

Homemade Paper

Explore how used paper can be recycled into new paper.

Big Idea

Some material, like paper, can be recycled to make new products.

Standards

1.A.ECa Follow simple one-, two- and three-step directions	Children will be able to follow the directions to make paper.
4.A Listen effectively in formal and informal situations.	Children will be able to listen to directions and information as they make paper
6.A.ECa Count with understanding and recognize “how many” in small sets up to 5.	Children will be able to count the marbles as they add and remove them from the pour method.
11.B Know and apply the concepts, principles and processes of technological design.	Children will explore hands on the technological design of paper.

Setup

Find a clean space to work either a table or a floor area and cover it with plastic by cutting up a trash bag. One may want access to a sink to wash hands.

Directions

Screen & Rolling Method:

Materials

- Paper (newspaper, junk mail, yellow pages, paper bags, colored construction paper, old homework—maybe not the glossy magazines)
- Buckets
- Wire whisks
- Measuring spoons
- Pieces of screen (about 6” across)
- Rolling pin

1. Tear newspapers into small pieces, filling bucket half full.
2. Add water and let it sit for at least two hours.
3. Beat the mixture into a creamy pulp with the wire whisk.
4. Submerge the piece of screen in the pulp and mix again. Repeat until the screen has about 1/8” thick layer of pulp.
5. Lay the pulp covered screen on newspaper and cover with plastic wrap.

6. Press out the excess water with a rolling pin and set the screen up so that the air can dry the pulp.
7. When dry, peel from the screen. Paper can be painted or decorated.

Directions Pouring Method (as seen in video)

- Materials
 - Plastic jar with lid
 - Marbles and a bowl to contain them
 - Non bleeding tissue paper
 - (2) 5 inch PVC pipes
 - Plastic support grid
 - Blue paper making screen
 - Cover screen (similar to light window screen)
 - 1 6x6 piece of card stock
 - Small damp sponge
 - Small bucket of water and cup for filling the plastic jars
 - Small lunch tray with a lip (to hold water)
 - Sandwich size plastic baggies
 - Shammy
1. To begin the pour papermaking process, start by building your paper making tower on a tray to catch the water. The tower is constructed in this order: PVC pipe, plastic support grid, blue papermaking screen with the second PVC pipe completing the tower.
 2. Choose two different colors of the half sheet tissue paper. Tear tissue into one inch squares and put into the plastic container with 7-8 marbles and a half cup of water. Tighten the lid and shake for about 3 minutes until the tissue pieces disperse into the water to create a slurry. Observe the color combinations as the two colors blend.
 3. Open the jar and remove the marbles, placing them into a bowl to keep them from rolling away. Pour slurry slowly from the plastic container into the top of paper making tower. Wait for the water to drain then carefully remove the top PVC pipe.
 4. Lift the sandwich of the plastic grid, screen and newly made paper round to a flat surface. Place cover screen on top of paper round and gently press straight down, blotting with damp sponge. (Do not “scrub” surface.)
 5. Carefully remove the cover screen and replace with a piece of card stock. Lift sandwich of blue paper making screen, newly formed paper round and piece of cards stock— flipping this carefully onto drying shammy. Press with sponge again with sponge to remove excess water.
 6. Remove blue paper making screen and celebrate the newly formed paper round! Card stock supporting newly made paper round can then be place in a zip lock baggie for transport home. Instruct parent to remove from bag at home and place paper with card stock between newspapers with weight on top until dry. If using heat press: place paper between blotters and press until dry.

Investigation Questions:

Q. What is paper made out of? How is it made?

A. Paper is made from trees. A pulp is made from the wood of the tree. It is pressed together and dried.

Q. What happened to the paper pieces in the water?

A. The paper absorbs water and turns into a mushy mix, called pulp.

Q. What happened when the pulp was laid on top and dried?

A. It blended together to make new paper.

Q. Why did we roll a rolling pin over the pulp?

A. It pressed the paper pieces really close together so they stick to each other and squeezed out the excess water so it would dry better.

Q. Why do you think recycling is important?

A. Recycling helps us to use less garbage and cut fewer trees.

Q. How can we use this paper?

Lesson Extension: Visit [Treewispers.com](https://treewispers.com)

<https://treewispers.com/tree-rounds-handmade-paper/make-paper/>