farming techniques and equipment have changed over time. (M.I. verbal/linguistic)
This could also become a technology project, a video interview.

Hands-On (Being There) *In the Good Old Days*. Students compare chores of their lives with those of children fifty or so years ago. (M.I. interpersonal; verbal/linguistic)

In the Good Old Days

Students are to talk with their grandparents or great-grandparents or an elderly relative or neighbor before this lesson. The students are to come prepared with childhood stories and a list of chores for children in the “good old days,” especially as those chores relate to agricultural life. These are compared through a graphic organizer. Next, the class names agricultural activities they have participated in (perhaps on their visit to the Dinsmore Homestead). The teacher lists these on the board or on chart paper. Each child copies the list. They then survey each their classmates. When the teacher says “Go,” the students move around the room to find students who have done a particular farm activity; for example, a classmate who has milked a cow or helped to set tobacco. The object is to find a variety of students who have participated in a variety of farming chores. The purpose of the combined activities is to gain an understanding of how lifestyles have changed.⁶

Lesson Connections:

Pairs (Learning Clubs): *Build a Barn*: students work in pairs to design a barn with listed specifications:⁷ (M.I. spatial; logical/mathematical)

BUILD A BARN

1. Must be able to store hay on the top floor
2. Has an easy way to get hay from the wagon to the hayloft
3. Needs to have a place, not inside the barn itself, to put cattle in hot or rainy weather
4. Must have a place to store tools
5. Needs to have a few stalls for livestock.

⁶ 1995 *Project Seasons*, Shelburne Farms, Shelburne, VT

⁷ Shelburne Farms

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Compare and Contrast Ft. Ancient farmers and Boone County farmers, 1799 to present day.

Research flooding and how it affects the soil of the river bottoms.

Investigate the presence of family cemeteries on farms and reason why they are there. What happens to family cemeteries when farmland is sold for development?

Putting It All Together:

Open Response: The students use their computer-generated graph of the changes in family farming from 1972 to 1997. Prompt:

You have interviewed a farmer and have shared your interview data with your classmates. We have listed reasons showing how and why farms in Boone County have changed since 1972. Write three paragraphs. In the first one, describe your graph. Show in words what your graph tells us about Boone County farms. The second paragraph should show how farms have changed since 1972. Your final paragraph should conclude why farms have changed.

LESSON # 8

Learning Kit:

Binder:

- Lesson Guide
- Photographs
 - African American Farmer
 - Cutting Hay
 - Piatt's Landing
 - Loading Tobacco at Kirtley Landing
 - Maria Kirtley, riding Big Ted the hog

- Map, East Bend Bottoms area
- Map, North Bend Bottoms, Constance
- Graphic Organizers
- Unit Culminating Projects
- Unit Appendices
- 1 Copy Student Booklet Reading Materials
- Newspaper Article, "Boone Studies Plan to Save Farms", Luke Saladin in *The Kentucky Post*, July 18, 2001
- Newspaper Article, "Sprawl Gobbling Up Farms", Courtney Kinney in *The Kentucky Post*, July 25, 2001.
- Boone County Will, listing Farm Inventory, 1799-1816 Courthouse Records
- Newspaper Photo, Cave Johnson House
- Activity and Inventory Sheet *In the Good Old Days*
- Activities:
 - *Starting From Scratch*
 - *The Farm Web Game and Build a Barn*
 - *From Farm to You*
 - *Butter Making*
 - *Farm Barnyard*
 - *A Cow Relay*
 - *From Grass to Milk*
 - *From Sheep to Sweater*

- *Northern Kentucky Heritage Magazine*; Volume IV, #1, Autumn /Winter 1996-1997
- *Northern Kentucky Heritage Magazine*; Volume VI, #1, Fall/Winter, 1998-99

- Teacher Resource Book, *Agricultural and Domestic Outbuildings in Central and Western Kentucky, 1800-1865*; Rachel Kennedy and William MacIntire. Kentucky Heritage Council, 1999

Additional Resources in the Kit:

- Copy of the *Boone County Recorder*, 1930 Historical Edition
- Teacher Resource Books;
 - *Early Farm life*, Lise Gunby. Crabtree Publishing Co., NY:1992
 - *Hooray For Orchards*, Bobbie Kalman. Crabtree Publishing Co., NY: 1998
 - *Images of America, Boone County*, Susan Cabot and Michael Rouse. Arcadia Publications, Charleston, SC: 1998
- Two Laminated Maps

Listing of Additional Sources:

- *Agrarian Kentucky*, Dr. Thomas Clark. University Press of Kentucky, Lexington, KY: 1977
- *Early Farm Life*, Lise Gunby. Crabtree Publishing Co., NY: 1983
- *Kentucky Historic Farms: 200 Years of Kentucky Agriculture*, Dr. Thomas D. Clark, Dr. Durwood Beatty, Cardell Jarratt, Christine Amos, and Karen Hudson. Turner Publications, 1994
- *Project Seasons*, Shelburne Farms, Shelburne, VT: 1995
- *The Kentucky Encyclopedia*, John E. Kleber, Editor-in –Chief. University Press of Kentucky, Lexington, KY: 1992

LESSON # 9

WATER TRAVEL

Lesson Preview:

Students will recognize changes in modes of transportation on the Ohio River in Northern Kentucky and Boone County. They will:

- **Read** to gain a perspective of life along the Ohio River during the steamboat era.
- **Research** 19th century water vessels on the Ohio River.
- **Compare** those kinds of water vessels.
- **Create** a skit and props based on group research and **role-play** according to their group project.

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<i>Lesson Kit, Bibliography</i>	<i>L 9.7</i>

LESSON # 9

Introduction:

The first steamboat on the Ohio River made its appearance the same year of the New Madrid earthquake. The *New Orleans* left Pittsburgh headed for Louisville, Kentucky. A coal-burning engine powered this marvel among river vessels. The noise and the fire emanating from the boat cause considerable excitement among the river towns. The residents of Louisville wondered if the long-tail comet, which had been seen nightly, had finally streaked to earth. Or perhaps the Shawnee leader, Tecumseh, had come for one last fiery raid.

Setting the Stage:

“America’s rivers were its first principal highways. They needed no building, grading, or paving to make them useful carriers of people and goods. Though they could occasionally turn wild and dangerous, they did not require constant repair. Rivers provided an inexpensive, efficient means of transportation.

These water paths were dotted with boats of all descriptions. First came the canoes of Native Americans. Canoes were adapted by European immigrants for exploration and trade. Soon, larger craft were plying the waters as keelboats, flatboats, barges, and the kings of the rivers, steamboats, became part to the American scene.”¹

Several kinds of watercraft carried cargo and passengers on the Ohio River during the nineteenth century – keelboats, flatboats, and steamboats. Keelboats were cargo vessels. They were pointed at both ends and could navigate the river both down and upstream. Keelboats were about forty feet long, nine feet wide, with a small attached cabin for the crew and cargo. Some had sails, most others were moved along by poles or oars. In the late 18th century, shipment of goods by keelboat was safer and cheaper than sending overland by wagon.² Keelboats were navigated upriver by means of sailing, poling, and rowing. The exhausting work of propelling a keelboat promoted the image of rough- and-tumble boatmen and legends such as Mike Fink, “half-man, half-alligator”.³

For those who floated down river on flatboats, it was easy to travel down but very difficult to attempt a return trip. It would take thirty days to go up river from Cincinnati to Pittsburgh. A long pole that was pushed into the muddy river bottom aided flatboats.⁴ Abraham Lincoln, as a young man, worked loading flatboats with agricultural produce and other cargo.

¹ Images From Ambler; files of the Dinsmore Homestead

² *The Kentucky Encyclopedia*, p. 484

³ Ambler

⁴ Don Demming, *Stampsboats* video

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Flatboats could be as small as a one-bay garage (12' by 20') and as large as a sizeable ranch-style home of today (25' by 60'). These kinds of vessels were easily constructed and just as easily dismantled at the journey's end.⁵ Families, furniture, and farm goods were crammed onto the flatboats. More than one million people settled in the Ohio Valley by way of these flat-bottom boats.⁶

Stewart Berkshire, a Petersburg native, related the following:

“Flatboats were the only means of getting products to market, and I remember how we were charmed by the tales of our grandfather Stewart, as he told us in great detail how, as a boy on his father's farm, he had made one or more trips to New Orleans. They constructed the boats from lumber from their farm, and after loading it with hams, bacon, potatoes and other farm products, they floated it down to New Orleans. Instead of coming back afoot, he told of buying horses that would be useful on the farm, and after selling the produce and the boat, made their way back home on horseback over such roads as existed at the time”.⁷

Initially, steamboats were not much more than flatboats with a steam engine. They were constructed to navigate the shallowest waters. In 1811, the year of the New Madrid earthquake, Captain Nicholas Roosevelt piloted the steamboat, *The New Orleans* from Ft.Pitt (Pittsburgh) to New Orleans. This steamboat had a sidewheel. People along the Ohio River were shocked and worried by the fire and noise emanating from the boat. Captain Roosevelt assured them that the boat was just “letting off a little steam”.⁸ When *The New Orleans* reached New Madrid, Missouri, the earthquake had hit; the town was on fire. This new invention, the steamboat, was blamed by some for the traumatic natural occurrence.⁹

Commerce on the river expanded almost exponentially. The Ohio River became the Interstate-75 of the waterways. As the Northwest Territory expanded, so did the economy of the United States. The steamboat connected the plantations of the Deep South to the industrial centers of the North. Ice cream and southern fried chicken were no longer foods solely for the South. “Cotton became king; the steamboat was the queen.”¹⁰

⁵ Gail King in *The Kentucky Encyclopedia*, p.324

⁶ King, p. 324

⁷ Stewart Berkshire, *Reminiscences*; from the files of the Boone County Historic Preservation Review Board

⁸ Demming

⁹ Demming

¹⁰ Demming

LESSON # 9

KERA STANDARDS

Essential Question:

Why is it important for me to learn and understand the geography and history of Boone County?

Guiding Questions:

- 1.What can old photographs tell us about transportation on the Ohio River?
- 2.How did steamboats improve the modes of transportation on the river?
- 3.How did changes in the river affect Boone County farmers? (How did they get their goods to market?)
- 4.What does the steamboat era tell us about life on the Ohio River in the 19th century?

Student Objectives

Academic Expectation: 2.19 Students recognize and understand the relationship between people and geography and apply their knowledge in real life situations.

Core Content for Assessment:

SS-E 2.1.2 Elements of culture (language, music, art, dress, food, stories, folktales) serve to define specific groups and may result in unique perspectives.

SS-E 4.2.1 Every place is unique and can be described by its human and physical characteristics (e.g. landforms, climates, *water*).

SS-E 4.4.3 The physical environment both promotes and limits human activity (rivers as transportation routes).

LESSON # 9

ACTIVITIES (INQUIRIES)

Read in the student booklet materials on keelboats, flatboats, and steamboats.
Read the student book in the lesson kit, *Mark Twain and the Queens of the Mississippi*.

Guided Instruction: The teacher prepares focused questions on travel on the Ohio River. Present the “Always a River” video from the lesson kit. It does have a brief segment on Maysville that can be omitted. The video shows steamboats and views of the Ohio River; also presents some history of the Ohio River.

Graphic Organizer: Compare the advantages and disadvantages of flatboats and steamboats.

Research/Writing: Students research steamboats and different kinds of water vessels along the Boone County riverfront.

Group One: Keelboats and the Mike Fink legend

Group Two: Flatboats and Abraham Lincoln

Group Three: Steamboats- physical structure

Group Four: Steamboat Culture- clothing of passengers, language and phrases

Each group creates a short skit and props for a final oral report on the group’s research. Props can include posters and murals. (M.I. interpersonal; verbal/linguistic)

Lesson Connections:

Listen to and learn one or two pieces of river theme music. (M.I. musical)

Putting It All Together:

Graphic Organizer: Students use a triple entry journal or learning log entry. The three headings are *keelboats, flatboats, and steamboats*. The students answer these questions for each heading: *What does each vessel tell us about transportation on the Ohio River in the 19th century? What does each vessel tell us about river culture? What common characteristics do the vessels share? What are the unique characteristics of each one?*¹¹

Websites:

<http://168.219.18/brk-hist/rivtraff.htm>

¹¹ Kris Flynn, triple entry graphic organizer in *Graphic Organizers*, p. 58

LESSON # 9

Lesson Kit:

Lesson Binder:

- Lesson Guide
- Photo of The Ohio River at Constance
- Graphic Organizers
- Unit Culminating Projects
- Unit Appendices
- 1 Copy of the Student Booklet Reading Materials
- Ferry Bond, 1813
- *Northern Kentucky Heritage Magazine*, Volume VII, # 1, Fall/Winter, 1999

Additional Resources in the Kit:

- Three Tall Stacks Teacher Resource Books
- Student Trade Book, *Mark Twain and the Queens of the Mississippi*, Cheryl Harness. Simon & Schuster, NY: 1998
- Copy of the *Boone County Recorder*, 1930 Historical Edition
- *Travel in the Early Days*, Bobbie Kalman & Kate Calder. Crabtree Publishing Co., NY: 2001

Listing of Additional Sources:

- *A History of Transportation in the Ohio Valley*, Images of Ambler. From the files of Dinsmore Homestead
- *Graphic Organizers*, Kris Flynn. Creative Teaching Press, Cypress, CA: 1995
- Reminiscences of Stewart Berkshire of Petersburg, From the files of the Boone County Historic Preservation Review Board
- *Steamboats*, video narrated by Don Demming; available through the Inter-Library Loan Program; kept at Campbell County Public Library
- *The Kentucky Encyclopedia*, John E. Kleber, Editor-in-Chief. University Press of Kentucky, Lexington, KY: 1992

LESSON # 10

THE RIVER AND FREE ENTERPRISE

Lesson Preview:

Students will recognize changes in lifestyles and ways of making a living in Boone County. They will:

- **Read** to gain a perspective of 19th century Boone County businesses.
- **Compare** 19th and 21st century needs and wants.
- **Plan and Participate** in a day of bartering.

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<i>Lesson Preview</i>	<i>L 10.1</i>
<i>Introduction</i>	<i>L 10.2</i>
<i>KERA Standards</i>	<i>L 10.5</i>
<i>Activities, Assessment; Websites</i>	<i>L 10.7</i>
<i>Lesson Kit, Bibliography</i>	<i>L 10.9</i>

LESSON # 10

Introduction:

“The Ohio River has played an important role in the development of Northern Kentucky.” (John Morgan of KET). Another player in that development is the Anderson Ferry. The ferry has been operating at Constance, in northern Boone County, since 1817. Richard Kottmyer (now deceased), a fourth generation ferry –owner and operator, assisted his great-grandfather, grandfather, and father 365 days a year in rain, fog, and snow. “The only thing that stops the boat is ice,” said Mr. Kottmyer in a 1985 KET video interview.

The ferry business has survived for nearly two centuries because it has changed with the times, from horsepower to steam power to diesel electric engines. Mr. Kottmyer stated that in this age of hustle and bustle, harried business people “get their most pleasure riding a ferry boat.” The Anderson Ferry is an excellent example of a river-based business that still thrives today because it has met the challenge of change.

Setting the Stage:

Types of businesses in early settlements in the United States:

Apothecary, bakery, blacksmith, bookbinder, boot-maker, butcher, cooper, harness maker, millinery, printer, silversmith ¹

Types of businesses in the nineteenth and twentieth centuries along the river in Boone County:

Bellevue:

Grain and livestock sales
Lumber and coal
Basket factory
Blacksmithing
Shipbuilding

North Bend Bottoms and Constance:

Orchards
Ferry
General stores
Hotel
Wagon making

¹ E. Stenson in *Early Settlers*, p. 73

Coal supplier
Druggist
Shoemaker
Blacksmith

Rabbit Hash:

Ferry
General store
Blacksmith
Creamery
Ironworks
Doctor

East Bend Bottoms:

(Hamilton Landing)

General store
Tobacco sales
Plow manufacturer
Hotel

Petersburg:

Distillery
Ferries
General Store
Inn

Zadoc Cramer reported the transport of these goods on the Ohio River in 1811:

“COMMERCE OF THE OHIO”

“We have been obligingly favoured with a transcript from the books of Messrs. Nelson, Wade, and Greatsinger, for two months, viz. from Nov. 24, 1811, to Jan.24, 1811, 197 flat, and 14 keel boats, descended from the falls of Ohio.”

18, 611 bls. flour	59 do. soaps
520 do. pork	300 do. feathers
2, 373 do. whiskey	400 do. hemp
3, 759 do. apples	1,484 do. thread
1,085 do. cider	154,000 do. rope yarn
721 do. royal	681,000 do. pork in bulk
43 do. wine	20,784 do. bale rope

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323 do. peach brandy	27,700 yds. bagging
46 do. cherry ounce	4,619 do tow cloth
17 do. vinegar	479 coils tarr'd rope
143 do. porter	500 bushels oats
62 do. onions	1,700 do. corn
20 do. gingsang	216 do. potatoes
200 groc. bottl'd porter	817 hams venison
260 gals. Seneca oil	4,609 do. bacon
15,216 lbs. butter	14,300 tame fowls
180 tallow	155 horses
64,750 do. lard	286 slaves
6,300 do. beef	18,000 feet cherry plank
4,433 do. cheese	279,000 do. pine do.

ALSO

A large quantity of potter's ware, ironmongery, cabinet works, shoes, boots, and saddlery- The amount of which could not be correctly ascertained.

Taken from the Pilot's b[ook] at Louisville, Ken. This 8th Feb. 1811. By Ja[unreadable]
Crum. ²

² Zadoc Cramer in *The Navigator*, p. 295

LESSON # 10

KERA STANDARDS

Essential Question:

Why is it important for me to learn and understand the geography and history of Boone County?

Guiding Questions:

1. What kinds of goods and services were directly connected to the Ohio River?
2. What kinds of needs and wants were like those of today?
3. How was the river important in the movement of goods?

Student Objectives:

Academic Expectation: 2.18 Students understand economic principles and are able to make decisions that have consequences in daily living.

Core Content for Assessment:

SS – E 3. 1.2 Consumers use goods and services to satisfy economic wants and needs.

SS – E 3. 2.3 The U.S. economic system is based on free enterprise where businesses seek to make profits by producing or selling goods or services.

SS – E 3. 3.2 The direct exchange of goods and services is called barter. Money has generally replaced barter as a more efficient system for exchange.

SS – E 3. 4.3 Producers who specialize create specific goods or services.

Academic Expectation: 2.20 Students understand, analyze, and interpret historical events, conditions, trends, and issues to develop historical perspectives.

Core Content:

SS - E 5.2.3 The way we live has changed over time for Kentucky and America because of changes in many areas.

Vocabulary

Economics: the study of how we produce and distribute wealth; includes the management of natural resources

Good: any item that can be bought or sold

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Service: any action that one person or group does for another in exchange for payment

Resource: anything used to produce a good or service

Supply: the number of items available for sale

Demand: the number of people who want an item

Wants: what we desire; not necessary to survive

Needs: needed for human survival

Buyer: person who purchases goods or services

Seller: person or company that has goods or services for sale

Consumers: person who uses goods to satisfy needs and wants

Producer: creates goods or services

Barter: to trade by exchanging goods or services rather than use money

Profit: monetary gain

LESSON # 10

ACTIVITIES (INQUIRIES)

Read the *Boone County Recorder* 1930 Historical Edition to discover more about Boone County businesses in the 19th century and early 20th century.

Cooperative Groups (Learning Clubs): Students work together to form a classroom business that pertains to the needs or goals of the school.

(M.I. interpersonal; logical/mathematical)

Graphic Organizer: Make a T-Chart, which compares 19th and 21st century wants and needs, focused on personal hygiene products or create a T-chart of needs and wants today, e.g. car, snow shovel, television, calculator, video games, watch.

Hands-on (Being There): Plan a day of bartering. The students bring in the goods they want to trade, e.g. comic books, CDs or cassette tapes, stamps, stickers, Barbies or other toys. They set up their own bin of goods with a fair trade exchange list, e.g. trade two Cabbage Patch dolls for one Tie-Dye Swirl Barbie. There is also a daily news box and a post card center, a table, chairs, and a checkerboard (a general store setting). The students rotate; one-half of the classroom moves to the trading bins while the other students stay with their goods, then switch rotations. After the bartering, these questions are posed to the students:

Why was barter used instead of money?

What kinds of things did they barter with and for?

What did they do if the items were not of equal trade value? ³

(M.I. bodily/kinesthetic; interpersonal; verbal/linguistic)

Hands-on (Being There): Purchase items at an in-class store using a 19th century budget. Use the printed currencies from the 19th century (available in the lesson kit).

Lesson Connections:

Research the tributaries of the Ohio River in Boone County and the reasons that mills were established along those tributaries, e.g. the Crisler-Gulley Grist Mill on Gunpowder Creek. (refer to the packet in the lesson binder). The research is reported to the class.

Research the effects of flooding on businesses in Boone County river towns, e.g. Rabbit Hash. Report to the rest of the class.

³ E.Stenson, pp. 69-70

Putting It All Together:

Open Response: Prompt:

Consider the kinds of businesses that exist along the river today—marinas, general stores, water delivery, gravel quarries, recreational sites. List three to five new businesses that could be created in a river town. Choose one that you could start. Answer these questions:

Will it provide goods or services? Is there a demand for your business?

*What would you charge? Will there be an exchange of money or will you use a barter system? Will your business provide needs or wants? Where will you locate your business?*⁴

Websites:

<http://www.frbsf.org/currency/civilwar/fractional/s132.html>
(19th century currency)

⁴ Barbara Adams in *Social Studies Made Simple*, p.59

LESSON # 10

Lesson Kit:

Lesson Binder:

- Lesson Guide
- Photos:
 - Two of Anderson Ferry
 - Crisler-Gulley Mill
 - Zimmer Store in Constance
 - Petersburg Distillery (or what is generally thought to be the distillery)
 - Kurtz Store in Petersburg

- Graphic Organizers
- Unit Culminating Projects
- Unit Appendices
- 1 Copy of Student Booklet Reading Materials, Lesson # 10
- Laminated 19th Century Currency
- Crisler-Gulley Grist Mill Exhibit Teacher's Guide

Additional Resources in the Kit:

- 2 Copies of the *Boone County Recorder*, 1930 Historical Edition
- Teacher Resource Books:
 - *Economics and You*, Kristen Girard Golomb. Carson-Dellosa, 1996
 - *Images of America: Boone County*, Susan M. Cabot and Michael D. Rouse. Arcadia Publishing, Charleston, SC: 1998
 - *The General Store*, Bobbie Kalman. Crabtree Publishing CO., NY: 1997
 - *The Gristmill*, Bobbie Kalman. Crabtree Publishing Co., NY: 1990

Listing of Additional Sources:

- *Early Settlers*, E. Stenson. Crabtree Publishing Co., NY: 1983
- *Kentucky State Gazette*, 1865, 1869, 189-1880,1883-84,1895-1896; From the files of the Boone County Historic Preservation Review Board
- *Social Studies Made Simple*, Barbara Adams. Frank Schaffer Publishing, Torrance, CA: 1997
- *The Navigator*, Zadoc Cramer. Cramer, Spear, Eichbaum, Pittsburgh, PA: 1811, Lithographed by Young and Klein, Inc., Cincinnati, OH: 1979

LESSON # 11

SLAVERY

Lesson Preview:

Students will use primary and secondary sources to examine slavery in Boone County. They will understand that free enterprise was misused as a way to buy and sell human life, and demonstrate that they understand the concept of the Underground Railroad and its connection to the Ohio River.

Students will:

- **Read** a variety of sources, through directed and independent reading.
- **Participate** in a panel discussion of slavery.
- **Compare and Contrast** the plight of Boone County slaves with latter-day child slaves in Africa.

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<i>Lesson Preview</i>	<i>L 11.1</i>
<i>Introduction</i>	<i>L 11.2</i>
<i>KERA Standards</i>	<i>L 11.4</i>
<i>Activities, Assessment; Websites</i>	<i>L 11.6</i>
<i>Lesson Kit, Bibliography</i>	<i>L 11.10</i>

LESSON #11

Introduction:

“Slavery was an economic system as dependent upon bankers in New York as upon plantation owners in the South... the justifications for slavery ran the gamut from biblical injunctions proposed by certain prominent southern preachers, to psychological ideas about the nature of ‘Africans’ to simple economic interest, convenience, and denial.”¹

In Boone County, there was very little of the kind of plantation life that characterized the Deep South. Boone County farms had perhaps two families of slaves. They served as field hands as needed; the remainder of their time was spent in household chores or refining their skills as artisans. A significant percentage of slaves were expert craftsmen, for example, coopers, wheel makers, and blacksmiths. Their skills were often hired out to the economic advantage of the slave master.²

The demand for slaves in Kentucky was low enough that the reproduction rate exceeded the demand. Slaves, then, were often sold out of the region.³

Setting the Stage:

Slavery, simply put, is the ownership of one human being by another. There were approximately four million slaves in the United States prior to the Civil War. It is estimated that by 1861, as many as 100,000 African Americans threw off the shackles of slavery and escaped to Canada.(source-Life on the Underground Railroad) There were 1,648 slaves in Boone County in 1860; 795 of whom were 16 years or older (Boone County Commissioner’s Book, 1860). For tax purposes, slaves were valued between \$300 and \$600. By comparison, land was valued at \$30 an acre. Slaves were extremely valuable in 19th century Boone County and were worth as much as twenty acres of good farmland.⁴

Abraham Lincoln challenged the view that slavery was “ a very good thing”. Lincoln responded that he had never heard of any man who wished to take advantage of this good thing “by being a slave himself”.⁵ It was quite the opposite. Slaves escaped at every opportunity.

¹ *Uncle Tom’s Cabin*, Introduction by Jane Smiley.

² Dr. Orloff Miller, phone interview, July 5, 2001.

³ Miller

⁴ Merrill Caldwell in *Slavery in Boone County*. Paper presented to the Boone County Historical Society, 1956.

⁵ Stephen Oates in *With Malice Toward None*, pp. 137-138

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The Ohio River was, in large part, a barrier to easy escape. Slave owners in Kentucky had good vantage points to watch over their “property.” There were few truly suitable places to cross over but slaves took the risk.⁶

What assistance existed for fugitive slaves? A secret system of hiding places and sympathetic helpers in the 19th century was named “The Underground Railroad.” Slaves used the North Star to guide their way to free states, then on to Canada.⁷

This is one account of how the Underground Railroad got its name:

Tice Davids escaped from his master’s farm in Kentucky in 1831. Tice ran to the Ohio River and swam across to Ripley, Ohio. A white man hid him. The master followed in a rowboat. He searched for hours, then finally gave up the hunt. When asked how Davids could have possibly disappeared so quickly, the reply was, “He must have gone off on some underground railroad.”⁸

A dramatic story of Boone County slaves in 1856 ended in tragedy. Margaret Garner was the twenty-two year old slave of Archibald Gaines of Richwood. On a frigid January night in 1856, Margaret, her husband, Robert, their four children, and Robert’s parents, fled the Gaines’ estate in a horse-drawn sleigh. Traveling the Covington-Lexington Turnpike (the Dixie Highway), the Garners arrived in Covington, abandoned the sleigh, and crossed the frozen Ohio River. They took shelter in the home of Margaret’s cousins, free blacks in Cincinnati. When a posse of men, including Archibald Gaines, surrounded the house the next day, Margaret slit the throat of her two-year-old daughter, Mary, and tried to kill the other three children. Incarcerated in Cincinnati for a month, Margaret told the jailer that she had been determined to kill all the children rather than return them to slavery because of the “cruel treatment on the part of the master, Archibald Gaines”. Margaret preferred death to slavery for herself as well.⁹

Margaret did not face the gallows as she hoped she would. The family members were returned to their respective owners (Robert and his parents were the “property” of James Marshall). Robert and Margaret were later sent to a plantation in the Deep South where Margaret died in 1858 of typhoid fever.¹⁰

⁶ *Life on the Underground Railroad*

⁷ *Life on the Underground Railroad*, p. 69

⁸ Raymond Bial in *The Underground Railroad*, p.31

⁹ Steven Weisenburger. *Modern Medea*, p. 85

¹⁰ Weisenburger

LESSON # 11

KERA STANDARDS

Essential Question:

Why is it important for me to learn and understand the geography and history of Boone County?

Guiding Questions:

1. What do I know about slavery in Boone County?
2. Why were slaves considered to be goods?
3. Why was free enterprise not “free” for slaves?
4. What was the Underground Railroad?
5. How was the Ohio River both a highway and barrier for slaves and slave owners?

Student Objectives:

Academic Expectations: 2.18 Students understand economic principles and are able to make decisions that have consequences in daily living.

Core Content for Assessment:

SS - E 3. 3.1 A market exists whenever buyers and sellers exchange goods and services. Prices and availability are determined by supply and demand.

Academic Expectation: 2.19 Students recognize and understand the relationship between people and geography and apply their knowledge in real life situations.

SS – E 4 .4.3 The physical environment both promotes and limits human activities.

Academic Expectation: 2.20 Students understand, analyze, and interpret historical events, conditions, trends, and issues to develop historical perspectives.

SS – E 5. 1.2 History can be understood by using a variety of primary and secondary sources and tools.

Vocabulary:

Abolitionist: an individual who wants to see slavery *abolished* or ended

Fugitive: a runaway; someone fleeing from law enforcement or from intolerable conditions

Fugitive Slave Law: the U.S. law of 1850 that allowed slave owners to recapture fugitive slaves that found refuge in free states; citizens were allowed to help in the capture

Slave: a person who is owned by another human

Underground Railroad: a system of hiding places and helpers who assisted fugitive slaves

Jim Crow: a negative or insulting term to describe African Americans and those who were sympathetic to Negroes (especially slaves)

Manumission: the act of freeing a slave

Chattel: personal property; a slave

LESSON # 11

ACTIVITIES (INQUIRIES)

Read: Students read from the student booklet, trade books from the learning kit, and any additional from the library. The students read for information on slavery in the United States, Kentucky, and Boone County. The students will discover facts on the Underground Railroad and its relationship to slave songs such as *The Drinking Gourd*. Students will also use the copies of the primary sources from the Boone County courthouse, e.g. Slave Book A, appraisals of the value of Boone County slaves.

Panel Discussion: The teacher divides the students into four groups or five groups, depending on the class size. Each group is given three or four statements on slavery. Opposing views are to be represented in each set of statements. Students discuss the statements in light of what they know about fair or equal treatment of humans. These are suggested statements: (M.I. verbal/linguistic; logical/mathematical; interpersonal)

1. "He who would be no slave, must consent to have no slave." (Abraham Lincoln)
2. "I have always hated slavery, I think as much as any abolitionist." (A. Lincoln)
3. "Let us have faith that right makes might." (A. Lincoln)
4. "Both North and South have been guilty before God." (Harriet Beecher Stowe)
5. "This country has already seen examples of men, formerly slaves, who have rapidly acquired property, reputation, and education." (H.B. Stowe)
6. "There is one thing that every individual can do, -- they can see to it that they feel right." (H.B. Stowe)
7. "Ye may whip me, starve me, burn me,-- it'll only send me sooner where I want to go." (Tom to Simon Legree, *Uncle Tom's Cabin*)
8. "Slavery is wrong and opposition to it is right. And right must never submit to wrong." (A. Lincoln)
9. "Many slaveholders boast of the love of their slaves. How it would freeze the blood of some of them to know what kind of love rankles in the bosoms of slaves for them!" (*Narrative of Sojourner Truth*)
10. "What a horrible affair; ought not abolitionism to be the more detested for placing those poor, unsuspecting creatures in so dangerous a position?" (reference to Margaret and Robert Garner's escape; *Abolitionism Unveiled*)
11. "If the slave escapes, the owner is legally empowered to pursue and recapture." (*Abolitionism Unveiled*)
12. "The Abolitionist is the same as the serpent who crept into the Garden of Eden and tempted Adam and Eve." (*Abolitionism Unveiled*)

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13. “The use of the Underground Railroad enables the Abolitionists to run off fugitive slaves with so much rapidity that most of the owner’s rights are destroyed in that way.” (*Abolitionism Unveiled*)

14. Archibald Gaines had a legal right to pursue his slaves into the state of Ohio. There out of “pure reverence” for the law, he adopted legal steps for the recovery of his slaves. The fugitive slaves, the Garners, were arrested by the “highest and most sacred authority”. (*Abolitionism Unveiled*, paraphrased)

15. “**Executor’s Sale,- Negroes!**- Agreeably to order of court, will be sold, on Tuesday, February 20, before the Court-house door, in the town of Washington, Kentucky, the following Negroes: Hagar, aged 60; John, aged 30; Ben, aged 21; Saul, aged 25; Albert, aged 14. Sold for the benefit of the creditors and heirs of the estate of Jesse Blutchford, Esq.” (*Uncle Tom’s Cabin*)

16. “Come here, Jim Crow,” said he. The child came up, and the master patted the curly head, and chucked him under the chin. “Now, Jim, show this gentleman how you can dance and sing.” The boy commenced one of those wild, grotesque songs common among the Negroes, in a rich, clear voice, accompanying his singing with many comic evolutions of the hands, feet, and whole body, all in perfect time to the music. (*Uncle Tom’s Cabin*)

17. The United States Government “was made by the white man, for the benefit of the white man, to be administered by the white man.” (Stephen Douglas)

18. James Dinsmore, as a young man, stated that he hated slavery. Yet, when he managed a sugar and cotton plantation, he owned slaves. He brought some of those slaves from the Deep South to Boone County in 1842.

Graphic Organizer:

Chart paper is used to start a running T-chart of this prompt for a double-entry learning log entry:

The Ohio River as a Highway for Slavery: As a Barrier for Slavery

As students read and investigate slavery, they record responses to the above prompt in their learning logs and on the class chart.

Putting It All Together:

Open Response:

Situation: You have read books, courthouse records, and the student booklet. You have discovered the harsh treatment of slaves in the 19th century in Boone County, Kentucky, and in other places in the United States.

Writing Prompt: *Read the following summary of an article on slavery in Africa today. Use the **Then and Now** graphic organizer to compare slavery in the 19th century with slavery today. Remember to include the buying and selling of goods in your response.*

There might be a hidden ingredient in the last chocolate candy bar you have eaten. The hidden ingredient might be slave labor.

Forty-three percent of the world's cocoa beans, the raw material in chocolate, come from small farms in Ivory Coast, a poor country in Africa. Some of the labor is done by boys as young as nine years old who are slaves.

These children clear fields, harvest the cocoa beans, and carry bags equal to their body weight. They work in the tropical heat, often shirtless. Many are underfed and overworked. Some are tied and beaten if they try to escape.

Slave traders look for children who seem to be lost and hungry. They promise the boys \$170 a year to work in construction. The traders sell the children to farm owners. Often, these are small farms, under ten acres. The slaves cut cocoa pods from the trees, scoop out the beans, spread them out to dry, then bag and load them into trucks.

There is poor law enforcement in Ivory Coast. There is very little to stop slave trading. Cocoa prices are low; some cocoa farmers say that they are forced to find the cheapest labor available. There may have been as many as 15,000 slave children working on cocoa farms in Ivory Coast in the past ten years.

Americans spend \$13 billion dollars a year on chocolate. Who knows where those cocoa beans were harvested? Think about that next time you bite into a candy bar.

Source: "Forced Child Labor Alive in Ivory Coast" Sudarsan Raghavan, Sumana Chatterjee, Tish Wells in *The Cincinnati Enquirer*, June 24, 2001

Lesson Connections:

Mapping: Given a starting point in Boone County, plan or map your way to the river. What directions would you use? Are you traveling by day or night? What obstacles will you encounter? (Teachers, do you want the student to assume that armed men and bloodhounds are pursuing them?). The directions should be written so that a classmate could follow them. (M.I. naturalist; spatial)

L 11. 9

Research: Kentucky enacted a law in 1833 that prohibited the importation of slaves into Kentucky. New residents had a sixty day grace period to bring slaves into the state; otherwise, they, along with all others who bought and sold slaves, faced heavy fines. This law was next to impossible to enforce, and in 1849, the law was repealed.⁹ See the primary document in the lesson binder, copied from Slave Book A, housed in the Boone County Courthouse. There are lists of names of those who attested that they had brought no slaves into Boone County and did not intend to purchase slaves while living in Boone County.

Create a wanted poster for a fugitive slave or a poster of a slave sale.

Visit: The Harriet Beecher Stowe House
2950 Gilbert Avenue
Cincinnati, Ohio (513) 632-5120

Listen to and Learn “The Drinking Gourd” song in music class. (M.I. musical)

Websites:

<http://www.ket.org/underground/history/kyunderground.htm>

⁹ Marion Lucas in *The Kentucky Encyclopedia*, p. 826.

LESSON # 11

Lesson Kit:

Lesson Binder:

- Lesson Guide
- Two Maps, Richwood, Richwood to Covington
- Graphic Organizers
- Unit Culminating Projects
- Unit Appendices
- 1 Copy of Student Booklet Reading Materials
- Kentucky and the Underground Railroad
- Abner Gaines' Will, 1839 (slaves as property)
- Benjamin Johnson's Will, 1819 (slaves as property)
- Slave Sale, 1817
- Slave Book A, Boone County Courthouse Records
- *Abolitionism Unveiled*, pp. 236-245
- Newspaper Article, 21st Century Slaves
- *Northern Kentucky Heritage Magazine*, Volume VI, #2, Spring/Summer, 1999

Additional Resource Materials in the Kit:

- Two Laminated Maps
- Video: *The Underground Railroad*, A& E Home Video, Triage, Inc. For the History Channel, 1995
- *Boone County Recorder*, 1930 Historical Edition
- *NightJohn*, Gary Paulsen. Bantam Doubleday Dell, NY: 1993. Sixteen Copies, Student Trade Book
- Other Student Trade Books:
 - *Frederick Douglass Fights for Freedom*, Margaret Davidson. Scholastic, NY: 1968
 - *If You Traveled on the Underground Railroad*, Ellen Levine. Scholastic, NY: 1988
 - *Picture Book of Frederick Douglass*, David Adler. Holiday House, 1993
 - *Picture Book of Harriet Tubman*, David Adler. Holiday House, 1992
 - *Rebels Against Slavery: American Slave Revolts*, Patricia & Frederick McKissack. Scholastic, NY: 1996
 - *Slave Dancer*, Paula Fox. Bantam Doubleday Dell, NY: 1973

L 11.11

- *Wanted Dead or Alive: The True Story of Harriet Tubman*, Ann McGovern. Scholastic, NY: 1965
- Teacher Resource Books:
 - *The Peculiar Institution: Slavery in the Antebellum South*, Kenneth Stampp. Random House, Toronto, 1956
 - *Twelve Years a Slave*, Solomon Northup. Louisiana State University Press, 1968

Listing of Additional Sources:

- *A Brief History of Slavery in Boone County*, Merrill Caldwell. A Paper Presented to the Boone County Historical Society, June, 1957
- *Abolitionism Unveiled*, Henry Field James (of Boone County). E. Morgan & Sons. Cincinnati, OH: 1856
- *Follow the Drinking Gourd*, Jeanette Winter. Dragonfly Books, NY: 1988
- *Life on the Underground Railroad*, Stuart Kallen. Lucent Books, San Diego, CA: 2000
- *Malice Toward None*, Stephen Oates. Harper & Row, NY: 1977
- *Modern Medea*, Steven Weisenburger. Hill & Wang, NY:1998
- *Narrative of Sojourner Truth*, Paul Negri, Editor. Dover Publications, Mineola, NY: 1997
- *National Register of Historic Places Nomination*, Maplewood. Dr. Kim McBride. Kentucky Archaeological Survey, October, 1999
- *The Kentucky Encyclopedia*, John E. Kleber, Editor-in-Chief. University Press of Kentucky, Lexington, KY:1992
- *The Underground Railroad*, Raymond Bial. Houghton Mifflin, Boston, MA: 1995
- *Uncle Tom's Cabin*, Harriet Beecher Stowe. Published 1852. Introduction by Jane Smiley, Random House, NY: 2001

FOLLOW THE DRINKING GOURD

*When the sun comes back,
And the first quail calls,
Follow the drinking gourd.
For the old man is a-waiting for to carry you to freedom,
If you follow the drinking gourd.*

*(Chorus) Follow the drinking gourd!
Follow the drinking gourd.
For the old man is a-waiting for to carry you to freedom,
If you follow the drinking gourd.*

*River bank makes a very good road:
The dead trees will show you the way.
Left foot, peg foot, traveling on,
Follow the drinking gourd.
(Repeat the chorus)*

*The river ends between two hills;
Follow the drinking gourd.
There's another river on the other side;
Follow the drinking gourd.
(Repeat the chorus)*

*When the great big river meets the little river,
Follow the drinking gourd.
For the old man is a-waiting for to carry you to freedom;
Follow the drinking gourd.*

Author unknown; words copied from the picture book,
Follow the Drinking Gourd, by Jeanette Winter.

CULMINATING
PROJECTS AND PRODUCTS

Culminating Performances and Projects

1. Test with 12 multiple choice and 3 open response questions.
2. Group projects with three to five students per group. Each group project has a scoring guide.

The culminating performances should cover as many Kentucky standards as possible.

If the projects are ones that involve skills or information that the students have not yet received, then mini-lessons can be presented, for example- compiling a newspaper, presenting a dramatic performance, making a video. To publish a newspaper based on the unit learning, students would need a foundation of “What makes a good newspaper” (transactive writing, the “hook” of an advertisement). For a dramatic performance, students would need a background in dramatic elements. It is possible that these kinds of skills and background information could be delivered in special area classes or in the scheduled language arts block.

An exhibition night could be planned to display projects (possible total projects- six to nine). If so, oral communication should be a part of the culminating performance. The Kentucky Historical Society has a *Museums to Go* program. If an exhibition night is planned (or some other exhibition time-frame), then it is possible to rent at no charge the panels that show the Ohio River, *Life Along the River*. The panels are rented for a month. Ask Jordan O’Rylee at Dinsmore Homestead about this. The phone number for the Kentucky Historical Society Museums to Go Program is (502) 564-3016.

3. Portfolio entry- Transactive piece: students choose one building or site near the river which should be preserved. They write a persuasive letter to the Boone County Judge Executive, Boone County Historic Preservation Review Board, and Kentucky Heritage Council, describing the building or site and listing reasons why the building or site should be preserved (could evolve into a National Register nomination with outside help in writing; contact the Boone County Historic Preservation Review Board, 334-2111).
4. Other possibilities:
 - a. Design a flag or stamp that reflects changes in Boone County.
 - b. Use technology to create a brochure on Boone County.
 - c. Produce and sell a textbook or coloring/activity book for newcomers to Boone County (about Boone County).
 - d. Develop a portfolio which persuades the Judge Executive and County Commissioners to restore the former Boone County Clerk’s Building as a place for students to use to research Boone County history and for the display of history-based projects. The building could become a center for heritage education. The writer should include his/her learning of county history based on the *River Born, Kentucky Bred* unit of study.

CULMINATING ASSESSMENT

Twelve suggested multiple-choice questions for the culminating assessment

The recommended format for a culminating written assessment is a four to one ratio of multiple-choice to open response questions. These twelve questions would be followed by three open response questions. The culminating assessment should address as many standards as possible.

Multiple Choice

- 1) Fossils provide evidence that plants and animals lived long ago. The fossil of an *extinct* animal found at Big Bone Lick is:
 - A. a dinosaur bone
 - B. a mastodon tooth
 - C. a dog bone
 - D. a deer antler

- 2) A unique characteristic of Big Bone Lick is the presence of:
 - A. swing sets
 - B. a campground
 - C. salt springs
 - D. a creek

- 3) Which is *not* true of Native Americans in Boone County?
 - A. Some groups lived in permanent villages.
 - B. Some groups grew corn, beans, and squash.
 - C. Some groups buried their dead in mounds.
 - D. Some groups lived in tipis.

- 4) Which Boone County administrator is most like the governor of Kentucky?
 - A. Police chief
 - B. School superintendent
 - C. Judge-executive
 - D. Planning Commission Director

- 5) Prehistory is:
 - A. the history of what occurred before written records were kept.
 - B. the time periods of dinosaurs and cavemen.
 - C. any event that occurred before Columbus sailed in 1492.
 - D. any event that occurred when your parents were young.

- 6) Which of these does *not* show the location of a place?
- A. A map
 - B. A globe
 - C. A grid
 - D. A time line
- 7) People who bought flour at the Rabbit Hash General Store were:
- A. producers
 - B. traders
 - C. consumers
 - D. sellers
- 8) Photographs of the Dinsmore family members are examples of:
- A. secondary resources
 - B. primary resources
 - C. natural resources
 - D. human resources
- 9) Farmers modify their environment by:
- A. plowing the soil
 - B. shoeing horses
 - C. reading the *Farmer's Almanac*
 - D. looking at the sunset
- 10) Slaves in Boone County were bought and sold as:
- A. wants
 - B. services
 - C. profits
 - D. goods
- 11) Which was *not* a reason to settle in Boone County?
- A. The Ohio River was an important natural resource.
 - B. The land along the river was fertile.
 - C. There were mountains.
 - D. There were plenty of trees to cut down for building homes.
- 12) Use the map of Boone County. Which of these towns is located along the Ohio River?
- A. Craig's Camp
 - B. Beaver
 - C. Polecat
 - D. Tanner's Station

Answer key: 1. **B** 2. **C** 3. **D** 4. **C** 5. **A** 6. **D** 7. **C** 8. **B** 9. **A** 10. **D** 11. **C** 12. **D**

HISTORIC PRESERVATION PERSPECTIVES

Bob Maurer, Chairman, Boone County Historic Preservation Review Board:

I hope as you look at the different lessons, it will make you realize that what we have now did not just happen. The people in the past were just like we are now, working to make a better place for their children and themselves. As time goes on what YOU do will be a part of history. Make sure what you do will be right. To do so you need to know how things got to this point where we are now. I hope this study will help you to better understand the past. What happens tomorrow depends on today.

Don Clare, Boone County Historic Preservation Review Board:

Personally, I feel that Historic Preservation in our county is a quality-of-life issue, which is just as important as infrastructure, county services, water, sewer, or clean air. Historic Preservation is not merely the restoration of an old building. It is the recognition, identification, and stewardship of all of our historic and prehistoric cultural resources. It is the reverence for and the protection and preservation of our precious and fragile heritage. We are all stewards of our past and it is our moral and ethical duty to see that our past is recorded, documented, protected, and preserved for future generations. This responsibility holds true for our local, state, and federal government as well as for each individual citizen. The clichéd statement about not knowing where we're going if we don't know where we've been is so very true! If we don't preserve and protect our history and heritage, then we become that confusing, derelict novel that is missing the first three or four chapters and has an ending that makes no sense.

Historic Preservation involves many disciplines and encompasses many activities and strategies. It is research and documentation. It is heritage education and heritage tourism. It is partnerships with other agencies and entities. It is lobbying and fundraising. It is restoration and adaptive re-use. It is good and necessary and it is a universal activity and function of the entire human race.

Jan Garbett, Consultant, Heritage Education Unit, 31 July, A.D. 2001:

Like many other things in life, historic preservation begins at home. We value and save family mementos. Parents treasure the hospital bracelets from their child's birth; they record that child's first tooth, first step, first day of school. Children keep class pictures, sports trophies, and academic awards. The walls of homes display family photographs, some of ancestors who have passed on. Our homes are museums representing the history of our lives. These household archives contribute to the history of our community, state, and nation but sadly, many of the older family archives have been forever lost.

Our county history is endangered. We suffer a great loss when historic homes fall under the crush of bulldozers. Even our historic county government buildings, ones that recorded the everyday business of our ancestors, are at risk. Recently, one of the most significant buildings in our county seat was threatened. The former clerk's office on Washington Street was in danger of being demolished. The clerk's office is nearly 170 years old. It is a useable structure but most

important, it is the last tangible memory of our county government as it was before the Civil War. Fortunately, the Boone County Fiscal Court voted unanimously on July 24 to move the building to the Burlington Government Square and to restore the building so that it can once again serve the community.

What does the future hold for Boone County history and historic sites? Will we sacrifice our heritage for that which glitters at the moment? As the Onceler said in the Dr. Seuss book, *The Lorax*, “unless someone like you cares a whole awful lot, nothing is going to get better. It’s not.”

APPENDICES

Activity Rating Sheet

(To assess the importance or order of suggested activities)

- A. Does this activity address core content?
- B. Will this activity assist the student in completing the culminating performance?
[Or is it one which best suits a learning center, or a whole group fun (I-can-afford-the-time) activity]?
- C. Does this activity address learning styles, varied instructional strategies, multiple intelligences, or Bloom's taxonomy?
- D. Does this activity address writing standards, purposeful reading, or oral communication?

Anticipation Guide-Archaeology

Choice # 1

Circle one response
(before the lesson).

Circle one response
(after the lesson).

Agree/ Disagree

Agree/Disagree

- | | | | | |
|---|---|---|---|---|
| A | D | 1.Prehistory refers only to the times of dinosaurs and cavemen. | A | D |
| A | D | 2.Archaeologists study dinosaur bones. | A | D |
| A | D | 3.Only “advanced” civilizations have culture. | A | D |
| A | D | 4.Another word for an archaeologist is “pot hunter”. | A | D |
| A | D | 5.All a person needs to practice archaeology is a shovel and a place to dig. | A | D |
| A | D | 6.The typical archaeologist is trying to find beautiful, valuable objects for display or sale. | A | D |
| A | D | 7.An archaeological site is the place where a town or village was located in prehistoric times. | A | D |
| A | D | 8.Archaeologists only investigate important or well-known sites. | A | D |
| A | D | 9.The Indians came to North America from India. | A | D |
| A | D | 10.Mounds are nothing more than tombs for the Indian dead. | A | D |
| A | D | 11.Boone County ‘s prehistoric Indians depended only on game for food. | A | D |
| A | D | 12.The prehistoric Indians in Boone County were primitive and uncivilized. | A | D |
| A | D | 13.The Indian word for corn is “maize”. | A | D |
| A | D | 14.The main hunting weapon of all Boone County prehistoric Indians was the bow and arrow. | A | D |
| A | D | 15.Indians used Boone County only as a hunting ground. | A | D |
| A | D | 16.Prehistoric events happened B efore the birth of C hrist. | A | D |

Modified from *Studying the Prehistory of Man in Kentucky: Activities for the Middle School Classroom*. Jim Carpenter and Kathryn Fraser, 1983, p. 90.

Reprinted in materials included in ANTS, Archaeology Network Teachers.

ANTICIPATION GUIDE- ARCHAEOLOGY

Choice #2

Make the false statements true (after the lesson activities).

(before the lesson)
Circle one response.

(after the lesson)
Circle one response.

True/false

True/false

- | | | | | |
|---|---|--|---|---|
| T | F | 1. Prehistory is the study of what occurred before written records were kept. | T | F |
| T | F | 2. Only advanced civilizations have culture. | T | F |
| T | F | 3. All a person needs to practice archaeology is a shovel and a place to dig. | | |
| T | F | 4. An archaeological site is one where evidence of past human activity is found. | T | F |
| T | F | 5. Archaeologists investigate only important or well-known sites. | T | F |
| T | F | 6. The Indians came to North America from India. | T | F |
| T | F | 7. Prehistoric Indians who once lived in Boone County were farmers as well as hunters. | T | F |
| T | F | 8. The Indian word for corn is "maize". | T | F |
| T | F | 9. The main hunting weapon of native groups in Boone County was the bow and arrow. | T | F |
| T | F | 10. Some groups of Indians lived permanently in Boone County. | T | F |

Modified from *Studying the Prehistory of Man in Kentucky: Activities for the Middle School Classroom*. Jim Carpenter and Kathryn Fraser, 1983, p.90.

RESPONSE KEY FOR ANTICIPATION GUIDES

Choice # 1 Agree/Disagree

1. Prehistory is the study of what occurred before written records were kept. The eras of dinosaurs and cavemen, which were *not* simultaneous time periods, are included in prehistory.^{1,3}

2. Archaeology is a branch of anthropology, which is the study of humans. Archaeology is the means or method for the recovery, study, and reconstruction of past human life through the scientific analysis of his material remains. ^{1,3} The study of dinosaur bones is in the realm of paleontology.

3. Our everyday language uses the word "culture" to mean the correct way to behave in social situations; culture may also mean the reading of "good" books, or other intellectual pursuits. "Culture", in a scientific sense, means the array of habits and customs shared by the members of a specific society or associated group of people. ¹

Archaeologists study the remains of human activity at a specific site to learn more about cultures of the past, whether the pieces of that past are found in a one hundred year old privy or in a thousand year old burial mound.

4. An archaeologist is a skilled professional. A pot hunter is one who collects prehistoric Native American artifacts for personal gain or pleasure. There is little or no concern for the scientific process of studying and analyzing the artifacts. A pothunter may also be a grave robber of Native American burial sites, looting the sites of their artifacts. ^{1,3}

An amateur archaeologist is one who may or may not surface collect (pick up projectile points from the soil surface). This person maps his "finds" and is willing to share information with trained archaeologists. COVAS is a regional group that allows amateur archaeologists to work with professionals.

5. Professional archaeologists use methodical ways to uncover the past. The examination of an archaeological site involves careful gridding and digging, taking soil layers bit by bit, not in the way we would prepare a site for a garden.¹

6. Indiana Jones would not find the excitement of "The Temple of Doom" in Kentucky. Typically, archaeologists are more concerned with reconstructing the culture of past peoples than in searching for priceless relics. A charred grain of corn from a fire pit might be the greatest find of the site because of the information revealed about a particular native group.¹

7. Simply put, an archaeological site is one, which shows evidence of past human activity, ^{1,3}

It could reveal the presence an entire village as in Petersburg, or a site may be a plowed field that yields a projectile point and a piece of pottery.

8. Well-known sites are ones that are publicized. Archaeologists regard any site as one of potential significance. ¹

Sometimes sites of potential significance cannot be investigated thoroughly because they are being developed for public uses—for example, a state road, a subdivision.

9. Many prehistorians believe that humans crossed the North American continent from Asia using a land bridge thousands of years ago. It was Christopher Columbus who thought he had reached Southeast Asia in 1492, thus giving the native peoples the misnomer, "Indians". ¹

10. Some mounds are tombs, but many have no burial remains. Platform mounds may have been constructed for ceremonial purposes, for example, at Cahokia. *1*
11. Long before Native Americans cultivated crops, they varied their diet with wild grains, roots, leaves, stems, bark, fruit, and nuts. Around 1000 B.C., the Native Americans began cultivating crops. The farms of Ft. Ancient Indians could support several hundred people. *1, 4*
12. “Primitive” can have several meanings. Do we mean that the Paleo Indians at Big Bone used simple, unsophisticated tools? In our eyes, there’s no doubt. In one thousand years, our computers will probably seem primitive to existing societies.
Do we mean that native groups were primitive because their cultural and physical characteristics resembled those of their ancestors? Again, some Indians could be called “primitive” in this sense. But if we mean that Indians are primitive because they are crude and rude red-skinned savages, then we need to examine an attitude of intolerance.
As for “uncivilized”, various Indian cultures were quite complex. Among river groups, such as those at Cahokia (near St. Louis, Missouri), there were highly populated areas with trade practices that reached across great distances. *1*
Native American cultures used various art forms, had their own language, lived in family units, and had the same basic needs that we have.
13. The Spanish word for corn is “maize”. Each native group had its own word for corn. *1*
14. The bow and arrow was a “new” weapon, dating to around A.D. 900. Various groups made different kinds of projectile points, which are incorrectly lumped into one group as “arrowheads”. *1,3*
15. There is documented evidence of at least two prehistoric settlements at Petersburg. These were Ft. Ancient villages. Other groups, over thousands of years, lived in, first, small base camps, then later, in summer and winter camps. By A.D. 500, there were small permanent villages. Five hundred people or more inhabited later villages.
Dragging Canoe, a Cherokee, stated in 1771 at a negotiation meeting with the Transylvania Company that the large tract of land (a good portion of what is now Kentucky) being transferred was a “bloody ground under a dark cloud”. This was interpreted to mean that Indians had never lived in Kentucky but had only fought for control of the land. This made the settlers’ claim to Kentucky lands an easier proposition. Current thought is that Dragging Canoe meant that the Cherokee could not sell the land, that the Shawnee claimed it as ancestral ground but the Iroquois wanted control. This situation could lead only to bloodshed. *5*
16. (See response number 1).
The initials “B.C.” notate events before the birth of Christ. “A.D.” is an abbreviation for a Latin term meaning “In the year of Our Lord”. Both references to Jesus Christ have been used as common dating notations in our culture. *6*

For Anticipation Guide choice #2, these items are true: # 1, 4, 7, and 10.

The others are false. See the above responses for assistance with the six false items.

- References:
1. Carpenter, J, and Fraser. K. *Studying the Prehistory of Man in Kentucky: Activities for the Middle School Classroom*, 1983, p. 90.
 2. Brown, Tressa. *Teaching About Indian Stereotypes and Contributions*. Kentucky Native American Commission, Frankfort. 1999, p. 3.
 3. Letts, Moe, Paterson, Smith. *Intrigue of the Past*. United States Department of the Interior, Bureau of Land Management. Utah, 1996.
 4. *Always a River*, United States Environmental Protection Agency, Cincinnati, OH: 1991
 5. Henderson, A. Gwynn. *Prehistoric Research at Petersburg, Boone County, Kentucky*, Archaeological Report #289, December, 1993.
 6. Kelly Elementary Students and PTA. *Ancestry: Our Ohio River Heritage*, 1996.

COVAS: Central Ohio Valley Archaeological Society

ASSESSMENT FORM

INFORMAL

OPEN RESPONSE

TRANSACTIVE WRITING

MULTIPLE CHOICE

***Teachers: Use this form at your discretion, as an aid for your lesson plans.**

SAMPLE DOUBLE ENTRY FORM

TOPIC

DATE

NOTES

REAL-LIFE CONNECTIONS

**THINGS I CAN WRITE ABOUT:
A POSSIBILITIES LIST FOR FIELD TRIP TOURS**

During this field trip, make notes on objects, observations, and curiosities that might appeal to you as something to research and/or write about when we finish.

1.

2.

3.

4.

5.

6.

7.

8.

9.

10.

* This is copied from the writing workshop materials, *Digging Through Dinsmore*, presented by David M. Bishop, PhD. at the Dinsmore Homestead, June, 1999.

KWL CHART

What We Know

What We Want to Know

What We Learned

STANDARDS-BASED UNIT GUIDE

Instructional Strategies

- Flexible Groups
- Demonstrating
- Direct Instruction
- Lecturing
- Mini-Lesson
- Questioning

Student Engagement

- Critical Thinking
- Observing
- Listening
- Participating in Projects
- Reading
- Writing
- Using Technology
- Manipulating
- Inquiries

Addressing Diverse Learners

- Contracts
- Cubing
- Independent Projects
- Learning Centers
- Learning Stations
- Varying Questions

Reading Strategies

- Anticipation Guide
- Choral Reading
- Guided Reading
- Independent Reading
- Paired Reading
- Story Mapping

Writing Strategies

- Admit and Exit Slips
- Journals
- Graphic Organizers
- Learning Logs
- Peer Conferencing
- Mini-Lessons

Adaptation of the Kentucky Department of Education and Oldham County Schools
Standards-Based Units Activities Guides

TEACHER REFLECTION ON THE UNIT

1. What did your students learn during this unit?
2. How would you rate this unit? (low) 1 2 3 4 5 6 7 8 9 10 (high)
3. Name a strength of the unit.
4. Name a weakness.
5. If you used an open response question, would you please include it and note the lesson it addresses?

Other comments?

* This form can be adapted to specific lessons. Please return the completed form to Matt Becher at the Boone County Planning Commission, 2995 Washington St., Burlington, KY, 41005.

Modified from the Kentucky Department of Education Standards-Based Unit Guide, 1998; Work Page #18

STUDENT REFLECTION ON THE UNIT

1. What did you learn during this unit?
2. How would you rate the unit? (low) 1 2 3 4 5 6 7 8 9 10 (high)
3. Name one or two topics that most interested you.
4. Name one or two topics that did not interest you.
5. What do you think you will remember from this unit? You may write or draw your response to this question. Use the back of the paper if needed.

* This form can be adapted to a specific lesson.