

# Building With Natural Resources

## Overview

Students sort objects related to Indian home construction into three natural resource groups.

## First Grade Standards:

### History (2004):

Benchmark 2, Indicator 4: The student will compare types of shelter used by American Indians in Kansas over time (e.g., grass lodge, tipi, earth lodge, frame house).

### Science (2005):

Science as Inquiry - Standard 1, Benchmark 1, Indicator 2: The student classifies and arranges groups of objects by a variety of properties, one property at a time.

## Objectives:

### Content

- The student identifies that Indians used natural resources in home building long ago.

### Skills

- The student sorts objects into the correct natural resource group.
- The student describes the object and its use in the building process.

## Essential Questions:

- What are natural resources?
- What natural resources did Indians in Kansas use to build their homes a long time ago?

## Trunk Materials Needed:

Object Cards - Use the 14 cards listed on the last two pages of this lesson.

### Reproduction Objects:

- Rawhide strip
- Bark rope
- Scapula hoe blade
- Digging stick
- Grassing needle
- Pole section
- Scraper
- Flesher
- Tanned hide
- Sinew
- Awl

### Images Used:

- #1 – Tall Grass Environment

## Materials You Need to Supply:

- Soil (about one cupful)
- Opaque container for objects (example: paper bag or cardboard box)

- 3 Natural Resource Cards – One card will should say “Animal,” one card should say “Plant,” and one card should say “Soil.”

**Advance Preparation Needed:**

- Get items listed in the “Materials You Need to Supply” list for this lesson.
- Read “Content Background for Teacher” portion of this lesson.
- Place items, including the Tall Grass Environment photo and the soil, in an opaque bag or other container so students cannot see them. Include the reproduction objects, the photo of grass, and the container of soil.
- Make three Natural Resource Cards by writing “Plant” on one piece of paper, “Animal” on a second piece of paper, and “Soil” on the third piece of paper. These will be the signs, or labels, the class will use when classifying natural resources.

**Vocabulary:**

Natural Resources = Materials found in nature that are useful or necessary for life. Water, animals, forests, and minerals are examples of natural resources.

**Content Background for the Teacher:**

What are natural resources? – Natural resources are things that come from nature such as sunlight, plants, animals, air, water, and soil. This lesson will focus on the buffalo, trees, grasses, and soil as the natural resources used to build the three Indian homes explored in this trunk – the tipi, the grass house, and the earth lodge.

Building with available resources. – People throughout history built using the resources available to them. Ancient Egyptians used stone, and Southwest Indians used adobe made from soil and water. Some early European and American settlers to the Kansas prairie used natural resources to build log homes, sod houses, and dugouts. Today most people build homes with what they can purchase at building stores or other convenient places. The important point is that choices are based on what resources are available to build a functional home not that one choice is better or worse than another.

**Lesson:**

This activity in this lesson allows students to sort items by type, not by their level of importance or the quantity used. When these items are counted by natural resource category (animal, plant, or soil) the animal category will have more items than the other two categories. This does not necessarily mean that animals were more important than plants or soil. The quantity of each item is not reflected in this activity, only the types of items used. For example, vast quantities of plant and soil were needed in the construction of a grass house and earth lodge, yet the number of items in the plant category will be much less than the number in the animal category.

Directions	Script
1. Introduce the topic of the lesson. <ul style="list-style-type: none"> <li>• A natural resource is something that comes from nature.</li> <li>• Indians used natural resources to build homes long ago.</li> </ul>	<p><i>Today we are going to learn about what Indians in Kansas used to build their houses a long, long time ago.</i></p> <p><i>Can anyone tell me what a natural resource is? Natural resources are things that come from nature. Animals are</i></p>

Directions	Script
	<p><i>a natural resource. Plants are natural resources. Soil and stone are natural resources. Sunlight, air, and water are natural resources too.</i></p> <p><i>Long ago, Indians living in Kansas used three of these natural resources to build their homes. They used animals, plants, and soil or stones. Indians also needed tools to build their homes. They made their tools from natural resources, too.</i></p> <p><i>Is the grass outside a natural resource? [yes]</i>  <i>Is the chair you are sitting on a natural resource? [no]</i></p>
<p>2. Explain that you have:</p> <ul style="list-style-type: none"> <li>• 3 cards (Animal, Plant, Soil)</li> <li>• Items Indians used to build their homes.</li> <li>• Classify and sort items into natural resource groups.</li> </ul>	<p><i>I have three cards. What do they say?</i>  [Animal, Plant, Soil]</p> <p><i>Inside here I also have some of the things Indians used long ago to build their homes. We will take things out of the bag one at time. We'll talk about each item we take out and decide what type of natural resource it represents. Is it animal, plant, or soil? Then we'll place the item by that natural resource card.</i></p> <p><i>For example, if I pulled out a stick, it would go by the Plant card. A stick comes from a tree and a tree is a plant.</i></p>
<p>3. Classify and sort items</p> <ul style="list-style-type: none"> <li>▪ Have students take turns removing items from the container one at a time.</li> <li>▪ Explain what each item is and how it was used. The object cards or the list provided at the end of this lesson will provide the information needed to do this. (Some items will fall in more than one category. Students will need to decide which natural resource to put them in or if they want to create a new category that combines natural resources.)</li> <li>▪ Have student place the item by the corresponding natural resource card.</li> </ul>	

Directions	Script
<p>4. After sorting all the objects, discuss which natural resource has the most objects and which has the least.</p>	<p><i>How many items are in the Animal category?</i>  <i>How many items are in the Plant category?</i>  <i>How many items are in the Soil category?</i>  <i>Which card has the most items by it?</i></p>
<p>5. Conclude activity.</p> <ul style="list-style-type: none"> <li>▪ Reinforce that all of the items are natural resources and all of them were used by Indians to build houses with.</li> <li>▪ Add information students learned to the “What we Learned” column of your KWL.</li> </ul>	<p><i>Have we taken all the items out?</i></p> <p><i>Did Indians use all of these things to build their homes long ago? [yes]</i></p> <p><i>Was everything a natural resource? [yes]</i></p> <p><i>Then we can say that all of these things the Indians used to build their homes are natural resources.</i></p> <p><i>What did we learn? [Indians used natural resources to build their homes.]</i>  <i>Let’s write what we learned on our chart.</i></p>

List of items being sorted in this lesson:

<b>Some Natural Resources Used by Indians in Home Building</b>		
<b>Item</b>	<b>Resource Type</b>	<b>Use in Home Building</b>
Rawhide Cordage	Animal	Used to tie together interior wooden frame when building a grass house or earth lodge. Made from long thin strips of rawhide.
Bark Cordage	Plant	Used to lash grass bundles onto wooden frame when building a grass house. Made from tree bark.
Scapula	Animal	Used to move dirt when building a grass house or earth lodge. Could also be used to cut grass for a grass house. The edges could be sharpened. Made from the scapula (shoulder blade) of a bison and usually attached to a wooden handle.
Digging Stick	Plant	Used to loosen dirt when digging for a grass house or earth lodge. Could also be used to pry out sod from the ground when building an earth lodge. Made from a stick that has been cut to a point. The pointed end was made stronger by heating it in a fire.
Grassing Needle	Animal	Used to sew bundles of grass onto the pole frame when building a grass house. Bone needles were made from long thin animal bones, such as a bison or elk rib.
Pole Section	Plant	Long poles were used to make frames for grass houses and earth lodges and tipis.
Scraper	Animal Soil & Stone	Used to clean and scrape a hide during the tanning process. Made from a sharp stone lashed onto an elk antler with rawhide.
Flesher	Animal	Used to clean a hide during the tanning process. Made from the leg bones of elk or bison.
Tanned Hide	Animal	Used to make a tipi cover. Eight to twenty hides were needed for an average tipi. Tanned hide was soft. The fur could be removed during the tanning process.

Item	Resource Type	Use in Home Building
Sinew	Animal	Used like thread to sew hides together when making a tipi cover. Connective tissue in an animal such as tendons.
Awl	Animal	Used to poke holes through a hide when sewing pieces together. Made from a bone.
Grass (photo)	Plant	Used to thatch a grass house and provide one layer in the construction of an earth lodge. Tall grass grows on Kansas prairies.
Sod (object card)	Soil & Plant	Used in the construction of earth lodges. Readily available building material that provides good insulation.
Soil	Soil	Used as the floor of grass houses and earth lodges and for the outer covering of earth lodges. Readily available building material.