



Lesson 3

Nature's Treasure Chest

Objectives:

1. To understand and appreciate the variety of forest products that we all use in our everyday lives.
2. To appreciate wood as one of earth's renewable, recyclable, and biodegradable resources.
3. To learn how paper is made.

Subjects:

1. Consumer Awareness
2. Science
3. Reading / Language



Vocabulary:

1. **Natural Resource:** material we use from our environment for housing, clothing, food energy, etc. Natural resources can be classified as renewable or non-renewable.
2. **Renewable Resource:** has the capability of replenishing itself in a human lifetime. For example, if a tree is harvested, it will regenerate from a seed that was dropped from a cone or planted by a human.
3. **Non-Renewable Resource:** exists in a limited amount that takes thousands of years to replenish. Examples are fossil fuels like coal, oil and natural gas.



Focus:

1. Establish the concept of the word "paper" by identifying the Latin word "papyrus" named after the Egyptian reed from which paper was first made. Ask the students if they can guess how paper is made today. Ask them to think of some of the things they know are made from wood. Make a list of their answers on the board.
2. Establish the value and variety of forest products by having the students read the story **Nature's Treasure Chest**. After they have finished reading it, have the students circle or highlight all the wood products that they can find in the story. Review with the class the answers and explanations of the many surprising products derived from wood.



Did you know that each year, each Californian uses the equivalent in wood products of a 100 foot tall tree, 16 inches in diameter? California foresters follow strict laws that ensure we do not harvest more trees than we grow. This is called **sustainable forestry**. We actually plant an average of 5 to 7 trees for every one harvested.

4. **Recyclable:** being able to be utilized again, often by being restructured into something else.
5. **Biodegradable:** being able to be broken down or decomposed by natural means.
6. **Cells:** the basic building blocks of living things.
7. **Cellulose:** the material that makes up plant cell walls.
8. **Fiber:** thin threads that bind together to form animal and plant matter.
9. **Lignin:** the sticky substance that binds plant cells together.
10. **Pulp:** the mash that forms when wood chips are cooked.

VOCABULARY

Enrichment Activity:

1. Make recycled paper as a class project. Instructions are included below. The students may take home the instruction sheet and work the project at home with their families.
2. Make a greeting card out of recycled paper. Students can draw designs on their finished paper. Use a glue pen to write a message or design a border and then sprinkle with glitter. Punch a hole in the corner and run curly ribbon through it to form a gift tag, if preferred.

ASK STUDENTS: Is paper made from a renewable or non-renewable resource? Explain your reasoning.
*Recycling or reusing resources decreases waste in landfills and decreases the demand for that resource.

Making Recycled Paper..

~Ingredients~

- Large square pan, about 3 inches deep
- 3 cups of water
- A whole section of newspaper
- A rolling pin, or a liter glass beverage bottle, or...
- a plastic pipe, tube, or any cylinder to roll with.

STEP 1

Tear 1-2 pages of newspaper into small pieces of 1 inch or less.



STEP 2

Put the paper chips into a large bowl and add all the water to it. Keep adding paper, tearing it and squeezing it, until the mixture looks like thick oatmeal.

STEP 3

With the pan turned UPSIDE DOWN, place about 1 cup of the blended pulp over the bottom of the pan. Spread it with your fingers evenly across the entire area.



STEP 4

Lay several sheets of newspaper over the pulp, then carefully turn the pan over. Remove the pan. Your pulp "square" is now sitting on the newspaper.

STEP 5

Close the newspaper over the pulp. Using the rolling pin, roll over the newspaper to blot out the extra water.



STEP 6

Uncover and let the new "paper" dry COMPLETELY. When it is thoroughly dry, peel your new "recycled paper" away from the newspaper.

It can now be cut to any size and used to make a variety of things!

