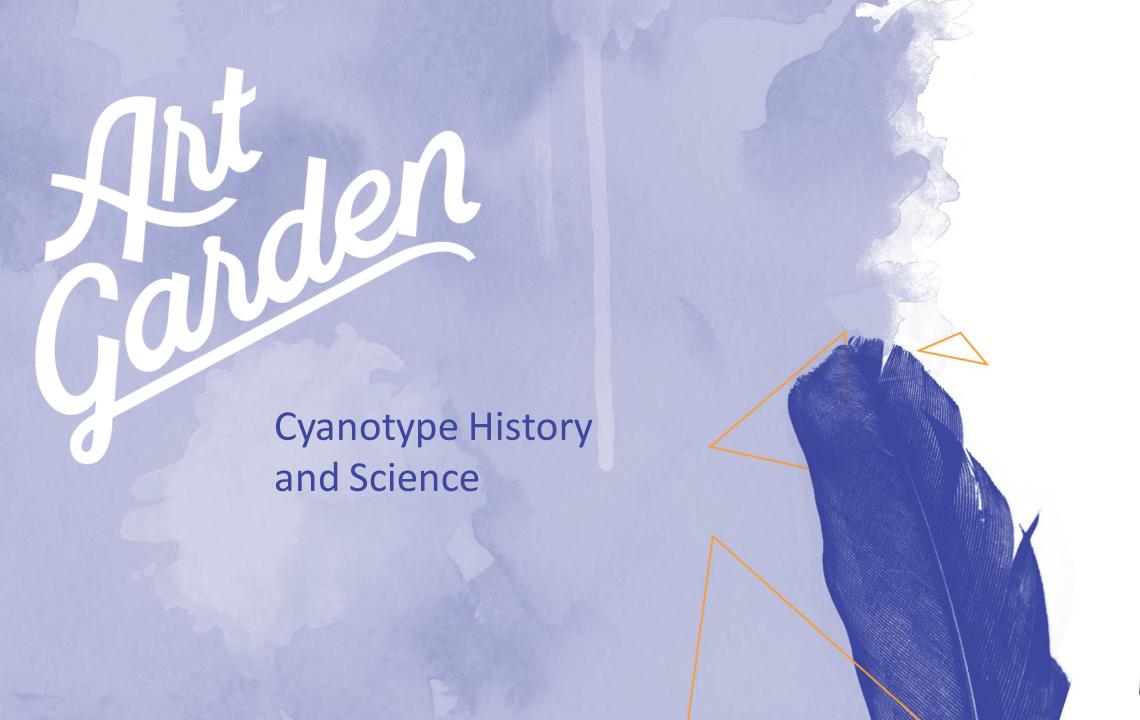


color, shape, and movement. The Art Garden will employ thousands

of origami lotuses made from a light-sensitive paper, called

cyanotype, to create this dynamic installation.







# What is a Cyanotype?

The cyanotype was developed in 1842 by Sir John Herschel, an astronomer and scientist.

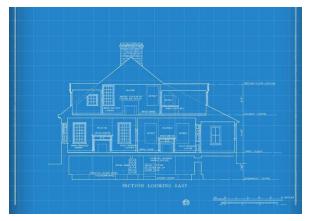
It is a camera-less photography technique using light-sensitive paper to create a blue-colored image.

The "cyan" in cyanotype refers to the blue-green color of the light-sensitive paper used to make the prints.

Because it is an easy way to make copies, cyanotypes were used to make technical drawings or "Blueprints" for architects and engineers. This was the most common use for cyanotypes for the next hundred years.



Sir John Herschel, [Public Domain]



House Blueprint, [Public domain]



## **Early Cyanotypes**

Botanist Anna Atkins used the cyanotype process to create the first book illustrated with photograms in 1843. She documented a wide variety of plant specimens including ferns and algae.

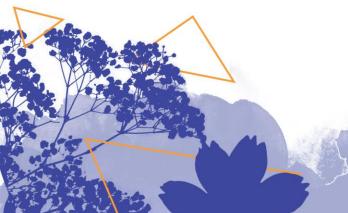
Atkins is recognized as the first female photographer because of her work with cyanotypes.



Anna Atkins, by Anonymous, 1861 [Public domain]



Anna Atkins, Foreign Ferns, [Public domain]





## How does a Cyanotype work?

Two iron salts are mixed to create a light-sensitive solution. The solution is painted onto paper or other surfaces and allowed to dry in the dark.

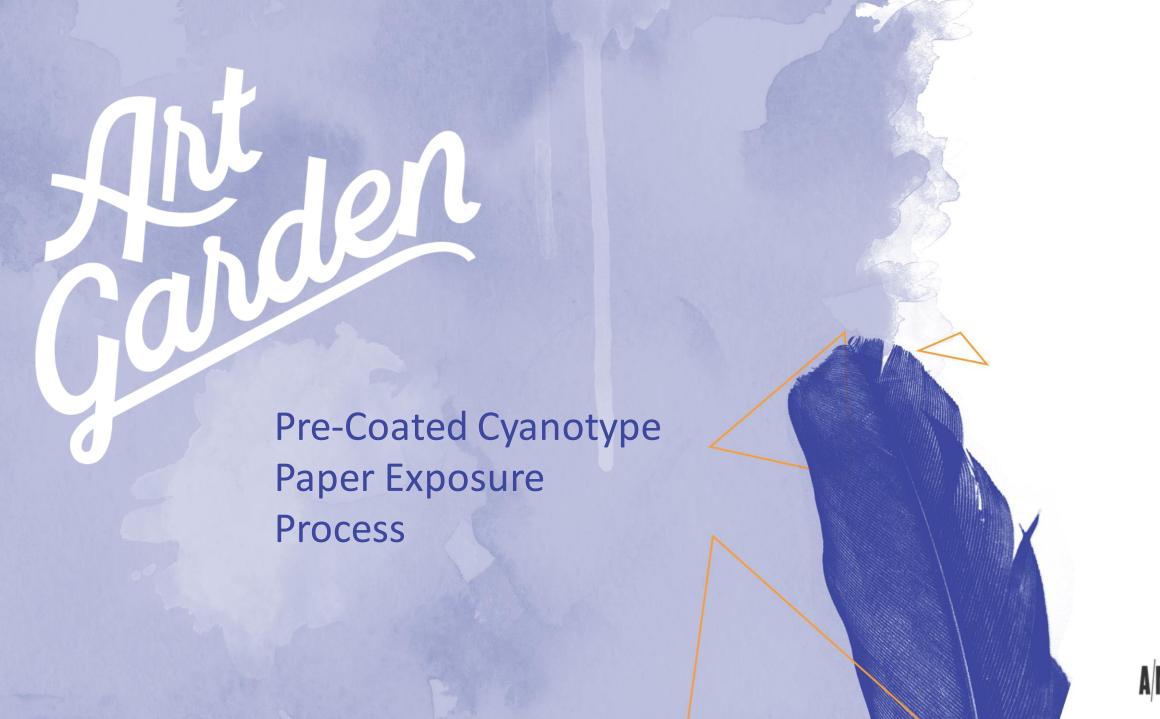
The paper is then exposed to ultraviolet (UV) light, like the sun.

Areas exposed to the sunlight chemically react with the UV light and will turn a bright blue. Covered areas where the light does not touch will remain white.

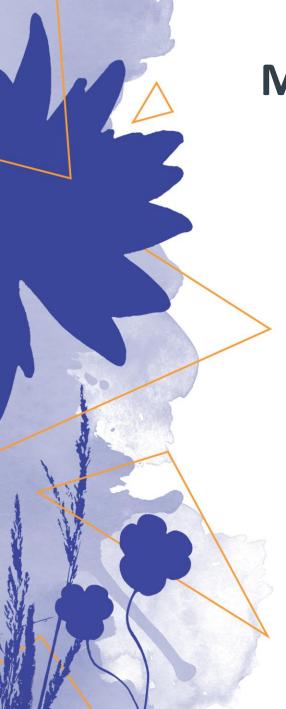
Washing the paper after exposure removes excess iron salts, leaving just the blue dye in the paper.











### **Materials**

- Cyanotype Paper
- Water Tray
- Towel

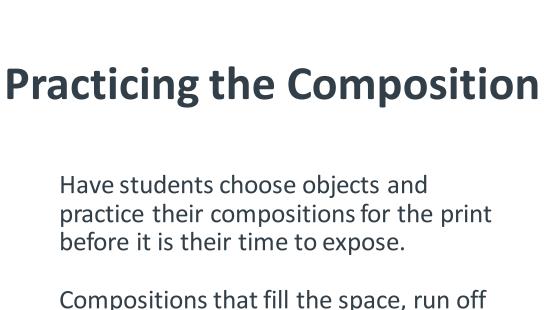
- Plexiglass
- Objects\*
- The Sun



#### Objects could include:

leaves, flowers, grass, twigs, feathers, yarn, string, buttons, mesh, other loose textiles, transparencies, cutout paper silhouettes, and more!



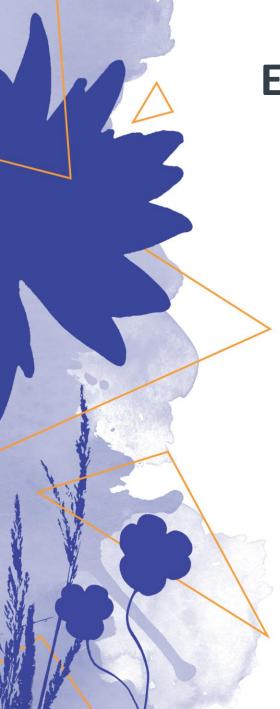


Compositions that fill the space, run off the edges, and have overlapping materials will yield better results. Have fun and experiment!

Students should have their chosen objects handy before removing the paper from the light-safe bags because the paper begins exposing as soon as it is in the light.







# **Exposure Set Up and Timing**

Location: Outside

It is recommended to have two tables for this part of the activity.

One table for students to choose their items and practice their compositions while they wait to make their prints.

The other table will be used to hold the active exposures and the water bath.

Exposure time varies depending on the time of the year and amount of sunlight.

**Estimated Exposure Times** 

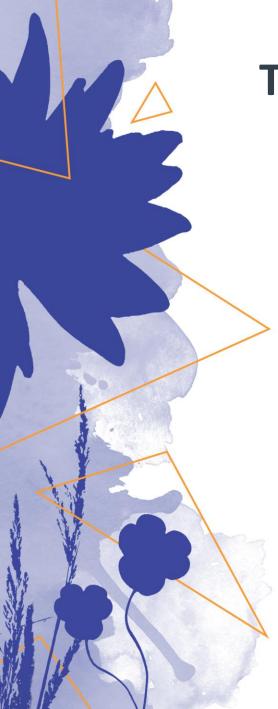
Fall: 3 minutes

Spring: 1 - 1.5 minutes

**Summer: 30 seconds - 1 minute** 

You will receive extra paper to test prints in order to get your timing down.





The Cyanotype Exposure

It's time to expose the paper in the sun!

After objects are arranged, a piece of plexiglass should be placed on top of the objects and paper.

This will ensure that objects don't move around with the wind and that they are making good contact with the paper to block out the sun.

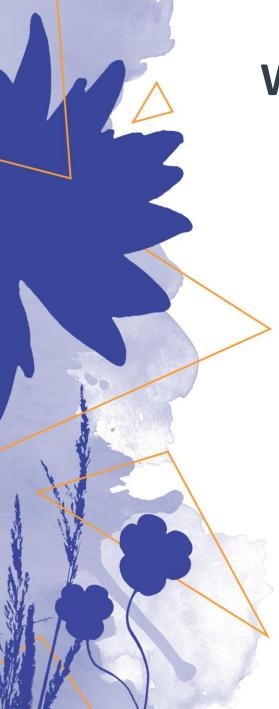
Once exposed, the background will be lighter than the areas covered by the objects.





After exposure - the background will be lighter than the areas covered by the objects.





**Water Bath** 

After the allotted time, remove plexiglass and objects from the paper.

Put the exposed paper into the water bath. You will need to agitate the paper in the water until all objects appear white. About 1 minute.

The objects will begin to appear white as the chemical reaction stops.

After the print is finished in the water bath take it out and gently dry between the towel and set aside to completely dry.

The print will continue to turn a darker shade of blue over the next 24 hours.







## Folding the Lotus Flower

The print will continue to turn a darker shade of blue over the next 24 hours.

After the paper is dry it's now time to fold the print into a lotus flower.

Folding instructions will be shared as a PDF handout, and as a slide presentation.







