

# Paper Making

## Objective:

Students will demonstrate ability to follow a procedure to create paper. They will be able to discuss and understand the resources involved in paper making.

## Method:

Students will use materials and tools and by following instructions will conduct an experiment to make paper. Using various sources students will discuss and report on stewardship and sustainability of natural resources and Aboriginal contributions.

## Learning Skills:

Following procedure; research; analysis

Age: Intermediate

Location: Classroom

## Preparation:

You will need (per group): an adult to help with the ironing and cleaning up; some white paper (about five sheets); water; 2 tea-towels or thin cloths; a blender or food processor; 2 wooden frames of the same size – old picture frames can be used; window screening; a stapler.

## Suggested Instruction Strategies:



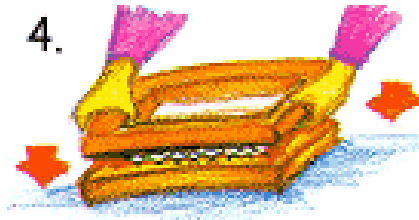
1. Tear the paper into small pieces and place them in the blender container with hot water. Let the paper get soggy.

2. While the paper is soaking, staple the screening around the outside edges of one of the frames.



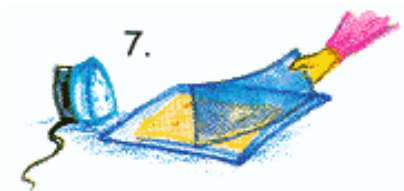
3. Blend the paper and water thoroughly. This mixture is pulp. Pour the pulp into a large basin, and add some more water. The pulp and water should be a thin, soupy mixture. You may have to experiment to get the right consistency.

4. Place the two picture frames together as shown, with the bottom frame placed so that the screening is on top, against the upper frame. Holding them together, dip the frames into the pulp, and move them until you have an even layer of pulp on the screen. Then lift it out of the mixture.



5. Let the excess water drain back into the basin. You will see your piece of paper forming on the screen as the water drains away.

6. Remove the top frame. Quickly turn the screened frame upside down on the tea towel. You may have to press on the screen to get your paper to come off.



7. Place another tea-towel on top, and iron it to press and dry your new piece of recycled paper.

*You can add all sorts of things to your mixture before you blend it to make your paper more interesting. Try adding flower petals or grass. Or start out with different qualities of paper, such as newspaper, or a brown manila envelope (kraft paper) or tissues. Which one makes the strongest paper?*

#### **Extensions:**

- i. Think of ways in which paper is used in your community and in the world. Who would use hand-made paper? How do other cultures make paper (i.e. Japanese rice paper)?
- ii. Discuss the role of recycling in conservation. Are there any drawbacks to recycling? (i.e. trucks pollute while collecting blue boxes, recycling factories, etc.)

- i. Indigenous people used different trees and plants to make dyes and paints for face painting and baskets. Did any of the plants you used change the colour of the paper?
- ii. How does the production of paper affect animal habitat?
- iii. Research topic: What native groups in BC used plant dyes for which products? Invite an Indigenous elder into the classroom to demonstrate.
- iv. Research topic: Where did the first paper originate? Who made it and with what material? How have advances in technology affected the production of paper?

***Suggested Assessment Strategies:***

- Produced paper by following procedure
- Ability to research topics using various sources and present the information in a comprehensive written or oral report format
- Observe classroom participation and teamwork in use and care of materials, tools and work space
- Consider originality of paper product and use of alternate materials
- Participation in classroom discussion during extensions

***Links:***

- UBC Pulp and Paper Centre [Early Years](#)
- [papermaking for kids](#)
- [Boston Museum – how to make paper](#)
- [Tinkerlab – how to make paper](#)
- [FP Innovations](#) (non-profit research lab housed at UBC with offices across Canada)
- [Forest Academy – Recycle paper](#)
- [Canadian Pulp and Paper Association](#)

*Activity courtesy of Canadian Council of Forest Ministers and modified by FORED BC*