

Lesson 4: Forest Products Time Machine

NUTSHELL

In this classroom lesson, students learn about historical uses of forest resources.

Students begin by sharing ways we use the forest while playing a game of Hot Pine Cone.

Next, the class explores forest resources used to create products of the past, while relating them to present-day goods. To conclude, students examine forest products and draw a picture of one they use every day.

ENDURING UNDERSTANDINGS

- Wisconsin's forests provided basic resources (e.g., food, clothing, shelter) for early Native Americans and European settlers.
- As Europeans settled Wisconsin, forests provided jobs for a growing immigrant workforce, resources for building the nation, and dollars for a new state economy.
- Humans depend on forests for products and services they use every day.

ESSENTIAL QUESTION

- What resources have forests provided to people over time?

OBJECTIVES

Upon completion of this lesson, students will be able to:

- List and describe basic forest resources that early Native Americans and European settlers used.
- Compare historic forest products with products of today.
- Recognize forest products necessary in their everyday life.

SUBJECT AREAS

Arts, Science, Social Studies

LESSON/ACTIVITY TIME

Total Lesson Time: 85 minutes

- Introduction.....30 minutes
- Activity30 minutes
- Conclusion.....25 minutes

STANDARDS CONNECTIONS

Standards for this lesson can be viewed online at the LEAF website (www.leafprogram.org).

BACKGROUND INFORMATION

What would have propelled the creation of present day Wisconsin had it not had its forests? It is impossible to overlook the incredible value of the forest as a resource when looking at the history of our state.

The forests of our state have successfully supported and in turn shaped human life in Wisconsin for century upon century. Historians believe that humans have inhabited the Great Lakes region for some 12,000 years. The earliest of these people are referred to as "Woodland" people because of their residence within and on the edges of the great forests of our state. These early residents are ancestors of the Native American nations that are in Wisconsin today. According to Patty Loew, in her book *Indian Nations of Wisconsin*, there are 12 Indian nations whose presence predates Wisconsin's 1848 statehood and who have maintained a steady residence here since. These early residents depended on forests for survival. In fulfilling their requirements for food, water, shelter, and space, early **Native Americans** learned how to use and manipulate the forest. They hunted forest animals and used them for food and clothing. They harvested food growing in the forest and cultivated forest trees and plants to provide themselves food.

VOCABULARY TERMS

Native Americans: The first people to live in the United States of America (and Wisconsin).

Product: Something used by humans that we have made from something else (a resource).

Resource: Something that can be used by animals, including humans.



Settler: A person who came from another place to make a new home.

They built shelters such as wigwams from bent saplings (young trees) and then sheathed them with bark from larger trees. The lakes and rivers of Wisconsin provided the means to travel in canoes fashioned from tree materials. These water sources provided food (fish) and drinking water. Native Americans utilized forest resources for medicine, from dental healing to rash treatment. They named their clans after forest creatures. They identified themselves as inseparable from the **resources** enabling life. Native American dependence on the forest was, and still is, reflected in their traditional values and teachings. These include the idea that natural resources are gifts of the creator and should be treated as such (respect), take only what you need and leave the rest (wise use/conservation), and always put something back (reciprocation). They trusted that the forest would provide what they needed, and they held it in reverence because of this.



The first Europeans to come to Wisconsin were the French-Canadian fur traders, or voyageurs. They came to trade European goods with the Native Americans in exchange for furs that were valuable in Europe. They traveled the rivers and lakes in large birch bark canoes that were held together with the roots of spruce trees and made watertight with resin pine sap from trees. In addition, they built log cabins from trees and feasted on game that was hunted and trapped in the woods.

MATERIALS LIST



For Each Student

- Crayons or markers
- Scissors
- Glue
- Copy of Student Page  **3, Forest Resources Cards**
- Copy of Student Page  **4, Forest Resources Worksheet**

For the Class

- One pine cone or other forest item/product that can be held and passed among students
- Student Page  **1, Native Americans**, and Student Page  **2, European Settlers**, copied or to project
- Paper bag with a variety of forest products in it (some examples are: wooden box, small piece of lumber, wooden spoon, pencil, toothpick, apple, cherry, plum, black walnut, maple syrup, paper, book, magazine, tissue, paper towel, cardboard box, crayon, toothpaste).

TEACHER PREPARATION

Two to three days before teaching the lesson, display Student Page  **1, Native Americans**, and Student Page  **2, European Settlers**, in a visible location in your classroom to pique the curiosity of students.

This trading began to change the way forests were used. Forest **products** were traded for useful items, instead of being used directly. The forest began to be a source of commodities as well as a source of life support.

Following the fur trade era, large numbers of **settlers** flocked to Wisconsin. The first to arrive were miners and farmers who settled the southern part of the state. Contrary to the goals of the Native Americans and voyageurs, these new arrivals wanted not just to use Wisconsin's forests and other natural resources but to own them. This new attitude brought about new challenges for Wisconsin's forests.

The stands of timber in northern Wisconsin became valuable as a source for lumber to build the cities and towns of Wisconsin and the Midwest. Jobs related to the forest industry began to draw people to northern Wisconsin. The lumberjack era provided money for the fledgling state economy and ushered in a new phase of our history. Forests were still being used to provide the lumberjack with basic needs, but in a different way. The forests provided paying jobs for people to earn money to buy food, clothing, and other supplies.

Over the centuries, humans have changed the forests, but forests have continued to provide us with our most basic needs. We still enjoy the beauty of the forest, hunt game, and develop products from the vast resources of the forest. We build our homes from lumber that comes from the forest and enjoy picking berries and participating in other recreation. The forests of Wisconsin provided Native Americans and early European settlers with everything they needed to live: food, water, shelter, and space. These same forests, although different today, also help sustain our existence.

PROCEDURE

Introduction - Hot Pine Cone

1. Gather students in a circle to play Hot Pine Cone. This game is played in a manner similar to Hot Potato. Explain to students that you want them to help you name some ways that we use the forest. Show the pine cone (or any other forest item or product that you choose; a pine cone works well with little hands, however). Tell students to use their imagination to pretend with you: "This pine cone loves to hear great thinking about how the forest is used, but it gets very, very impatient. We will be passing the pine cone around the circle, from person to person. When the pine cone is in your hands, you will need to share a way that we use the forest, and then pass it on." (*Possible answers include things like wood to build houses, places to camp, or paper.*) "If the pine cone sits in your hand too long, it starts to get very hot, and only cools down if it is passed to the next person."
2. Pick a student to begin, or you may begin. If a student gets stuck, introduce the option to "Phone a Friend." To "Phone a Friend," have the student pick up his/her (imaginary) phone and dial. Other students who think they can help should indicate this by raising their hands. The individual phoning for help will "call" the one whom they have chosen and ask them what they need to know. Set a time limit and count down the last five seconds to end the call. When all students have had a chance to participate in Hot Pine Cone, put the pine cone away.

3. With the group still gathered together, bring both picture pages to the front or project them. Show students the Student Page , **Native Americans**, picture first. Ask if they know who the people in the picture are. (Answers could vary. Most children should be able to recognize them as Native Americans or Indians. As you ask the following questions, be aware of stereotypes students may have about Native Americans and address them as they arise. For example not all Native Americans lived in tepees.) Explain that they are Wisconsin's first people. They lived here a long time before new people began to arrive.
- Ask if they recognize any of the objects in the picture. (All are named and briefly described on Teacher Key , **Native American Resource Key**.)
 - Ask if these are things that we have today. (*Yes and no.*) Allow children to explore the fact that we use adaptations of many of these items today.
 - Ask if Native Americans went to a store to buy these things. (*No.*)
 - Ask where they think these things came from. (*They made them.*)
 - Ask what they think they made them with. (*Stuff they found.*)
 - Name specific items in the picture. Allow children to explore and guess what types of materials and resources are used in the creation of the item. Help them understand that the source of materials is the forest. Be sure to point out that the Native Americans in this picture made all of the things they needed themselves. They used the forest as a resource to give them the things they needed to live. Recall the recent game of Hot Pine Cone and remind students that we still use the forest as a resource today!
4. Show the Student Page , **European Settlers**, picture to students. Ask if they know who these people might be. (*People from a long time ago.*) Explain to students that these people came to Wisconsin a long time ago. They are not Native Americans. They are called settlers. The settlers had to do many of the same things the Native Americans did to stay alive in their new home. From the Native Americans, they learned many ways to use the forest as a resource.
- Ask if students recognize any of the things in this picture. (*Answers will vary; see Teacher Key , **European Settler Resources Key**.)*
 - Ask how they think the settlers got these things. (*Brought them with them or made them.*) The settlers didn't have room to bring everything with them that they needed, so they had to find ways to make many of the things they needed when they got here.
 - Ask what they think the settlers needed to make in this picture. (*Verbally walk students to the conclusion that the things in the picture were handmade.*)
 - Ask where they got the things to make them. (*Help students to see that the necessary materials for many of pictured items originated as forest products; consult the key.*)
 - Ask the class if they think the forest was important to the Native Americans and European settlers. (*Yes.*)
 - Ask if they think it is still important to us today. (*Yes.*)

Activity - Matching Forest Resources

- Show Student Page  **3, Forest Resources Cards**. Point to the first column (“A”). Explain that the pictures there are all things in the forest. These things look a lot like they would if you walked through a forest and saw them today. People haven’t done much to change them. Point to the second column (“B”). Tell the class that these things also came from the forest, but they have been changed by humans. These are products that the early Native Americans or European settlers made from the forest materials in the first column. Point to individual pictures in this column and explain to students what they are (many are products that were also included in the Native Americans and European Settlers pages). Hand out the cards and have students color the items and cut the cards apart.
- Have students put their colored and cut cards into two rows, “A” and “B.” Explain to students that their job is to decide which of the pictures in the first row (“A”) were turned into the things in the second row (“B”). They need to match the forest resource with the product it was made into. Allow students to ask any questions they may have about the items as they match their “A” and “B” cards.
- Show students Student Page  **4, Forest Resources Worksheet**. Point out the first two columns. The first column is where they will glue the resource “A.” The second column is where they will match the product “B” that came from the resource. The third box is for students to draw a related item in their present-day lives. Elaborate that in it they should draw a picture of something that we use today that is similar to the forest product from long ago. For example, students would match up the birch bark (resource) with the canoe (product of the past), glue them down, and then draw in a modern-day boat or kayak (product of present). Hand out Student Page  **4, Forest Resources Worksheet**, to each student. Have the students choose two pairs of “A” and “B” cards and glue their pieces onto the sheet. Allow and encourage creativity in this task. As students work on this project, circulate around the room to see that students are on track and making connections between forest resources and forest products. Assist as needed to facilitate understanding.
- When students are finished, gather the group in a circle with their finished Student Page  **4, Forest Resources Worksheet**. Allow students to share their favorite picture that they drew. Encourage them to explain how their product of today is similar to the products that Native Americans and European settlers from a long time ago used. Question students, when appropriate, about which products of today still contain forest products in them. Explain that some of the products of the past are still used today (*for example, maple syrup*). (NOTE: There are also some traditional items skills/knowledge used by early Native Americans and European settlers that are sought after and recreated by those who seek to maintain the traditions.) Once everyone has shared, collect these pictures and display them on a bulletin board titled “Forests for All: Past and Present!”

“For in the true nature of things,
if we rightly consider,
every green tree is
far more glorious
than if it were made of
gold and silver.”

★ Martin Luther ★



Conclusion - Forest Products

1. Have a paper bag with a few forest products in it ready for the group. Discuss the things that the students use every day that are from the forest. First pull out or point to a product made of wood that is easily recognizable. (*A wooden box, small piece of lumber, wooden spoon, pencil, wooden furniture in the room, toothpick.*) Explain that sometimes forest products are used to make items that look like wood, so it is easy to notice this.
2. Next, move on to something that is not wood but that students may easily associate with a forest or tree. (*Apple, cherry, plum, black walnut, maple syrup.*) Sometimes products aren't made from the wood of a tree but grow on the tree.
3. Finally, take an item out of the bag that isn't as obviously a forest product. (*Paper, book, magazine, tissue, paper towel, cardboard box.*) Sometimes forest products look very different from wood or trees. The trees may have been cut up into lots of pieces and put back together in a different form.
4. Tell the class that sometimes only part of something we use is from the forest. It is invisible to us, but it is there. (*Use a crayon or toothpaste as an example.*)
5. Have students draw a picture of a forest product that they use often. Tell them that you don't expect them to know about the things that have invisible forest products in them. They can draw things like the other examples you showed them.

CAREERS

The career profile in this lesson is about Linda Struye, owner of The Little Farmer orchard in Malone, Wisconsin, and is found on page 62. A careers lesson that uses this information begins on page 80.

SUMMATIVE ASSESSMENT

Show students Student Page  **1, Native Americans**, and Student Page  **2, European Settlers**, again. Point out the children playing the stick game in the Native American picture and the wooden buckets in the European Settler picture. Ask students to find equivalent items that they use in the classroom (e.g., games and containers). Discuss whether those items are made of wood today.

SOURCES

- Culin, S. (1992). *Games of the North American Indians* (Vols. 1 and 2). Lincoln, NE: University of Nebraska Press.
- Densmore, F. (1974). *How Indians Use Wild Plants for Food, Medicine and Crafts*. New York: Dover Publications, Inc.
- Jones, E. T., McLain, R. J., & Weigand, J. (2002). *Nontimber Forest Products in the United States*. Lawrence, KS: University Press of Kansas.
- Loew, P. (2001). *Indian Nations of Wisconsin*. Madison, WI: Wisconsin Historical Society Press.
- Sloane, E. (1965). *Reverence for Wood*. New York: Ballantine Books.
- Strathe, S., Hylla, N., Kiser, S., Boyd, E., & Dreier, P. (2000). *Wisconsin Forestree – Bridging the Gap Between Environment and Economy*. Central Wisconsin Environmental Station.

Career Profile

Linda Struye, Apple Orchard Owner and Manager

This is Linda Struye. Linda is an apple orchard owner and manager. An apple orchard is a place where rows and rows of apple trees grow. The apples you get from the store grow in apple orchards. Linda has 18 acres (that's about 18 football fields) of apple trees growing on her land. Linda also grows pumpkins to sell.

An apple orchard owner/manager has to do a lot of different things. To take care of the apple trees, Linda cuts branches, picks up brush, and makes sure no bugs hurt the apples. She hires people to help her pick the apples, put them in bags, and sell them. She also has to keep track of the money that comes from selling the apples.

Linda grew up on an apple orchard, so she learned a lot about them when she was a kid. In order for Linda to be an apple orchard owner and manager, she went to college and learned how to run a business. Linda goes to meetings with other orchard owners to learn new things about taking care of trees. She also takes classes that give her ideas about how to sell apples.

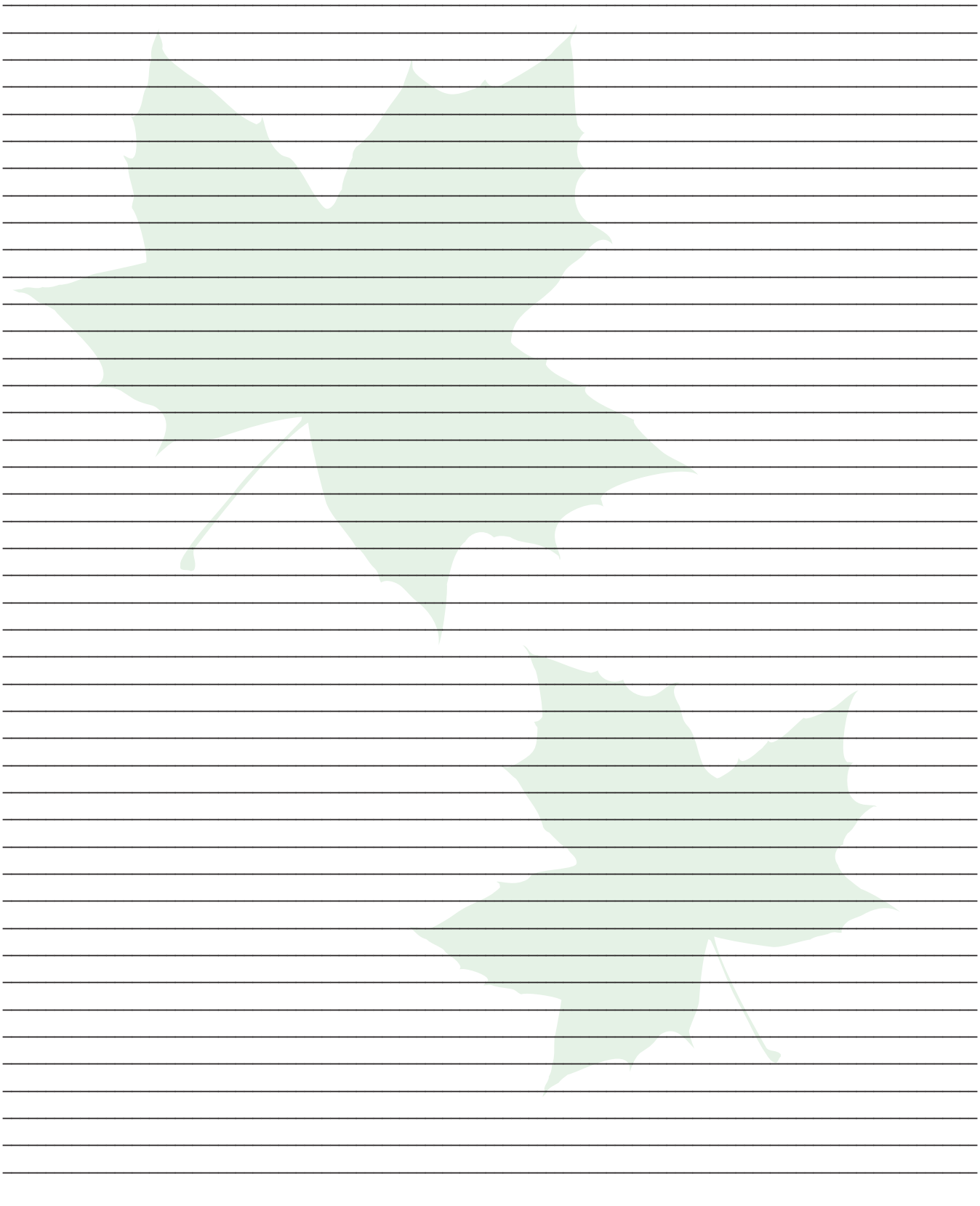
Linda says that her favorite part of her job is that she gets to do something different every day.

If you want to become an apple orchard owner/manager, Linda says that you should learn to listen and enjoy talking to other people. She also says that you should learn whatever you can about apple orchards now and work at one when you are old enough to get a part-time job.



This is Linda with one of her apple trees.

NOTES



The page features a series of horizontal lines for writing. Two large, light green maple leaf illustrations are overlaid on the lines. One leaf is positioned in the upper left quadrant, and the other is in the lower right quadrant. The leaves are semi-transparent, allowing the lines to be seen through them.

NATIVE AMERICAN RESOURCES KEY 🍏🔑

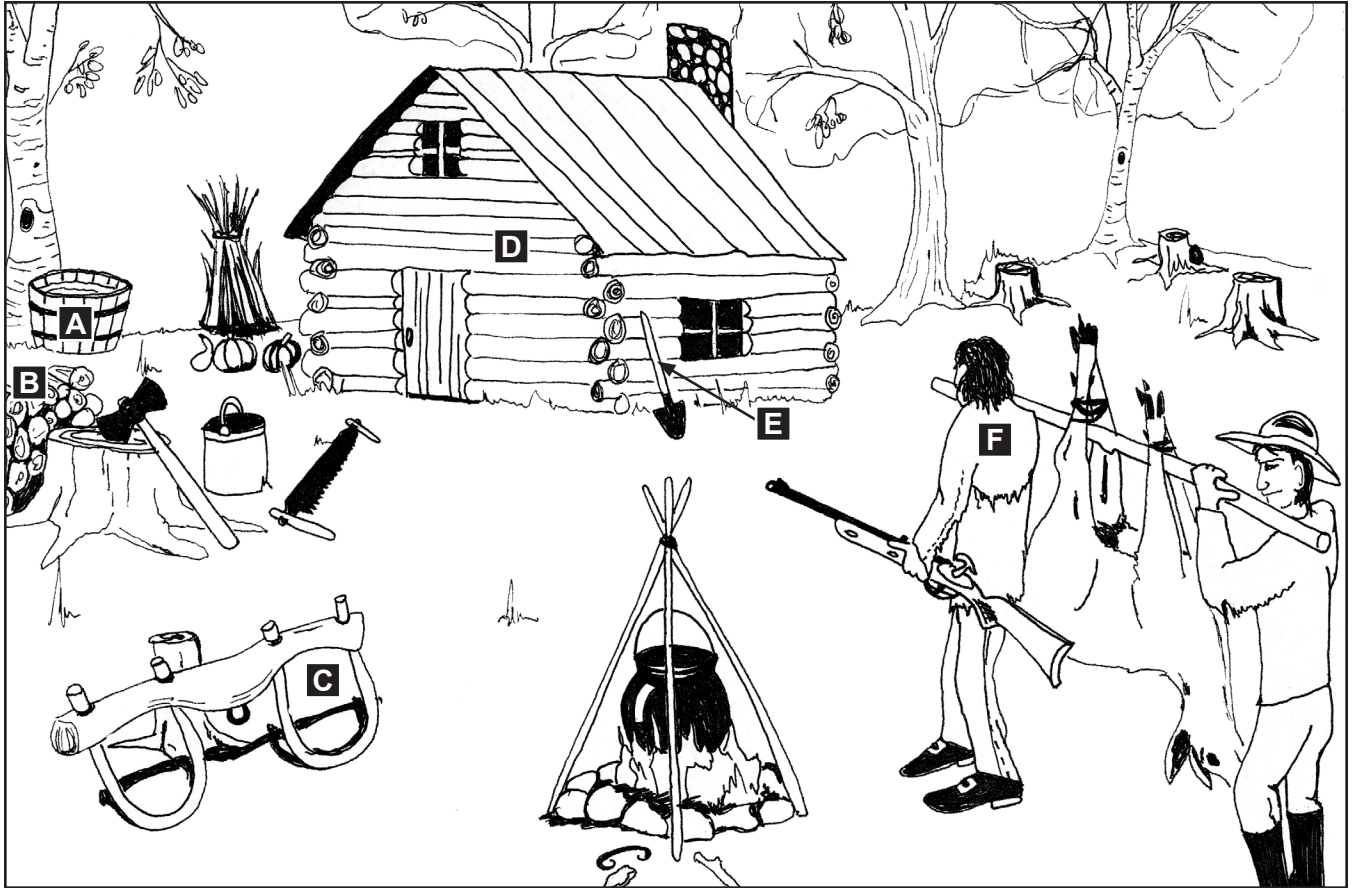


What is it? What is it made from? What is it used for?

- A. Firewood:** Came from all types of trees surrounding the area where people lived. Used for fires necessary for cooking and warmth.
- B. Stick Game:** Sticks were carved from branches from all types of trees. Children used materials from the natural world around them to make toys and games.
- C. Birch Bark Canoe:** Made of bark from birch trees, tied together with roots, and sealed with pine sap. Canoes were necessary for water travel and transportation of goods.
- D. Canoe Paddle:** Carved from a variety of hard woods. Used to paddle birch bark canoes.
- E. Basket:** Woven from branches, strips of wood, or pieces of birch bark. Used to carry and store items.
- F. Bow Drill:** Made from wood and animal hide. Used to start fires.
- G. Animal Hide:** From deer, bear, or other animals' tanned hide. Used for clothing, moccasins, blankets, and many other items.
- H. Wigwam:** Wigwams were made by bending young trees to form the round shape of the home. Over this shape pieces of tree bark were overlapped. Over the bark a layer of thatch, or dried grass, was added. Used as shelter.
- I. Bow and Arrow:** Carved from wood, with a string made from animal parts, and stone arrow points. Used to hunt animals and for protection.
- J. Deer Antler:** Shed yearly from male deer. Used as a tool for punching holes and scraping or digging holes.
- K. Maple Syrup:** Made from the sap of maple trees. Used for food.

Teacher Key 🍏🔑1

EUROPEAN SETTLER RESOURCES KEY 🍏🔪



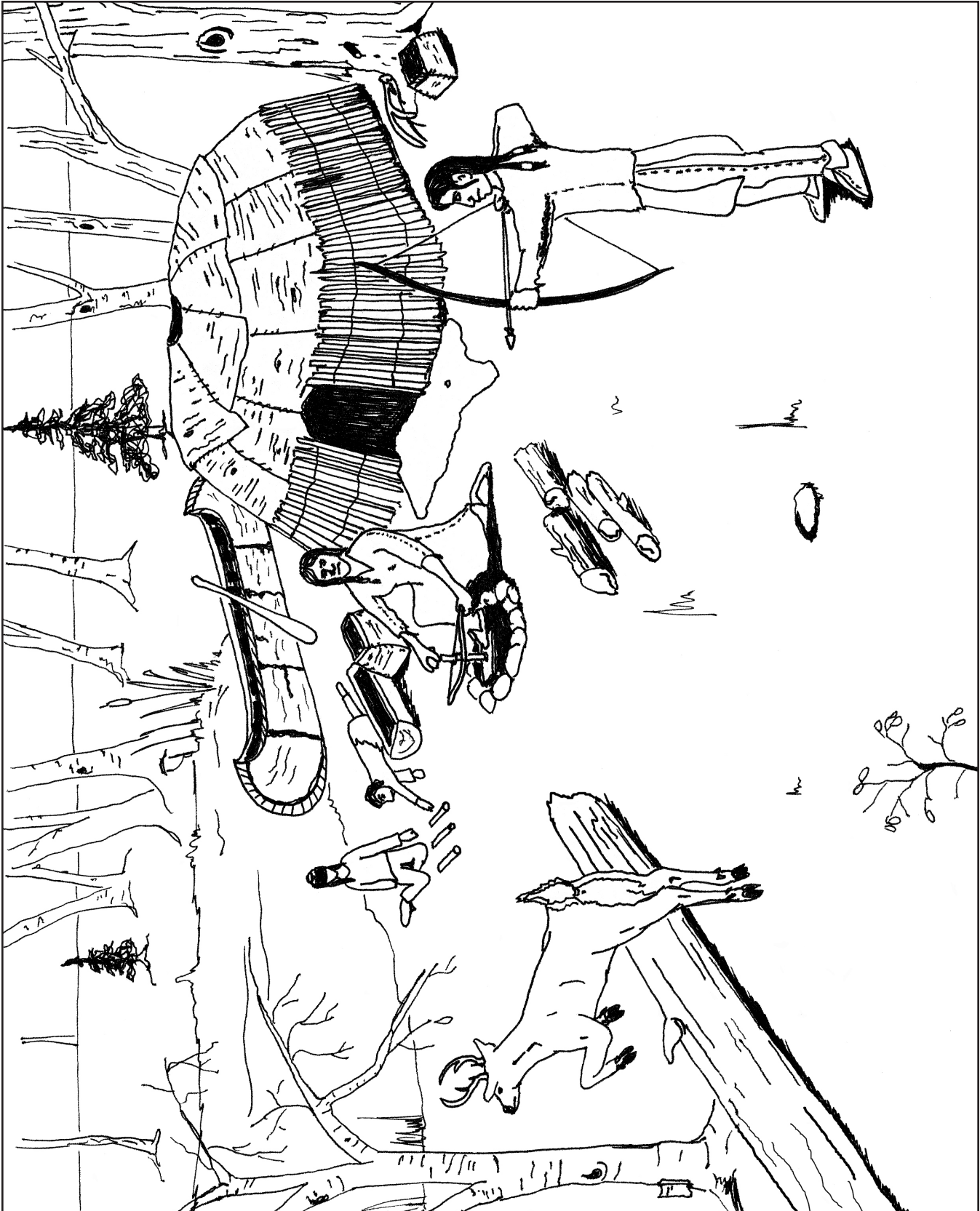
What is it? What is it made from? What is it used for?

- A. Tub/Bucket:** Made from wooden slats. Used to hold water for bathing, washing clothes, carrying food, or storage.
- B. Firewood:** Came from all types of trees surrounding the area where people lived. Used for fires for cooking and warmth.
- C. Yoke:** Carved from wood. Placed on oxen so they could pull wagons or plows.
- D. Log Cabin:** Made from tree trunks. Used for shelter.
- E. Shovel Handle (axe, saw, other tool handles):** Carved from wood. Used with metal shovel head that the settlers brought with them.

- F. Clothing:** Made from deer or other animal hide. Most clothing items were made from leather until cloth became available.

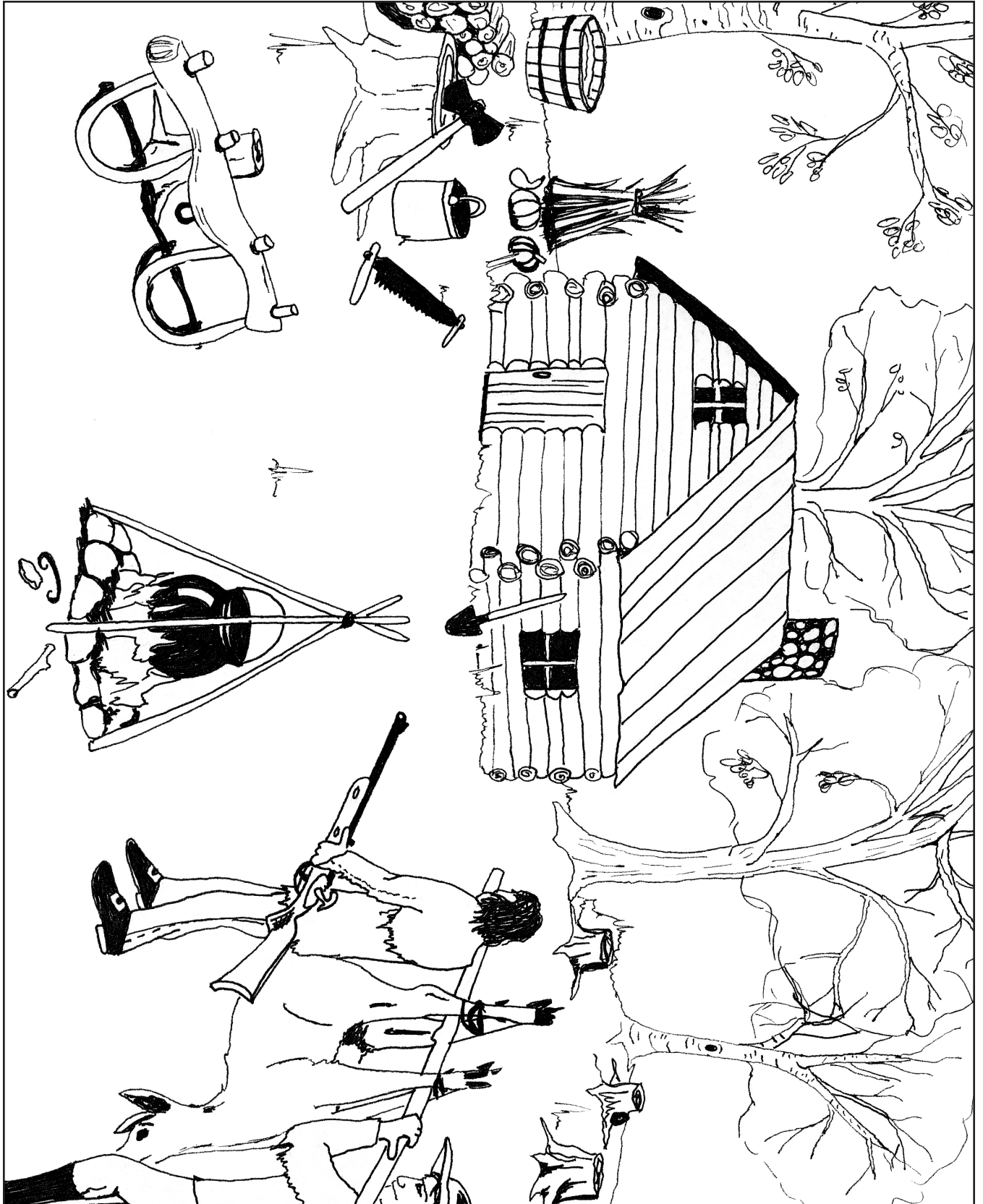
NOTE: There are many items in the picture that the early settlers did not get directly from the forest but brought with them from their home countries. A few of these items include the steel (used with stone) for fire starting, the iron kettle and stand, shovel, axe, saw blade, and gun. They also brought some seeds for squash and pumpkins with them.

NATIVE AMERICANS



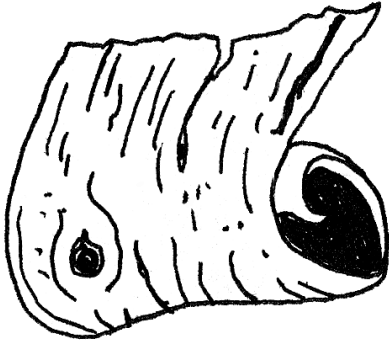
Student Page 1

EUROPEAN SETTLERS

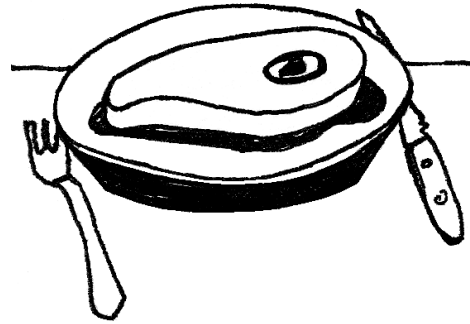


FOREST RESOURCES CARDS

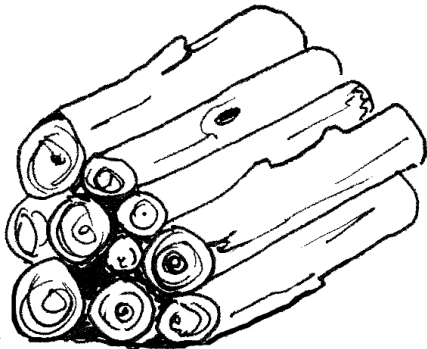
A



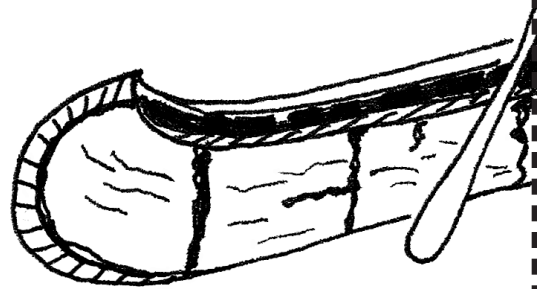
B



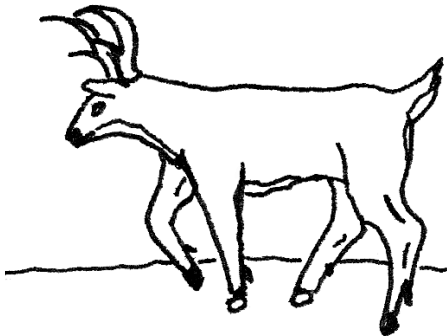
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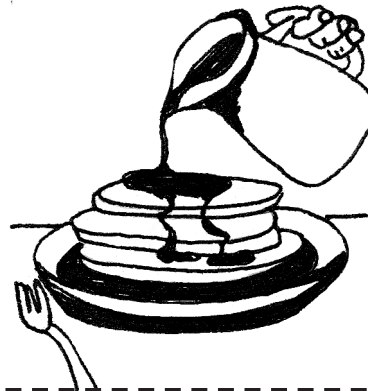
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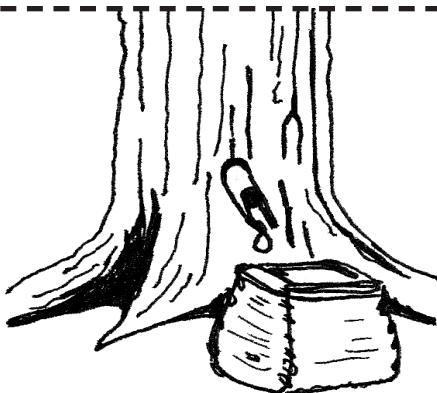
A



B



A



B



FOREST RESOURCES WORKSHEET

(Resource Card A)

(Resource Card B)

(Present-day Product)

(Resource Card A)

(Resource Card B)

(Present-day Product)