



SUPERSTAR

Recycle Reuse Organiser's Card



About the activity

The children have been asked to think about recycling paper, and to try and make their own paper.

Recycling paper is a way we can help the environment. While researching why and how we recycle, can the children recycle old scraps to make their own paper?

Through this activity you will support your group to:

- Think about why we recycle paper
- Try different ways of making their own paper by recycling waste paper
- Share their ideas with the group

Kit list

- Used paper e.g. newspaper, coloured paper, sugar paper
- Magnifying glasses or microscope
- Washing up bowls and warm water
- Hand whisks (PAT tested electric whisks or blenders can also be used) or mashers
- Metal coat hangers shaped into a rough rectangle covered with old tights or nylon stockings to make a sieve
- Absorbent material – e.g. blotting paper, layers of newspaper or cloth
- Rolling pins, bottles and/or iron (PAT tested) to help to dry the paper
- Starch (optional)
- Colouring, glitter, bits of foil etc. to add to the paper. Leaves, buttons, string etc. to place on top of the paper, before it is dried, to make patterns.
- Crayons, pencils etc.



What to do

1. Read the activity card to familiarise yourself with the activity.
2. Check the kit list to ensure you have the required resources.
3. Set the scene by discussing the article. What do the children already know about paper-making? Does the story give them some ideas?
4. Encourage the children in small groups to try to work out why there is a damaging effect on the environment by not recycling paper (see Background information).
5. Let children look closely at the fibres in different samples of paper (you could use a digital microscope to share images with the whole group).
6. Each group can make their own paper following the instructions provided.
7. Let children experiment on their own but give help to any children who seem to be struggling.
8. An iron can be used to speed up the drying process.
9. You or the children could take photographs of the process.
10. Give the children time to compare their paper samples and think about what has made a difference. Talk about which papers are good for recycling.
11. Children could display their paper once it is dry. They could write messages on it. Crayons and pencils are generally better than ink.
12. There are extra challenges on the activity card. These can be used if there is spare time or the children want to carry on investigating at home and earn a bonus sticker.



Things to think about

Homemade paper can take many days to dry naturally.

Ensure pulp evenly covers the frame.

If the pulp is very thick the paper will be lumpy.

Homemade paper is sometimes difficult to write on. It can be too bumpy and too absorbent.

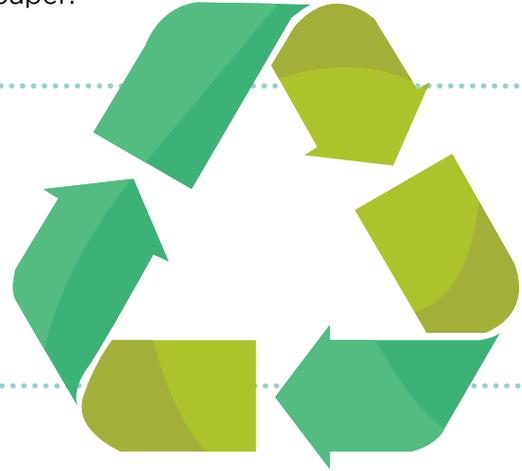
You can add a little starch to paper to improve its texture.



Take it further

Paper is made from cellulose fibre as well as wood pulp. It can also be made from straw, rags, grass, even elephant dung! In 2004, 74% of UK paper was recycled.

As paper is made from sustainable forests, recycling is carried out for environmental benefits, not to save trees. Paper in landfills produces methane, which is a potent greenhouse gas. Recycling 1 tonne of paper saves 30,000 litres of water, 3,000-4,000 kwh of electricity and 95% of air pollution, compared to the production of 1 tonne of new paper.



Keywords

- Paper
- Recycling
- Environment

Watch out!

Irons, electric blenders or whisks are best used by an adult. Keep the iron at a low temperature.





SUPERSTAR



Recycle Reuse

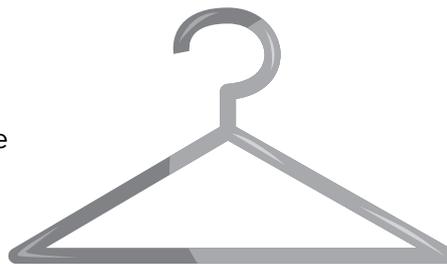
Activity Card



Paper was first created in China by Ts'ai Lun in A.D. 105. He mixed hemp, mulberry bark, and rags with water, mashed them, pressed out the liquid and hung it to dry. This humble idea has allowed people around the world to communicate ideas, share news and create works of art. But paper production has a major impact on the environment. It's time to take action! You can help by recycling.

Your challenge

Find out more about recycling paper and make your own paper by recycling waste paper.



Discuss

Why do you think it is better to recycle paper than to throw it in waste tips?

If you look at different types of paper with a magnifying glass or microscope, what can you see?

What kinds of paper do you think you could recycle?



Getting started

Tear old paper into small pieces, put in a bowl, cover with warm water.

Mash or whisk until it is like thick porridge.

Make a frame from a coat hanger and old tights.

Dip your frame into the liquid and make sure it is evenly covered with pulp. Let the water drip back into the bowl.

Put the coat hanger down on absorbent paper or cloth. Leave to dry.

To speed up drying, put another piece of paper or cloth on the top of the pulp and roll firmly with a bottle or rolling pin. Ironing it will help too. Ask an adult to help.

Your paper needs to be left to dry for at least a day before you try to write on it.

Test your ideas

Make a plain piece first, then try different ideas.

You could add colouring, seeds, glitter or other tiny items to your paper as you mix it.

You could put leaves, buttons, pieces of string or other interesting things on top of your paper to make patterns.

Share your ideas

Look at the different papers that have been made. How will you change what you do next time? You could make a display of the finished paper.

Extra things to do

How strong is your special paper?

Find out how much paper you use each day.

Find out more about how paper is recycled.

