

# MAKING HANDMADE PAPER

## KEY OBJECTIVES

1. Children will understand where paper comes from and what resources go into making paper.
2. With the help of a hands-on activity, the children will understand the science behind paper making and the steps involved in making paper.
3. They will learn the importance of waste segregation and learn to appreciate the value of paper.
4. Children will use natural materials like seeds, leaves, flowers etc. to make their own handmade paper.

## INTRODUCTION

Paper, as we know it today, has made a long journey before reaching us. Invented by the Chinese, in the 2nd century, by mixing hemp fibres and Mulberry bark in water to form the base pulp, paper making was a long process.

These days, however, it can be made much faster. But we still rely heavily on nature and its resources.

Cellulose fibres are extracted from various sources to form the pulp, which is then flattened, dried and cut into sheets/ rolls with the help of machines. Commercial paper making uses harsh chemicals and large amounts of water that results in contamination of our water bodies. Although a lot of our paper is recycled to make newspapers, paper towels and packaging materials, trees still play a huge role in paper making.

In this activity, children will learn about the science behind paper making. Children will make their own handmade paper using waste paper and other materials that are easily available.

## GUIDING QUESTIONS

1. Where does paper come from?
2. What did you see when you tore the paper? (Introduce cellulose and why fibres are important in paper making?)
3. Why are some types of paper smooth and others rough? (Explain the role of big fibres and small fibres in deciding the texture of paper)
4. Can we make paper from used paper? (Introduce waste segregation and Recycling)

## MATERIALS/ PREPARATION

- Old newspaper (about 4 sheets)
- A large mixing bowl
- Warm water
- A rag
- A thick bath towel
- A flat wide kitchen sieve (refer picture)
- A large rectangular or circular tray/ bucket (to comfortably accommodate the sieve)
- A tea towel
- A blender or a mortar & pestle (optional)
- Dried leaves/ flowers/ seeds
- This activity can be done in pairs, so that while one child holds the sieve over the tray, the other child squeezes out the water.
- Adult supervision is required to make sure the steps are followed correctly.

## CONNECTION TO SDGS



## TOPICS

CREATIVE EXPLORATION    PLANT LIFE

## CROSS LINKS

Waste Management, Art, Climate change, Natural life & resources

## KEYWORDS

RECYCLE    CELLULOSE    FIBRE  
 NATURAL RESOURCES    DEFORESTATION  
 WASTE SEGREGATION

## LEVEL

Elementary/ Primary

## RESOURCE TYPE

PROJECT

## INTENDED AUDIENCE SIZE

50

## MODE OF DELIVERY

Small group

## TIME FOR ACTIVITY

45- 60 mins

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## TASKS/PROCEDURE

Tear a sheet of newspaper and observe its edges. What do you see? (Paper is made from fibres). Now, let us use this concept and make our own paper. Tear up the old newspaper into small pieces and soak them in warm water for about 10-15 mins.

Once they are soaked well, mush them up really well with your fingers or use a blender to make a pulp. You can also use a mortar & pestle to grind it into a soft pulp. Place the flat kitchen sieve inside the large rectangular or circular tray. Put a layer of pulp onto the sieve (not too thick and not too thin) and flatten it with your palm to squeeze out as much water as possible.

Raise the sieve up carefully. While holding it raised in the tray, squeeze out more water from the pulp by pressing it down with your palm or use a rag cloth for this purpose. Now lay a bath towel on the floor and place the sieve on it. The children can now use dried flowers, leaves, seeds to decorate the pulp. Use the rag to press over the decorated pulp to ensure it is nice and flat and the decorations are well embedded into the pulp. (You may notice more water squeezing out, which will be soaked up by the bath towel). The pulp would now look less soggy and have a flat uniform shape.

Now, lay a dry tea towel on the floor and carefully flip the sieve onto the tea towel in one swift move. The paper would have detached from the sieve and fallen onto the tea towel. (If it is still stuck to the side, pat the sieve gently to release the paper)

Leave them to dry completely in the sun. Once dry, your handmade paper is ready to use.



*The type of flat kitchen sieve that works well for this activity.*

## FOSTERING DISCUSSION

Can we reduce deforestation if we use more recycled paper? Do you think people should plant more trees?

If paper is made from fibre, can we make paper from other things that have fibre in them?

(Give examples of paper made from dead leaves and elephant poo.)

What are the other things you can add to your paper other than dried flower and leaves?

(Give examples of types of natural food colouring they can use to make colourful paper)

## SAFETY INSTRUCTIONS

Do this activity in a clutter free area and on the floor (Water based activity). Adult supervision is recommended for this activity.

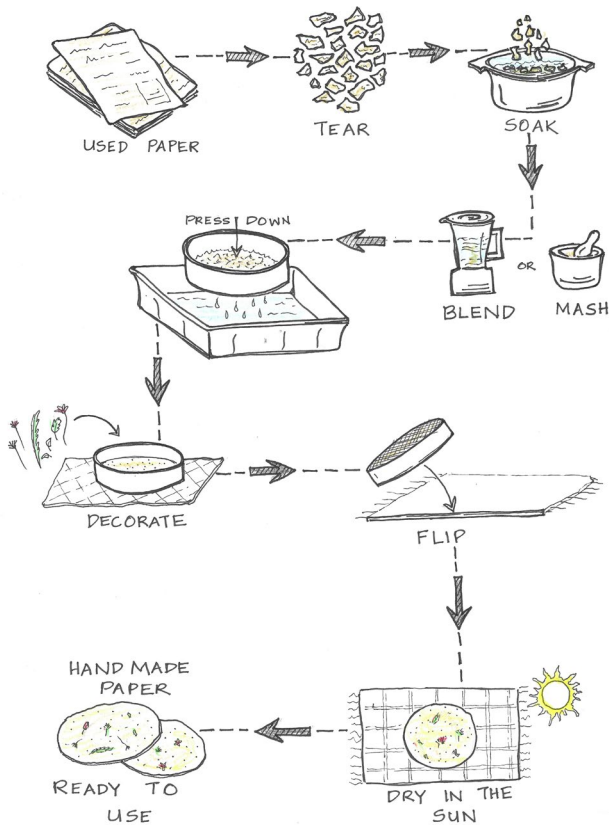
Ensure the water used is only warm, not hot. If using a blender, make sure an adult is performing this step.

Use a mortar & pestle under adult supervision.

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## POSSIBLE EXTENSIONS

Use your handmade paper to make something that you can use- paper plates, a book cover etc. Children could set up a checklist next to their waste bins at home, to record what and how much of waste goes into it. Roll old newspapers/ magazine sheets and glue them together to make bowls, trays and trinket holders- Upcycled paper products.



## AUTHOR

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