

MAKING PHOTOS WITH THE SUN



For [her exhibition](#) at Storm King this year, artist **Kiki Smith** made this artwork, called *river light*. It is made up of nine brilliant blue flags arranged in a circle. Each flag is an image of sunlight sparkling on water. Kiki took these images from videos she made of the East River in New York City as she walked from her apartment to a nearby pool to swim.

To make her flags, Kiki Smith used an almost 180-year-old photography process called **cyanotype**. A cyanotype is a kind of photograph made without a camera. It is made by coating paper or fabric in chemicals that change color when exposed to light. Then, an object or a transparent photo negative is placed on the treated paper and exposed to the sunlight. Everywhere the sunlight reaches, the paper turns deep blue, but everywhere that it is covered up, where the sun does not reach, stays white. Originally, cyanotypes were used to copy text and architectural drawings. Even though they're no longer copied by cyanotype, that's why building plans are still sometimes called *blueprints*!



Anna Atkins was the first person to use the cyanotype process to record other kinds of things beside text and building plans. In 1843 she began placing algae and plant specimens directly onto cyanotype paper and exposing them to light to record their exact size and shape. She included over three hundred of these **photograms**, or photos made by placing objects directly onto photo-sensitive paper, in the very first book illustrated entirely with photographs, [*Photographs of British Algae: Cyanotype Impressions*](#).



Now that we know a little bit about how artists have used cyanotypes, it's time to make our own photograms.

ACTIVITY 1: Consider your subject and collect your specimen(s)

Kiki Smith used cyanotype to record and share the glinting sunlight that she noticed on her daily walk. What routes do you walk, drive, or ride often? Is there something memorable or beautiful or interesting or strange about your journey that you'd want to share? What could you gather from your route to make a photogram?

Anna Atkins used cyanotype to look at algae carefully and to notice all the variations in the size and shapes of the many different kinds. Is there a category of object that you'd like to investigate? For example: What different types of leaves are found in your yard, or on your block? Or, how many sizes and shapes of eating utensils are in your house?

Once you've gathered some possible subjects, you're ready to make your own photogram!

If you purchased the Storm King Camp Kit, follow the directions on the next page to make your own cyanotype flag using the treated fabric included in your kit.

If you didn't purchase a kit, or if you've already made your flags, skip ahead to the following page to learn how to make an **anthotype**, a photogram made with supplies from the grocery store.

MAKE YOUR OWN CYANOTYPE FLAG



Included in your Summer Camp Anywhere Kit is a black envelope with two pieces of fabric treated with cyanotype chemistry. One piece is small, roughly 5 x 7in. The other is a little bigger, about 7 x 10in.



Step 1. Set Up

Find a flat, sunny surface and gather your supplies: the envelope of treated fabric, the objects you want to make an image of, and a way to submerge your fabric in water.

Step 2. Plan

Because the fabric is sensitive to light, it will be important to work quickly once you remove it from the envelope. Spend some time thinking about how you might want to arrange the objects you've chosen on the fabric.

The edges of your fabric are not hemmed and may be uneven. Consider whether you'll want to trim or hem the edges when you're finished, or

whether you like the rough edges. If you think you'll want to tidy them up, be sure to leave room at the edges when you arrange your objects on your fabric in the next step.

You will also want to think about how you'll keep your fabric flat if it's a windy day. You might want to weigh, pin, or tape down the corners depending on the weather and what surface you're working on. Grab those extra supplies if you think you'll need them.



Step 3. Arrange

Once you've done a little planning, remove the fabric from the envelope and lay it flat. (You can use either side.) Working quickly, arrange the objects on your fabric.

Step 4. Expose

Stand back and wait as you expose your cyanotype. You will see the fabric go from a blue green in the beginning to a bronze (similar to the color pictured at left) once fully exposed. Depending on the light conditions, this could take between 3 and 15 minutes. It's better to err on the side of waiting longer.



Step 5. Rinse

Once your fabric has been exposed, remove your objects and quickly submerge the fabric in water. Keep the fabric submerged for at least 5 minutes, changing the water until it runs clear.

Step 6. Dry

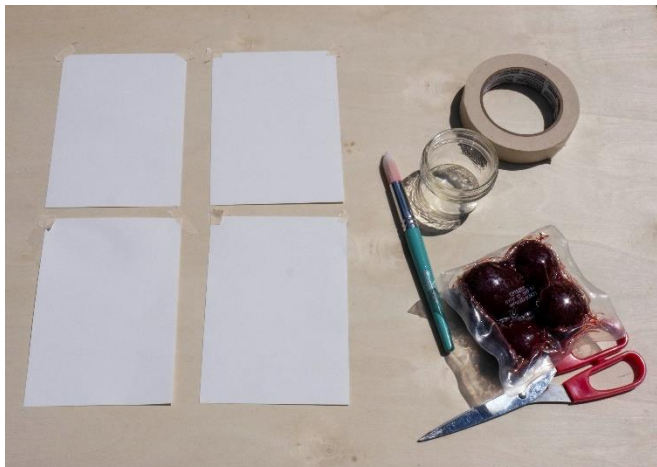
Air-dry your flag on a clothesline or drying rack.



MAKE YOUR OWN ANTHOTYPE



An **anthotype** is a photogram made with light-sensitive plant materials instead of with the special chemicals used to make cyanotypes. Lots of different kinds of plants will work for anthotypes and you might want to experiment. Things that would stain your clothes but that don't contain artificial dyes are good options, for example beet juice, grape juice, cherry juice, or turmeric. You can also use plants that you don't eat like brightly colored flower petals and leaves. Learn more about how to process different plants to use for anthotypes [here](#). To start, we'll keep it simple and use the juice from a package of pre-cooked beets.



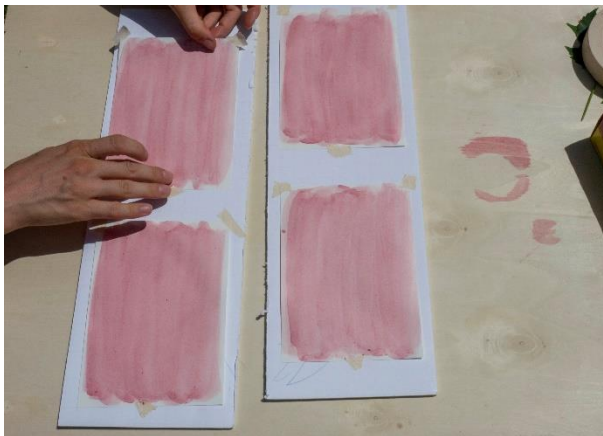
Step 1. Set Up

Gather your supplies. You'll need a package of precooked beets, a bowl, a brush, and paper. Any paper will work but heavier, rougher paper absorbs the juice a little better without curling up. Consider whether you'd like to make one large anthotype or a few smaller ones and cut your paper accordingly. I had enough juice in one package of beets to make 4 prints that were about 5 x 7 inches with some juice leftover. I was working outside and so also used some tape to keep my paper in place.



Step 2. Paint, Wait, Repeat

Snip the corner of the package of your beets and empty the juice into a bowl. Use a brush to paint a thin layer of juice onto your paper. You can paint just an area of the paper or the whole thing as you'd like. Paint at least two coats, waiting for the paper to dry between each coat. I did three coats.



Step 3. Plan and Arrange

Anthotypes take a long time to expose – I left mine outside on a very sunny day for about 9 hours. You'll need to think about how to keep your objects in place for that long. Flat, heavy objects will stay in place easily. Lighter objects and objects that are less stable will be harder. Consider whether you can pin, tape or weigh down some of your objects but remember that anything that blocks the sunlight will appear in your print. You might also consider using a piece of plexiglass, a transparency, or a single layer of plastic wrap to keep your objects in place without blocking the light. I taped my paper to a couple pieces of scrap cardboard and used plastic wrap to keep the leaves in place.

**Step 4. Expose**

Go find something fun to do while the sun creates your anatype. Depending on the light conditions, it could take anywhere from a few hours to a few days.

Check on your anatype periodically and notice how the bright pink beet juice slowly starts to fade and turn brown. Resist the urge to touch or move your objects as your anatype exposes! Once the areas you can see are definitely not the same bright pink as before, remove your objects and reveal your prints.

Because anatypes aren't "fixed" with chemicals, they will continue to change in the sun and won't last forever. Enjoy them and maybe snap a few digital photos to record them.



Key vocabulary words:

Cyanotype
Photogram
Anatype