

## SUNPRINTS – HOW THEY WORK & TIPS FOR BEST RESULTS

- I. **What you need**
  - 1 Sunprint paper, acrylic sheet, cardboard, a tub full of water, fun and interesting objects to print.
- II. **Arrange your objects on a piece of Sunprint paper out of the reach of the sun.**
  - 1 The blue molecules embedded in the paper are sensitive to ultra-violet light. For best results, prepare your print in a place where the sun's light cannot reach the paper as you arrange objects on top of it. Direct sunlight will expose the paper quickly, but even ambient light in the shade, or in a room with a big window will cause slow exposure of the paper.
- III. **Place the acrylic pressing sheet on top to flatten and hold your items to the Sunprint paper.**
  - 1 Using the acrylic pressing sheet when taking prints of flat or almost-flat objects will help to sharpen the edges between blue and white in your final print. The ambient sunlight outdoors will find its way underneath the edges of your objects if they are not pressed firmly to the paper, and you will get Sunprints with blended edges.
- IV. **Take your Sunprint outside and lay it in direct sunlight for 2-5 minutes.**
  - 1 The areas of the paper exposed to the sun will fade from blue to white. When you see most of the color disappear from the paper, your print has been fully exposed. If no direct sunlight is available, don't worry—just expose your print a little longer and wait for the same fading effect. Under cloud cover, the process will take 5-20 minutes depending on the thickness of the clouds. What is happening in this step? Two crucial molecules in the paper are interacting, forming a new molecule. Their interaction is initiated by specific wavelengths of ultra-violet light. The new molecule is colorless so that as the blue molecules are converted, the white of the paper base begins to show through. Areas of the paper covered by your objects still contain the original blue molecule, so they remain blue.
- V. **Rinse your Sunprint in water. Watch the white turn into blue and the blue turn into white.**
  - 1 To get the deepest blue that the paper can give, leave it in the water for a while: 1-5 minutes. There are two exciting things happening underwater. First, the original blue compound is water soluble so that when you immerse it in the bath, the water carries it away, leaving only the white paper base in those areas. Second, the colorless compound whose formation was caused by the sun's energy is *not* water soluble, so it cannot wash away in the water bath. It *is* sensitive to the water in another way. Just as the Sun's light stimulated a chemical change in the previous step, the water stimulates another chemical change. The water causes an oxidation reaction that turns the colorless compound into the deep blue of a finished Sunprint.
- VI. **Lay your Sunprint flat on an absorbent surface and allow it to dry.**
  - 1 You can use a paper towel, or a piece of cardboard as a bed for your Sunprint while it dries. Putting it on something absorbent helps to avoid the formation of water spots by drawing the water from the Sunprint paper.
  - 2 When you take your paper out of the water, it will probably not have finished oxidizing. The water remaining in the paper will do the job before it evaporates. By the time it is all gone you should have a beautiful deep blue Sunprint!

If you have any questions about any of the steps in this process or about how to get the best results from your Sunprints, contact Seth at 510-642-8856 or [sharthun@berkeley.edu](mailto:sharthun@berkeley.edu).