

Onion Dye With a Solar Oven

Difficulty: ★☆☆☆☆ - Easy; requires adult supervision.

Time: 40 minutes (+ 4-6 hours waiting time)



Materials

- Cardboard box (deep enough to set a glass jar inside)
- Aluminum foil
- Glue or tape
- Onion skins
- White fabric or yarn¹
- Glass jar
- Bowl with water
- Bowl or basket for a dye bath
- Rubber bands (optional, for tie-dye)²
- Gloves³ (optional)

¹ Materials from natural fibers like cotton, linen, silk and wool will take the dye the best. Synthetic materials will take some dye, but will usually be lighter in color.

² More about tie-dye technique can be found in the avocado dye instructions.

³ Wear gloves to avoid unwanted stains on your hands.

Tips

Do this activity on a bright sunny day. This simple dyeing method takes advantage of the sun as a heat source.

Steps

1. To harvest the energy of the sun let's make a solar oven. Line the inside of your box with aluminum foil, gluing or taping it down.



2. Change your box to have a single flap as a lid. Remove three of the flaps leaving only one long flap in place. Stick the removed long flap to the one left with tape.



3. Cover the flap (inside) with aluminum foil. Use the discarded cardboard from the short side flaps to prop the lid open.



4. Place your DIY solar oven outside in full sun, with the reflector facing directly at the sun. Prop the flap open to reflect the light into the box. You will probably have to tape the prop in place.

Now it's time to extract dye from onion skins!



5. Put the onion skins in a glass jar, fill it with boiling water.



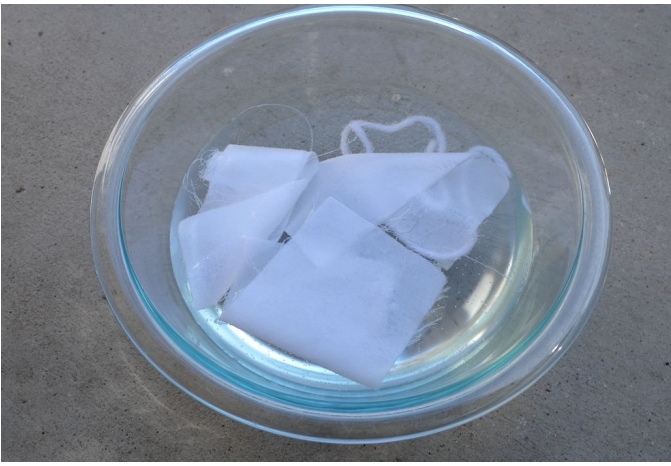
6. Cover the jar and place it in the solar oven. Leave it out in the sun for about 2-3 hours.



It's important to note that this oven gets **HOT** so please supervise young children and take care when touching the glass bowl. Use a tea towel or oven mitt for safety.

7. In the meantime, prepare your fabric or yarn by washing it with soap to remove dirt and oils that could prevent the dye from binding to it. Rinse with cool water and don't dry it. Soak your materials in a bowl full of fresh water so that it is thoroughly wet. This allows the dye to adhere more evenly to the fabric or yarn.





8. After 1-2 hours of the sun brewing, strain the extracted dye liquid into a clean bowl or basket. Gently squeeze out any excess water from the fabric or yarn that has been soaking in water, and place it in the dye bath. Make sure that it is covered with dye completely.



9. Leave for 2-3 hours. You can leave the fabric/yarn in the bath overnight to achieve stronger color.



10. Remove the fabric or yarn from the dye, rinse it thoroughly in cold water (optionally with soap), and hang it to dry.



Yellow onion skins create a golden range of earthy colors. What color did you get?

