

ROBERSON MUSEUM AND SCIENCE CENTER

Post-Visit Homegrown: Making Recycled Paper

Grade Level: 7 through 12

New York State Learning Standards: MS&T 4, 7; Arts 2

Pennsylvania Learning Standards: S&T 3.2, 3.8; E&E 4.2, 4.8

Objectives: Students will learn about making recycled paper. Students will better understand how easy, effective, useful, and fun recycling paper can be.

Materials:

- Water
- Large container for soaking scrap pieces of paper
- Blender or whisk
- Leaves, glitter, or dye for added texture and color are optional
- Measuring cup
- Large square pan, about 8 cm deep
- Window screen, about the size of a piece of paper
- Hot iron or rolling pin
- Cloth, towel, a piece of old fabric, or some extra pieces of newspaper
- Extra scrap paper and newspaper, if necessary

Procedure:

1. **Note: This project may take more than one class period to complete. Also, this project can get messy, so be aware when choosing and preparing a place to do it.**
2. Tell the students in advance (at least the day before) that they will be making recycled paper. Have each student bring in a sandwich bag with about two handfuls of scrap paper that has been ripped up into tiny pieces, about the size of 1 inch squares. They may use any kind of paper that they are planning to recycle: newspaper, old bills, brown paper bags, construction paper, etc. The more variety in paper scraps, the more colorful the finished product will be. **Note: Avoid using glossy paper, like magazines, and wax-coated paper.**
3. Soak the tiny pieces of scrap paper in a container of hot water for about 30 minutes. While the paper is soaking, lay out a cloth on a flat surface. A towel, a piece of old fabric, or some newspaper would also work.
4. Take about a handful of the soaked scrap paper and put into the blender. Continue mixing until it has the consistency of pulpy mush. **Note: A whisk may be used as an alternative to beat the mixture.**
5. At this point, other materials, such as leaves, glitter, or dye, may be added for color and texture.
6. Pour the scrap paper pulp into a measuring cup.
7. Fill the pan up with water to about 3 cm.

8. Place the screen in the pan (must be submerged in the 3 cm of water) and pour one cup of the scrap paper pulp onto the screen that is still underwater.
9. Using their fingers, students will spread the scrap paper pulp evenly over the screen in the water. It will have a mushy feel. Ensure that there aren't any holes in the "sheet" of paper.
10. Pull the screen up slowly out of the water and hold it above the pan as it drains.
11. Take the pulp-covered screen and turn it over to lay it face down onto the cloth or other material that was laid down in Step 3.
12. Slowly lift up the screen so that just the pulp is lying on the cloth. Lay another cloth or other material on top of the paper pulp.
13. To remove the excess moisture, either use a hot iron on a low setting or roll it out using a rolling pin. The pulp must dry in between the cloths or other material for at least 24 hours.
14. After 24 hours, check to see that the paper has dried. It is now ready to be used.
15. Some suggestions for how to use the paper: Have the students make invitations to a school event, like a drama production or school dance. Have them make greeting cards for family and friends. Have them write a letter to their congressman reinforcing the importance of recycling, using information they learned in the pre-visit activity.

Conclusion: Students have a clearer picture about the process of recycling paper. They will see how paper is reusable by making something, an invitation, card, letter, etc., using their recycled paper.

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