

Natural History along the Natchez Trace Parkway



Classroom Lesson:

Ecoregions of the Natchez Trace Parkway (code ECO)

- **Grade:**
6th
- **Subject Areas:**

Science, Ecology,
Environmental
Science.

- **Setting:**
Classroom and
computer lab

- **Duration:**
Two class
periods

- **Skills:**
Internet research,
analysis
7

- **Vocabulary:**
Biome, abiotic, biotic,
ecoregion, ecosystem,
landform

Summary: The students will investigate an ecoregion of the NATR and fill out a worksheet with ecoregions characteristics. They will then collect the information into a class scrapbook.



Materials Needed: Each student will need a copy of the instructions and ecosystem diagram. Access to internet (or suitable printed material).

Instructional Information

Tennessee Learning Expectations:

6th Science

Interdependence

GLE 0607.2.4 Analyze the environments and the interdependence among organisms found in the world's major biomes.

8th Science Biodiversity and Change

GLE 0807.5.5 Describe the importance of maintaining the earth's biodiversity.

Learning Objectives: The students will be able to: 1) describe the biotic and abiotic characteristics of at least one ecoregion found along the Natchez Trace Parkway. 2) understand how a disaster might affect the ecosystem

Teacher Set: If necessary, the teacher will review with the class, the words; biotic, abiotic, biome and landform. The teacher will assign pairs or small groups of students to research the various ecoregions found along the Natchez Trace Parkway. The teacher will provide access to the internet of equivalent printed materials. The teacher will allow the students to orally share what they learned. The teacher will assist the students in compiling a scrapbook containing their research.

Teacher Overview: An ecoregion (or bioregion) is a part of a biome. A biome may contain many different types of soils and landforms. An ecoregion is part of a biome that has a particular soil type and landform. There can be many different types of ecoregions in a biome. Even though two of the same kind of ecoregion may not be near each other, they will usually have many of the same types of biotic factors (plant and animals). An easy example to imagine is our country's Atlantic shoreline. The shore is within a deciduous forest biome. The shoreline in northern Florida has similar soil and land form as the shoreline in Maryland even though they are far away. Both are different than the Appalachian Mountains that are in the same biome. They may be considered the same ecoregion. They would have the same or similar plants and animals. Different scientists may have different definitions to various ecoregions. Ecosystems are smaller, localized areas within ecoregions.

The Natchez Trace Parkway has seven different ecoregions (see the diagram). See teacher answer sheet for summarized properties of the seven ecoregions.

General Characteristics of Natchez Trace Ecoregions

Nashville Basin – Maple- Oak – Hickory-Ash Forests
Gravelly streams underlain with limestone

Highland Rim
Transitional to Mixed Forest of the Appalachians
Home of rare cedar glade ecosystems

Fall Line Hills
Mixed Oak – Pine Forest
Ecoregion with highest number of currently threatened or endangered species (5)

Blackland Prairie/Margins
Blackbelt Forest and Bluestem Prairie
Highly divers 60+ bird species and 400+ plant species

Northern Hilly Gulf Coastal Plain
Mixed Pine – Oak Forest
Home to more than 30 species of reptiles and amphibians

Southern Rolling Hills
Oak –Hickory – Pine and Southern Floodplain Forests
Naturally fertile soils have largely been converted to agricultural uses.

MS Valley Bluff Hills and Loess Plains
Oak- Hickory-Pine Forests
Rare loess soil found in only one other North American location.

Student Task: The students will fill out the worksheets by researching their assigned ecoregion on the internet. They are encouraged to find pictures to illustrate their research. When all research is done, the students will share what they learned about their ecoregion and compile a scrapbook.

Student Instruction: See Student Instruction Sheet:

Teacher Closure: The teacher will display the scrapbook in the classroom or library.

Student Assessment: Quality of research and completeness of worksheets.

Suggestions for re-teaching: Relate Natchez Trace ecoregions to other areas.

Extension: Visit the Natchez Trace Parkway and discern various ecoregions and/or ecosystems. Compare the Natchez Trace ecoregions with those of other National Parks.

Student Instructions for Natchez Trace Ecoregions:

Review: What is a biome? What is abiotic? What is biotic? What is a landform?

An ecoregion (or bioregion) is a part of a biome. A biome may contain many different types of soils and landforms. An ecoregion is part of a biome that has a particular soil type and landform. There can be many different types of ecoregions in a biome. Even though two of the same kind of ecoregion may not be near each other, they will usually have many of the same types of biotic factors (plant and animals). An easy example to imagine is our country's Atlantic shoreline. The shore is within a deciduous forest biome. The shoreline in northern Florida has similar soil and land form as the shoreline in Maryland even though they are far away. Both are different than the Appalachian Mountains that are in the same biome. They may be considered the same ecoregion. They would have the same or similar plants and animals. Different scientists may have different definitions to various ecoregions.

Ecosystems are smaller, localized areas within ecoregions.

The Natchez Trace Parkway has seven different ecoregions (see the diagram). Your assignment is to investigate the different ecoregions along the Trace. You will need access to the internet to do this assignment.

Fill out the information boxes and see if you can find pictures to go along with your information. Be sure to keep track of where you found the information.

When you are finished, you will present your information to the class and enter it into a class scrapbook.

When you have finished filling out the information in the table, answer these questions:

How would you describe the biodiversity of your ecoregion.

Are there any unique, unusual or special ecosystems in your ecoregion? Describe them.

Imagine a specific disaster and explain how that disaster would affect your ecoregion.

What's in 444 miles?
More than you think!

- 5 degrees of latitude
- 8 major watersheds
- 40 forest alliance types
- 1800 vascular plant species
- 117 reptile species
- 64 amphibian species
- 242 fish species
- 229 bird species
- 220 insect species

Species at Risk
44 Federally Threatened or Endangered Species including:

- 22 invertebrates
- 6 fish
- 7 plants
- 2 insects
- 4 mammals
- 2 reptiles
- 2 birds



Michigan Lily
TN state threatened species



Endangered Gray Bat Habitat



Bald Eagle Nest



Brilliantly-Colored Prothonotary Warbler



Beaver Habitat Management



Vibrant Blackland Prairie Flower



Endangered Mitchell's Butterfly



Threatened Slackwater Darter



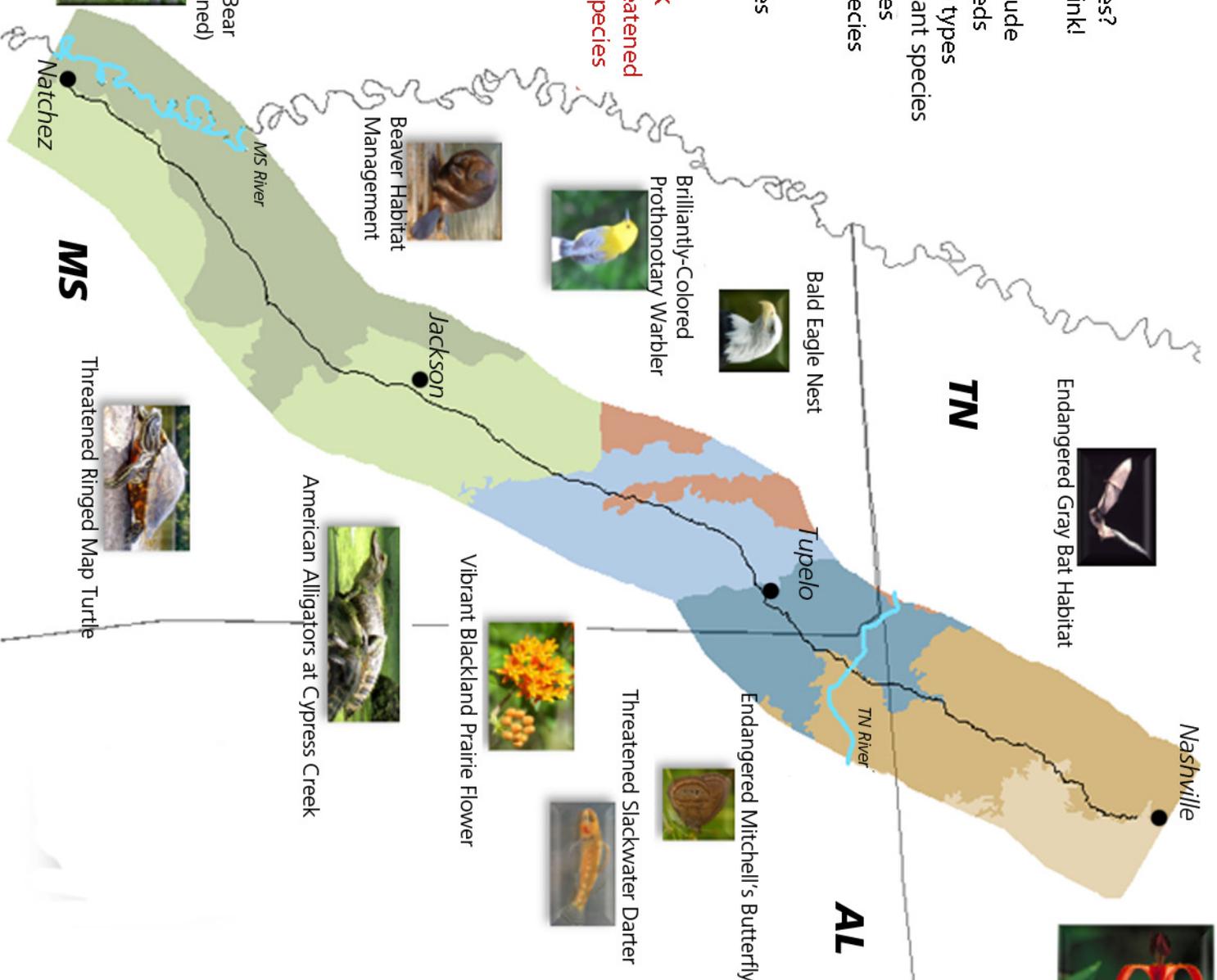
American Alligators at Cypress Creek



Threatened Ringed Map Turtle



Louisiana Black Bear Habitat (Threatened)



	Natchez Trace PKWY
	Nashville Basin
	Highland Rim
	Fall Line Hills
	Blackland Prairie/Margins
	Northern Hilly Gulf Coastal Plain
	Southern Rolling Hills
	MS Valley Bluff Hills and Loess Plains

Abiotic Factors	Soil Characteristics	
	Landforms	
	Water Factors	Land
		Precipitation

Biotic Factors	Plants - Common	
	Plants - Rare or Threatened	
	Animals - Common	
	Animals - Rare or Threatened	