



# forests up-close

## The Many Uses of the Forest



Canada's forests produce wood that can be used both as lumber for construction and pulp for making paper. The forests also provide us with other useful products that are referred to as non-timber forest products.

Today, forest products make up a large part of Canada's economy. Canada produces 34% of the world's pulp and paper and exports to over 100 countries. In Canada, 23 newsprint mills are set up for recycling.

Paper making is an ancient process that has retained its methods for over 2000 years. Ts'ai Lun, a member of the Chinese court was the first person recorded to make paper in 105 AD. In 1150 the first papermaking mill (in Spain) was opened. Since then, paper has spread all over the world and has many uses.

Did you know that a cord of wood (3.5 m<sup>2</sup>) can produce almost 700 kg of paper?

**Did you know?**  
To learn more about ground hemlock (*Taxus canadensis*) visit [www.atl.cfs.nrcan.gc.ca](http://www.atl.cfs.nrcan.gc.ca)



- Non-timber forest products include:**
- Maple syrup
  - Edible mushrooms
  - Herbs
  - Balsam fir tips – for Christmas wreaths
  - Berries
  - Wildlife

Ground hemlock (*Taxus canadensis*) is a special non-timber product that is the subject of much research at the Canadian Forest Service. This small shrub is the active ingredient in the anti-cancer drug Taxol®. Ground hemlock has compounds called taxanes that are used to fight more than 20 cancerous and non-cancerous diseases.

### Pan-Canadian Learning Outcomes:

**Grade 3: 102-12** describe ways in which plants are important to living things and the environment

**102-13** identify parts of different plants that provide humans with useful products, and describe the preparation that is required to obtain these products and how our supply of useful plants is replenished

**Grade 4: 301-1** predict how the removal of a plant or animal population affects the rest of the community

**302-1** identify a variety of local and regional habitats and their associated populations of plants and animals

**302-3** classify organisms according to their role in a food chain

**Grade 7: 306-1** describe how energy is supplied to, and how it flows through, a food web

**306-2** describe how matter is recycled in an ecosystem through interactions among plants, animals, fungi, and microorganisms

**304-2** identify the roles of producers, consumers, and decomposers in a local ecosystem, and describe both their diversity and their interactions



## How Can I Make Paper?



### Materials Needed:

- Scrap paper
- Egg cartons, or other tree-based products
- Newspaper
- Water
- Towels
- 8 x 8 inches (20 cm) window screening
- Scrap wood
- Nails
- Hammer
- Scissors
- Large plastic tub
- Blender

### Directions:

1. Make a mold by framing a piece of screen with scrap wood.
2. Tear scrap paper and egg cartons into small pieces.
3. Fill blender half-full of water.
4. Add a few pieces of paper and mix at low speed.
5. Add more paper until the mixture is a pulpy soup.
6. Pour pulp in the dish tub (3/4 full).
7. Petals, small leaves or glitter can be added to the pulp for extra interest.
8. Dip screened mold into pulp.
9. Move the screen back and forth in a sifting motion to form an even layer of pulp on the screen.
10. Hold the mold over the tub to drain excess water.
11. Slip the screen between layers of newspaper.
12. Slide the newspaper between folded towels.
13. Press evenly to remove water from the pulp paper.
14. Open the towel and newspaper from the pulp paper.
15. Place a dry sheet of newspaper over the pulp paper.
16. Carefully turn the pulp paper onto the dry newspaper.
17. Set in a warm place to dry.