Week 3: SUNOGRAPHY

Pictures and more at: carbondalepubliclibrary.org/png

Harness the power of the sun to create art & charge your devices!

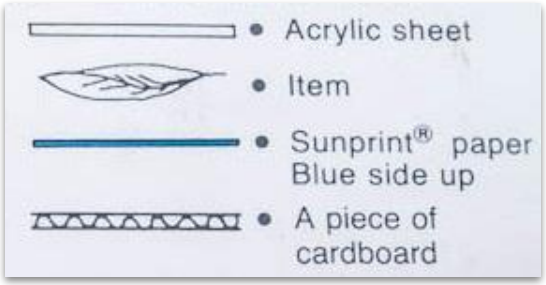
Your kit contains materials for 2 projects:

- MONDAY: **Solar Science Station** box with instructions
- WEDNESDAY: **Sun Paper** kit - DO NOT OPEN the paper bag until you're in a dark room!

For Wednesday, you will need a few extra things at home:

- A hardcover book or piece of cardboard, 12" long (to take your sunpaper outside)
- Water (a sink or tub to rinse out your sunpaper)
- A towel or paper towels (for drying your sunpaper)
- Flat items (leaves, petals, etc) to use as patterns for your sun print

HOW TO MAKE A SUN PRINT:



1. **Plan your design**
   a. You can use any plants you'd like in your design. You can also use man-made objects - maybe you have some extra tessellation patterns lying around?
   b. You can also paint the acrylic sheet with sunscreen, which blocks UV light. Note: In Step 2, make sure your sunscreen is on top (not touching the sunpaper).
2. **Arrange your objects IN A DARK ROOM**
   a. Turn out all the lights and draw shades. Take the sunpaper out of the bag and place on top of your large book or piece of cardboard. Arrange your objects on top of the sunpaper, then place the acrylic sheet on top.
3. **Take your sunpaper outside**
   a. Put your prepared sunpaper in direct sunlight for about 5 minutes. Under cloud cover, the process may take closer to 20 minutes.
4. **Rinse your sunpaper in water (be gentle!)**
   a. Once your exposed paper has turned almost white, remove the objects and rinse the paper for about 1 minute to stop the chemical reaction.
5. **Lay flat and dry**
   a. Once rinsed, lay your sunpaper on something absorbent and let dry. Once dry, you can flatten it between some paper towels pressed in or under a book.

CYANOTYPE, also known as "blueprinting," is the oldest non-silver photographic printing process.

In 1842, Sir John Herschel first used cyanotype to reproduce notes, diagrams, and - you guessed it - blueprints. Soon after, Anna Atkins used cyanotype to document plant life; some consider her the first female photographer.

Cyantotype sun printing uses material chemically treated with a light-sensitive solution of potassium ferricyanide and ferric ammonium citrate. Negative or positive images can be obtained by blocking UV light from reaching the sensitized paper.

What's happening? Molecules in the paper are interacting, forming a new molecule, initiated by specific wavelengths of UV light. The new molecule is colorless. Areas of the paper covered by your objects still contain the original blue molecule, so they remain blue.

What's happening? The original blue molecules are water soluble; rinsing the paper removes them. However, the new colorless molecule is *not* water soluble, BUT it does oxidize when wet, turning a deep blue color. This is why the colors reverse when your rinse your paper!