

WOOD IN OUR LIVES

(Modified for ADEED)

This Alaska Department of Fish and Game lesson has been selected for Yukon Flats School District use by a team of education specialists at the University of Alaska Fairbanks Geophysical Institute.

The lesson addresses the following Alaska Grade Level Expectations:

Science

[3] SC3.1 The student demonstrates an understanding that all organisms are linked to each other and their physical environments through the transfer and transformation of matter and energy by identifying and sorting examples of living and non-living things in the local environment (L).

[3] SA1.1 The student demonstrates an understanding of the processes of science by asking questions, predicting, observing, describing, measuring, classifying, making generalizations, inferring, and communicating.

[3] SE2.1 The student demonstrates an understanding that solving problems involves different ways of thinking, perspectives, and curiosity by identifying local tools and materials used in everyday life (L).

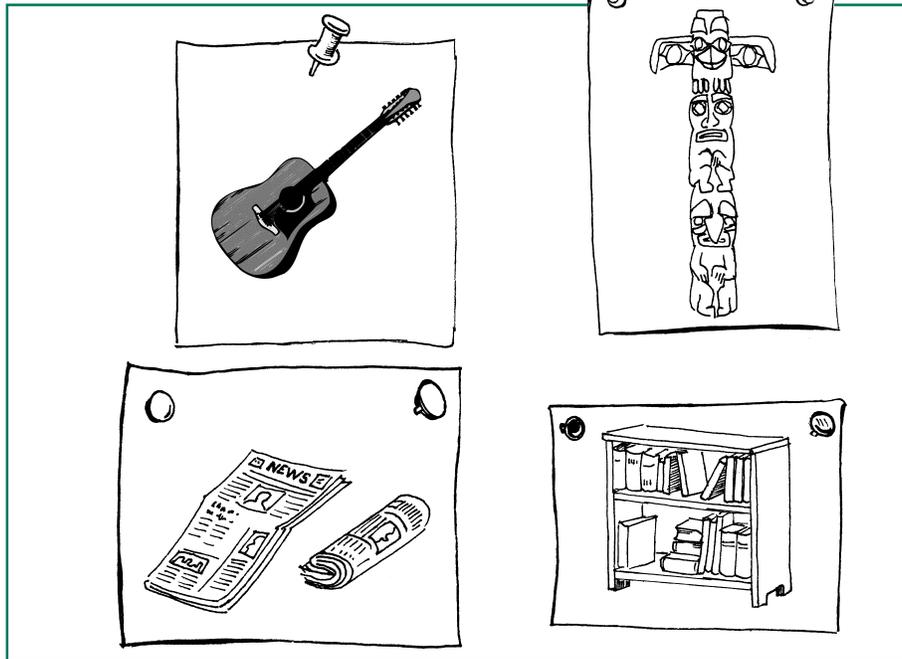
[3] SG4.1 The student demonstrates an understanding that advancements in science depend on curiosity, creativity, imagination, and a broad knowledge base by asking questions about the natural world.

Added Materials

Alaska Ecology Cards

Wood in our Lives

5 EXTENSIONS



Section 5 FOREST ACTIVITIES

Grade Level: K - 6

State Standard: Geo E-1

Subjects: Social studies,
language arts

Skills: Decision-making,
observing, comparing,
classifying

Duration: 30-60 minutes

Group Size: Small group
followed by whole class

Setting: Indoors

Vocabulary: Cellophane,
rayon, renewable resource

Objectives:

Students will name at least 10 ways that we use wood in our lives.

Teaching Strategy:

Students search their school and home environments to find ways that wood is used. Students find samples and pictures and make a display board.

Complementary Activities:

INDOOR: "Paper Making" and "Voices of the Woods" in this section

Materials:

For each group of older students: paper, pencils, tagboard or large pieces of paper. For younger students: bulletin board, magazines for cutting pictures, scissors.

Background:

See INSIGHTS, Section 5, Human Uses and Impacts: "Wood in Our Lives: Alaska Trees – Wood Products" fact sheet.

Procedure for younger students:

1. Conduct a class discussion about forest products, focusing on where wood is found in nature. Discuss why trees are important to us as part of our natural environment.
2. Students look around the classroom and note things that are made of wood. Create a list of all of the things in the classroom made from wood or wood products. *Add things to the list that perhaps are not as obvious, such as paper, pencils, and boxes.*
3. Ask students to look around their home and identify one item made from wood and used frequently. They can bring a sample of the wood product, draw a picture of it, or cut a picture from a magazine.
4. The next day, collect the items and pictures and make a display showing the ways that wood is used in our lives. *As an extension*, students classify their products into groups of similar items.

Procedure for older students:

1. Discuss the importance of trees as part of our natural world.



2. Discuss how trees provide many products that we use every day. Students may think of lumber, but remind them that wood pulp is another form. Discuss uses for wood pulp such as **rayon**, **cellophane**, and additives in food products.

3. The class lists items in the classroom that are made from wood. Model the skill of classifying these items into such categories as school supplies, furniture, etc.

4. Assign small groups to find the many ways wood is used in our lives. Provide magazines and have students create a collage poster of the varied uses of wood. On the back of the posters ask them to list the uses in categories (*furniture, houses or shelters, etc.*) Encourage the use of encyclopedias or alternate resources to find additional unusual uses.

5. Students present the posters to the class. See how many categories of uses for wood the class can create.

6. Conclude the lesson with a discussion of other resources that could be substituted for wood. For example, could we build our houses effectively out of other resources? Is there a substitute for paper products?

Evaluation:

Students name at least 10 ways in which we use wood.

EXTENSIONS:

A. **Research wood substitutes.** Students research other products that replace wood in our lives. For example, explore the idea of building homes out of adobe, cement, or straw bales.

B. **List ways to reduce personal wood consumption.** Students list all the ways they can replace wood products used at home (for example, using cloth napkins instead of paper napkins).

C. Compare historic and current uses of wood.

Using Eric Sloane's *Reverence for Wood* or Cameron Miller's *Woodlore* compare the ways we use wood today with the ways people used wood 100 years ago.

D. Research local use of recycled wood products.

Students visit the grocery store in search of recycled wood products, finding and recording as many items as they can that use recycled packaging.

E. Rank wood items on a scale of importance.

Students evaluate categories of wood products commonly used in their lives, rating each in terms of necessity for human survival on a scale of 1-10.

Curriculum Connections:

(See appendix for full citations)

Books:

Apple Trees (Patent)

Christmas Tree Farm (Jordan)

From Tree to Paper (Davis)

The Life and Times of the Apple (Micucci)

Lorax (Seuss)

Timber (Jasperson)

Woodlore (Miller)

Media:

The Lorax (Video)

Teacher Resources:

(See appendix)

Historically, forests have been used for objects that we wouldn't recognize today. Early versions of chewing gum and rubber tires both came from trees. Today we use other materials.



FOREST FACTS - WOOD IN OUR LIVES

Ever since earliest time, humans have used trees for shelter, weapons, heat, utensils, toys, transportation, building material, and art. Wood is valuable because it has so many uses and because it is an organic, **renewable resource**.

Forests Shrink as Population Expands. As our human population increases, our demand for wood and wood products grows. Are the forests expanding at the same rate as our population, or are they shrinking?

Recycling to Conserve Forests. People are searching for substitutes for wood to ease the

pressure on forests. Some wood products – paper and cardboard – can be **recycled**.

Searching for Substitutes. Plastics and other petroleum-based products can be used as some substitutes. Although petroleum is a non-renewable resource, the good news is that some plastics are recyclable – milk jugs, for example, can make indestructible boards for wet environments.

How to Achieve Balance? We need trees in forest ecosystems and for wood products. Our challenge is to achieve a balance.

Alaska Trees – Wood Products

BIRCH

Bowls	Flooring
Cabinets	Veneer
Matchsticks	Toothpicks
Tongue depressors	Golf tees
Dowels	Pulp
OSB (<i>particle</i>) Board	Firewood

COTTONWOOD/POPLAR

Cabinets	Bridges
Pulp	Pallets
Old-fashioned fruit baskets	Veneer

SPRUCE

Pulp	Lumber
Railroad ties (<i>when treated</i>)	Bowls
Bridges (<i>when treated</i>)	House logs
Musical instruments (<i>Sitka spruce mostly</i>)	Airplanes
Scaffolding	Canoe paddles
Fish containers	Boats
	Firewood

WESTERN HEMLOCK

Pulp	Veneer
Lumber	Railroad ties
Cabinets	Flooring
Furniture	Broom handles
Poles	

ALASKA YELLOW CEDAR

House construction	Cabinets
Decking	Trail planks
Poles	Bridges
Boats	Furniture

WESTERN RED CEDAR

Chests	Canoes
Basket weaving	Shingles
Fence posts	
Lining for inside clothes closets	

