



# Educator's Guide

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## ART GARDEN INTRODUCTION

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As the Grand Opening of the Arkansas Museum of Fine Arts (AMFA) approaches, we are continuing our legacy of creativity, inspiration, and arts education for young people.

Our inaugural event, *Art Garden* invites students to be an important part of the Arkansas Museum of Fine Art's grand opening celebrations. Utilizing Downtown Little Rock's MacArthur Park as our canvas, *Art Garden* will be a community-created artwork that transforms the Museum and grounds into active compositions of 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.

AMFA is excited to have you and your class not only be a part of the grand opening celebrations but also a part of the AMFA community. Thank you and we look forward to seeing you at the *Art Garden*!

## PROJECT OVERVIEW

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This Educator's Guide and the related instructional materials will provide the resources for you and your students to create your very own cyanotype lotus flowers. These flowers are the individual artworks which will be gathered to become the *Art Garden* installation.



This project is open to all students as portions of this project are differentiated for different grade levels. Elementary students may use the preprepared pre-coated paper to create their cyanotypes, while secondary students can coat their own papers with a cyanotype solution to make larger cyanotype prints. They will then all use the origami folding instructions to create their own origami lotus flowers. All lotus flowers, regardless of perfect folding or use of cyanotype paper can be used in the installation!

To be a part of the larger *Art Garden* installation please contact Miranda Young at [ryoung@arkmfa.org](mailto:ryoung@arkmfa.org) for information on how to drop off your completed flowers. Participating schools and organizations will receive further information about the installation date and participation opportunities in the Spring of 2023.

In addition to these materials, you can review the project processes step-by-step in the *Art Garden* introductory videos at [arkmfa.org/art-garden/](https://arkmfa.org/art-garden/)

After reading this guide and reviewing the instructional materials, if you have any other questions about the *Art Garden* installation or the associated lesson please reach out to Miranda Young using the email address above.

## Instructional Materials

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The presentations and handouts provided will assist students in the classroom with the creation of the individual cyanotype lotus flowers.

The instructional materials will go step-by-step with each process of the project – creating prints using pre-coated or brush-on cyanotype paper, and lotus origami folding. Along the way, we will look at the history of cyanotype, the science behind the “magic,” and tips for creating vibrant prints and dynamic origami forms.

You can access and download these instructional materials by visiting [arkmfa.org/art-garden/](http://arkmfa.org/art-garden/). Please use these materials as works best for your students.

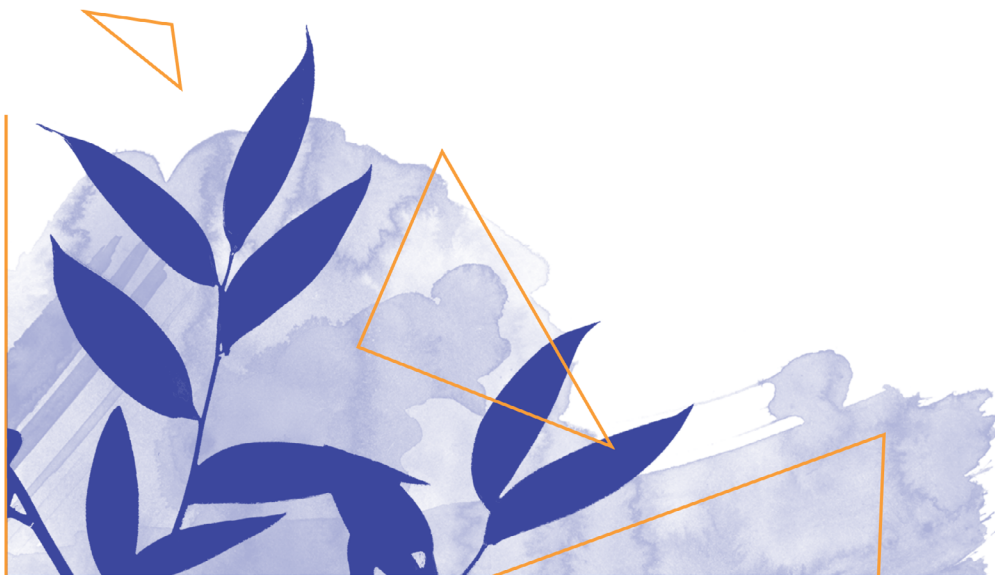
Instructional Materials for elementary students using the prepared cyanotype paper:

- Creating Cyanotypes with Pre-Coated Cyanotype Paper Presentation
- Folding Origami Presentation
- Folding Origami Handout

Instructional Materials for secondary students using the paint-on cyanotype method:

- Creating Cyanotypes with Paint-On Cyanotype Solution Presentation
- Folding Origami Presentation
- Folding Origami Handout

The website will also include video tutorials as well as an alternative process activity for those who want to participate without the need for cyanotype paper.



## Additional Project Tips and Setup Recommendations

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### Coating Paper with the Paint-On Cyanotype Solution

Only mix enough solution for the papers to be coated. The combined solution is only good for a few hours but when they are kept separate, the A and B solutions will keep for several months. Full directions for mixing the solution can be found on the solution package. While the mixture is light sensitive, the mixture can be applied in a lit room. Just make sure to move the coated paper to a dark space, such as a cabinet, to dry as soon as possible. After the coated papers are completely dry, the papers can be stored in the light-safe bags to save space and for easy transport.

### Cyanotype Exposure Process

It is important to have all of the necessary project materials close at hand when exposing the cyanotypes outside. It is recommended to have two tables: one for students to practice their compositions while they wait to expose their prints, and another for the actual exposures and the water bath. Make sure you have access to clean water to change out your water bath while working. Finally, consider where you will be able to lay or hang washed prints to completely dry. Pressing dried prints under books is an extra way to ensure flat prints for easier origami folding.

#### Exposure Times\*

Pre-Coated Cyanotype Paper: 1-3 minutes depending on amount of sunlight

Paint-On Cyanotype Paper: 2-5 minutes depending on amount of sunlight.

You will receive extra paper to test the proper exposure times. This will depend on several factors including time of year, amount of sunlight, and position of the sun. Pay attention to your practice exposures to notice the shift in paper color as it changes to determine optimal exposure times.

\* The exposure process will be illustrated more in-depth in the provided videos and the instructional presentations.

### Origami Folding

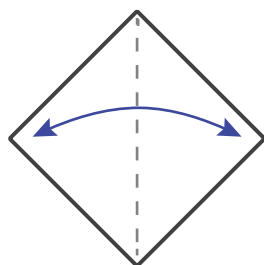
Make sure students have enough space on a flat surface to fold their origami. Students can practice their origami folding with plain paper to gain confidence with the folding process before creating the origami lotuses with their cyanotype prints. Encourage heavy creasing along folds to help construct a stable final flower. For strong creasing, students can use a pen, pencil, or popsicle stick to press along the folds.

Test out your origami skills by trying to make over-sized lotus flowers!

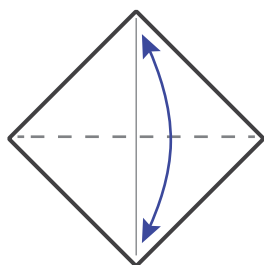
# Lotus Origami Folding Directions

**Materials:** A square cyanotype print or piece of paper.

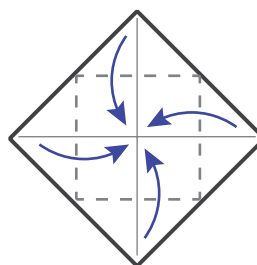
**To Begin:** Start with the blank side facing you.



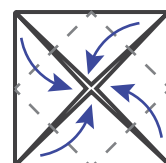
**1.** Fold two opposite corners together. Unfold.



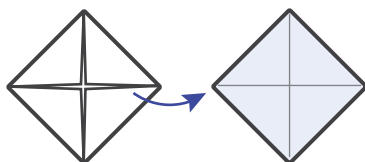
**2.** Fold the other two corners together and unfold again.



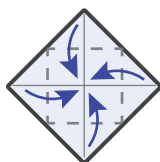
**3.** Fold each corner to the center.



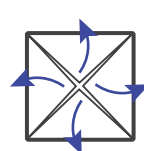
**4.** Fold each corner to the center again.



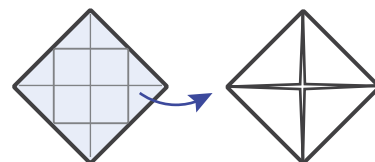
**5.** Flip the paper over.



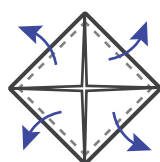
**6.** Fold each corner to the center.



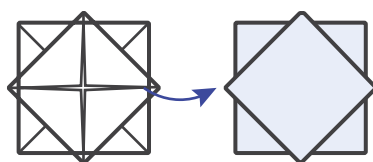
**7.** Unfold the corners once.



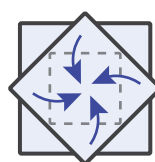
**8.** Flip the paper over.



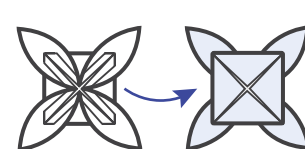
**9.** Partially fold back the corners leaving a small frame around the edge of the paper to create an 8-sided star.



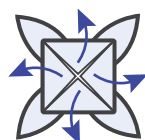
**10.** Flip the paper over.



**11.** Fold the inner corners to the center of the paper. (The flower should start appearing!)



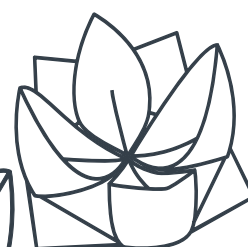
**12.** Flip the paper over.



**13.** Fold the corners out from the center and curve them around to the other side.



Admire your lotus flower!



## **Arkansas Academic Standards**

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The academic standards related to this project apply to most K-12 Fine Arts courses as listed in the 2020 Arkansas Fine Arts Academic Standards.

### **ARKANSAS FINE ARTS ACADEMIC STANDARDS**

**CR.1** - Students will generate and conceptualize artistic ideas.

**CR.3** - Students will refine and complete artistic works.

**PR.4** - Students will analyze, interpret, and select artistic work for presentation.

**PR.5** - Students will develop and refine artistic techniques and work for presentation.

**PR.6** - Students will convey meaning through the presentation of artistic work.

The Common Core Standards for Mathematical Practice describe varieties of expertise that mathematics educators at all levels should seek to develop in their students.

### **COMMON CORE STANDARDS FOR MATHEMATICAL PRACTICE**

**CCSS.MATH.PRACTICE.MP1** - Make sense of problems and persevere in solving them.

**CCSS.MATH.PRACTICE.MP5** - Use appropriate tools strategically.

**CCSS.MATH.PRACTICE.MP6** - Attend to precision.

**CCSS.MATH.PRACTICE.MP7** - Look for and make use of structure.

The Common Core English Language Arts Anchor Standards for Speaking and Listening for College and Career Readiness connect to the K-12 ELA Standards that together define the skills and understandings all students must demonstrate.

### **COMMON CORE COLLEGE AND CAREER READINESS ANCHOR STANDARDS FOR SPEAKING AND LISTENING**

**CCSS.ELA-LITERACY.CCRA.SL.1** - Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively.

**CCSS.ELA-LITERACY.CCRA.SL.2** - Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally.

This project will also connect to other academic standards based on connections with:

- Origami > Shapes > Mathematics / Geometry
- Chemical Processes > Science / Chemistry

## Vocabulary List

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**Agitate** - To stir briskly

**Composition** - The way in which different elements of an artwork are combined or arranged.

**Cyanotype** - 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.

**Exposure** - Amount of UV (Sunlight) light the paper receives to create the print

**Installation** - A large-scale, mixed-media construction, often designed for a specific place or for a temporary period of time

**Origami** - The Japanese art of folding paper into decorative shapes and figures

**Photogram** - A photographic image made without a camera by placing objects directly onto the surface of light-sensitive paper.

**Silhouette** - A dark shape outline against a lighter background

## Additional Resources

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[Cyanotype Process Video](#) by the George Eastman Museum

[Anna Atkins's Cyanotypes: The First Book of Photographs](#) by the Natural History Museum, UK

[History of Origami](#) by Robert C. Williams Museum of Papermaking at Georgia Tech University

[See a NASA Physicist's Incredible Origami](#) by Great Big Story, YouTube

[Cyanotype Kit](#) Purchase Link

Pre-Coated Cyanotype Paper Purchase Links: [8.5” X 11” Paper](#) or [11” X 17” Paper](#)

Artists Working in Cyanotype: [Beverly Buys](#), [Diana Bloomfield](#), [Brenton Hamilton](#), and [Leah Sosbey](#)

Check Out [#cyanotypes](#), [#cyanotype](#), [#cyanotypeprocess](#) and [#cyanotypeprint](#) on Instagram for more inspiration photos and videos.