

Paper Making

This lesson covers the process of how paper is made and how you can make recycled paper at home/school to save energy and materials.

Objectives

- To learn how paper is made.
- To understand why making recycled paper is better for the environment than using raw materials.
- To learn that the recycling process sometimes changes the properties of a material.

Lesson Outline

Paper making game:	Explain to the children that they will be playing a game to find out how paper is made. Act out making paper from raw material gathered in a forest.
	Pupils to come up to front and act out their labels (boss, tree, bulldozer, logger, lorry, de-barker, chipper, bleach, water, pulper, roller, lorry).
	Audience asked to think about what everyone is using (energy) and about other things that are being used.
	Same pupils act out making paper from recycled paper from the class. Which processes/materials don't we need any more? (tree, bulldozer, logger, de-barker, chipper). Do we need to add bleach? Environmentally preferable to omit. Do we need both lorries? Ask children to consider the differences between making new and recycled paper and the advantages of recycling.
	Demonstrate how to make a sheet of recycled paper. Use scrap/used paper rather than unused.
Children to make recycled paper:	Children to work in pairs to make a sheet of paper each. Paper can be placed on folded newspaper to dry.

Extension activity:	Completed paper could be used to make picture frames, bookmarks or make book covers, as a background for printing, painting, collage etc.
	Carry out an audit of paper thrown away from school.
	Find out what recycled paper can become.

Resources you will need:

- Labels for papermaking game.
- Equipment and instructions for paper making.*

*Attached below for printing.



Recycled Paper Making

You will need:

- 1 towel and J cloth per child.
- 1 sieve per pair.
- 1 tray of paper pulp per group.
- Newspaper.
- Shredded paper which has been soaked for a few hours or overnight- about half a black bag is enough for a class of 30 pupils.
- Some frames - ours are made from old tights stretched over old wire coat hangers which are bent into a square shape.
- Powder paint (or similar if you want to colour your paper).
- Optional glitter, threads, sequins, dried flowers etc to decorate the paper.
- Plastic containers (one per pair of children).
- A blender.
- Plenty of water.
- An apron to wear.
- Newspaper or card.

* If you use too much paper, too little water or run the blender for too long it will break! You could try using a hand whisk or even a mortar and pestle.

Instructions:

1. Put very small amounts (one handful) of soaked shredded paper into the blender with lots of water.* Whizz until the paper is mashed to the consistency of thick soup/mashed banana.
2. Place paper pulp with more water in a large tub (consistency of mashed banana). Mix in glitter and paint etc.
3. Hold the frame horizontally and push down to the bottom of the tub, lift it back up gently so that the paper pulp sits on the old tights and the water runs through. Hold it still, draining as much water as possible.
4. Place the net on a folded towel, cover with a j cloth and then the second folded towel.
5. Push down firmly with the flat of your hands, applying pressure so that the water is squeezed out. (Think CPR!).
6. Carefully peel back the top towel and J cloth.
7. Place a piece of card/folded newspaper over the paper pulp and then carefully turn the net and card over. So that your paper pulp is now on top of the card/newspaper.
8. Using your fingertips push down gently to release the paper.
9. Leave paper to dry. Make sure it sits on a flat surface, otherwise it will dry in a strange shape!