

## **LESSON 4: Humans' Effect on the Driftless Landscape**

### **Overview:**

Humans have changed the Driftless in many ways. First, early Native Americans built mounds to bury their dead and also as a place to conduct religious and social ceremonies. A second way the Driftless region was changed was men came to this region to mine. They dug deep holes and tunnels in the earth to dig out the lead. They also cut down many of the trees to heat lead smelters and to fuel the steam engines that carried the lead to sell. Farmers then followed. They stopped burning the prairies and they plowed fields, disrupting the native prairies and causing erosion to the Driftless landscape, particularly the Algific slopes.

**Duration:** 30 minutes

**Grade levels:** 5-8

**Subject Areas:** Earth Science, Physical Science, Life Science and Social Studies

**Standards Addressed:** 4-ESS3  
5-ESS3  
MSESS3-2  
SS.G.3.6-8.LC

### **Objectives:**

- Students should learn the significance of the mounds to the Native Americans who first lived in the Driftless region
- Students should be able to identify three types of Native American Mounds in the area
- Students should learn how lead mining changed the shape of the Driftless region
- Students should learn how farming changed the landscape of the Driftless region

### **Teacher Background:**

The first occupants of this region didn't leave any written or spoken records that would allow us to know about their daily lives. However, they did leave very important clues in the mysterious burial mounds that can be found on the high banks of the Mississippi River from its beginning in Minnesota to its end in Louisiana. Built over one thousand years ago, the mounds were ceremonial and sacred sites that commemorated the passing of loved ones and illustrated the sacred beliefs of the ancient peoples. Called the Mound Builders, these people left us traces of the prehistoric age in which they lived. The mounds, which contain skeletons, household utensils and implements of war, tell us how people lived in this area. The silent monuments of a prehistoric age have fascinated scholars for centuries. Some of the mounds are linear or conical, beaten down by centuries of wind and harsh weather. Others represent effigies of birds or animals such as eagles or bears.

The earliest way of smelting is an example of how mining disturbed the landscape. The Indians dug a hole in the face of sloping ground about 2 feet deep, and two feet wide at the top and narrowing at the bottom to an 8 OR 9 inch square. It was lined with flat rocks. At the point at the bottom narrow stones were laid making a grate. A trench was dug beside the hole leading to the bottom of the hole. This trench was a foot wide and foot deep. It was filled with dried branches and leaves. The original hole was filled with ore. The dry wood was set on fire and in a few minutes the molten lead fell through the stones at the bottom and through the trench over the earth. The fluid mass was then poured into a rough wooden mold.

Early mining was done by squaws. In the spring of 1829, thousands of miners came to Galena to dig for lead. There was so much lead to be found near Shullsburg that 9 log furnaces were running. A miner would sink a perpendicular shaft down to 10 to 20 feet into the earth. The shaft would be about 4x6. It would be lined with planks of wood. At this depth, limestone was found. If it was soft, the miners would go down with a pick and dig it out, but usually gun powder was used to blast the rocks away until they reached rock where they expected to find the lead. Then they would build “rooms” underground, sometimes from 4 to 15 feet high and sometimes 40 feet in width and as long as several hundred feet. Many times the roof of the cut was lined with wood to make it secure. These “rooms” were lighted with tallow candles. The ore was carried back to the main shaft by a wooden hand run railway. From 1821-1858, 820,622,839 lbs of pigs or melted lead was shipped out. Think of all the logs needed to line the shaft and melt that into liquid.

This area was primarily prairie and savanna. Less than 1/10 of 1% of our original prairies remains today. In the Driftless Area, much of these remaining prairies are “hill prairies.” The prairies are now considered “globally rare” and contain many unique and declining species of plants and animals. Most prairie types were lost primarily to plowing. The “hill prairies” however, disappeared because with farming came the control of fires. Farming especially in more recent years has had and continues to have a large impact on our ecosystems. Stripping the land of trees and prairie grasses, changing the contours of the land itself, allowing farm runoff to seep into our groundwater, and in more recent years, the use of chemicals are some of the farming practices that have a negative effect on our environment. Fortunately, farmers and environmentalists are working together to find ways of better controlling these effects.

### **Glossary:**

Effigy- a burial mound in the shape of a bird or other animal

Conical- cone shaped mound

Linear- long, narrow mound

Smelting- to melt rock that contains metal in order to get the metal out

Erosion- the gradual destruction or wearing away of something by natural forces (such as water, wind or ice)

Lead - a metal, also known as galena. Used to manufacture bullets and household items

Silting – earthy matter, fine sand carried by moving or running water and deposited as a sediment

## **Activity: Recreating a Burial Mound**

### **Supplies Needed:**

Large playground space

Chalk

Brown butcher paper, enough for each child in class to trace their bodies while lying flat

Crayons

Scissors

Images of mound shapes

### **Activity Steps:**

1. Give each student in class a length of butcher paper and a crayon.
2. Working in pairs, have each student trace around their partner.
3. Have the student cut out silhouette.
4. Ask the students to draw on their silhouette treasured items with which they might wish to be buried.
5. Using chalk, find a space on playground. Step off 700 feet, which is the size of some of the known mounds.
6. Draw a circle.
7. Students will place as many silhouettes as will fit in the circle.

### **Discussion Questions:**

- How did Native Americans change the landscape?
- How did mining change the Driftless region?
- How did farmers change the Driftless region?
- Pros and Cons of mound building, lead mining and farming over saving prairies and original Driftless landscape.
- In what ways do we affect the land today?
- Are there ways in which we can alter the landscape in positive ways?