

Paper Plants

Create a special holiday card from recycled paper that can also grow beautiful flowers. Many recycled items like paper, cans, bottles, cardboard, etc. can be made into new products. Recycling helps the environment by saving the earth's natural resources and reducing pollution.

TEKS:

3.5D Explore and recognize that a mixture is created when two materials are combined, such as gravel and sand, or metal and plastic paper clips.

5.5D(ss) Identify changes that can occur in the physical properties of the ingredients of solutions, such as dissolving salt in water, or adding lemon juice to water.

Materials:

- 5-10 sheets of used printer paper, crosscut into tiny pieces manually or with a paper shredder <u>Note</u>: these need to be prepped the night before beginning the project (see Step 1)
- Large bowl of warm water
- Window screen material (enough to cover a small embroidery hoop)
- Small embroidery hoop (Alternative: make a wooden frame out of popsicle sticks)
- Food coloring (optional)
- Blender
- 9 x 13-inch baking pan
- Packet of wildflower seeds or other seeds
- Old bath towels or several layers of felt squares (to soak up water)
- Waxed paper
- Colored markers
- Cookie cutters (optional)
- Flower pot
- Soil



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How To:

- 1. Soak the used paper strips in a bowl of water overnight.
- 2. Put the soaked paper into the blender.
- 3. Fill the blender halfway with fresh water.
- 4. Blend until the paper mixture is soupy.
- 5. OPTIONAL: add food coloring of choice and blend some more.
- 6. Fill the 9x13-inch baking pan one-quarter full of water.
- 7. Pour the blended paper mixture into the 9x13-inch baking pan.
- 8. Slide the window screen material into the embroidery hoop. Then slip the embroidery hoop into the bottom of the pan from the side so that it slides beneath the paper mixture (If necessary, spoon some of the mixture over the screen so that the finished paper product will not be too thin once dried!).
- 9. Lift the screen gently, catching the paper mixture evenly on top and letting the water drain off.
- 10. Lay the screen on an old bath towel or felt layers to drain.
- 11. Sprinkle some seeds on top of the wet paper mixture.
- 12. Gently pat them into the surface of the paper mixture.
- 13. When the bath towel or felt has soaked up as much water as it can, pick up the hoop and turn it over onto a sheet of waxed paper to dry (seeds will be on the bottom). *You may have to gently hit the hoop on the table or counter surface to loosen the paper mixture from the screen. If the paper mixture does not stick together, try putting more paper mixture on the screen
- next time. 14. Let the paper dry for at least 24 hours.
- 15. <u>OPTIONAL</u>: use cookie cutters to make your paper and seed mixture into a desired shape.
- 16. If the paper does not lie flat, place a heavy object (like a book) on it for a few hours to flatten it.
- 17. Decorate it with markers on the un-seeded side.

Once you're ready to plant your greeting card:

- 1. In a pot of your choice, firmly fill the pot with soil (leave about half an inch of room at the top).
- 2. Lay greeting card flat on top of the soil.
- 3. Place about a quarter-inch thick layer of soil on top of the greeting card.
- 4. Tap the soil gently.
- 5. Water soil lightly so that the soil and paper are damp.
- 6. Keep seeds wet until they sprout and have a couple of days to grow roots.
- 7. Once the sprouts appear, continue to keep the paper moist (make sure not to overwater).
- 8. Enjoy your new plant!



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Why Does It Work?

When you plant your greeting card, the seeds will sprout and the paper will eventually biodegrade. Biodegrading is the process of certain materials being decomposed (or broken down) by bacteria. Once the paper biodegrades, it leaves the flowers (or whichever plant you decided to plant) behind and most importantly, it does not leave any waste.

Career Connection:

<u>Environmental scientists</u> work to regulate, control, and prevent air, land, and water pollution. They conduct research to find pollutants or hazards in our environment and then propose a plan to eliminate them. Environmental scientists work with various organizations and government agencies to conserve the local natural areas.

Resources:

- <u>http://climatekids.nasa.gov/seed-paper/</u>
- <u>http://play-activities.com/how-to-make-seed-paper/</u>
- <u>http://www.botanicalpaperworks.com/how_plantable_paper_works</u>



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