

# Natural History along the Natchez Trace Parkway



## Bears on the Trace

### › Grade Level:

9<sup>th</sup> – 12<sup>th</sup>

### › Subject Areas:

Biology

### › Setting:

Classroom

### › Duration:

One class period

### › Skills:

Research, explanation, and evaluation

### › Core Standards:

MS Biology I  
Competency/Obj.  
6a

### › Vocabulary:

Taxonomy, binomial nomenclature, genus, species

**Summary:** Students will examine the system of classification developed by Carlos Linnaeus in the 1750's.



**Materials Needed:** Each student will need a poster, permanent marker, and internet access.

## Instructional Information

### Mississippi Objectives:

**Biology I: Demonstrate an understanding of principles that explain the diversity of life and biological evolution. 6a. Draw conclusions about how organisms are classified into a hierarchy of groups and subgroups based on similarities that reflect their evolutionary relationships.**

Major levels of hierarchy of taxa (e.g., kingdom, phylum/division, class, order, family, genus, and species)

**Teacher Set:** Students will develop a poster illustrating the Linnaean Classification System.

**Teacher Overview:** The black bear (*Ursus americanus*) has played an important role in Mississippi's natural history. Native Americans traveled the old Natchez trace from Natchez to Nashville. They relied on the black bear as a source of food, clothing, and goods for trade.

By the early 1900's, black bear numbers had been drastically reduced.

With a natural slow reproductive rate coupled with the clearing of forest for agriculture, and overhunting, the state's bear population was reduced to less than a dozen animals in 1932. In fact, there were no documented cases of black bears giving birth to cubs in Mississippi for a period of time from the early 1970's until 2005. The reason for this is quite simple. There were no female bears. The few bears that did inhabit the state were primarily sub adult males that had been pushed out of their former ranges from other states by older, larger males. By 1980 more than 80 percent of the bottomland hardwood forest in Mississippi was gone. In 1984 the black bear was placed on the endangered species list. Things started changing for the black bear in 2005. A radio-collared female bear from Louisiana wandered into Wilkinson County and gave birth to 5 cubs and a new era in Mississippi black bear conservation and management was begun. From 2005 to 2010, biologist documented six litters of cubs born to six different collared females throughout Mississippi. Den checks by MDWFP biologist and MSU biologist documented six more litters of cubs in the Delta region of the state.

Today, we are witnessing the re-colonization of one of Mississippi's greatest icons. Due to federal programs to restore bottomland hardwoods and protected federal land such as the bayous and swamps along meandering rivers in the southern portion of the Natchez Trace Parkway, the black bear is doing well today in Mississippi. The Linnaean classification system for the black bear is as follows:

**Scientific Classification:**

Kingdom: Animalia

Phylum: Chordata

Class: Mammalia

Order: Carnivora

Family: Ursidae

Genus: Ursus

Species: americanus

**Binomial name:**

*Ursus americanus*



**Student Instruction:** Students will develop a poster illustrating the seven levels of Linnaeus's classification system from general to most specific. The levels are kingdom, phylum, class, order, family, genus, and species. Students will begin with at least 10 animals in the Kingdom, Animalia and conclude with the binomial name of the black bear, *Ursus americanus*.

**Student Task:** Students will use their textbook and the internet and/or magazines to complete the poster.

**Teacher Closure:** Explain to the students that the black bear plays a vital role in the natural heritage of our state. They once thrived when the Native American lived here. Due to habitat destruction from human activity, black bear populations drastically declined. With the help of government agencies such as the US National Park Service, other agencies, and each of us, black bear populations can steady increase and be here for the enjoyment of future generations.

**Student Assessment:** Students will be graded using a rubric on their poster.

**Suggestions for re-teaching:** Refer to the Black Bear when teaching topics such as principles of ecology, interactions in ecosystems, and human impact on ecosystems.