



Eiteljorg
Museum

Using Natural Dyes

Monica Raphael



At a Glance

"I use all different types of dyes for quills. I use Rit dye...I also use things like Kool-Aid, food coloring, and I also use some natural dyes. The sumac tree makes a really pretty yellow, golden yellow. There's different berries that make really pretty purples, magenta colors...The bark of a tree, the cherry bark, you use that and that makes a rusty-brownish color. There's all different things that I use to dye them that are historic somewhat, but also very modern too. I consider that all part of the art, actually harvesting and knowing how to make your own materials."

—Monica Raphael
Anishinaabe/Siċąŋġu Lakota



Themes

Continuation and Innovation

Learning Objectives

Students will be introduced to artist Monica Raphael and her artwork. Inspired by Monica and her artwork, students will experiment with natural dyes — collecting natural materials, creating dyes and dyeing items like cloth, cotton balls, and yarn.



Monica Raphael's supply of dyed porcupine quills

Cuff shown on page 1:

Monica Jo Raphael (Anishinaabe / Siċąŋġu Lakota, born 1964)

Miiċawaadad Heart Berry Cuff, 2023, birch bark with naturally and commercially dyed porcupine quills, tanned and smoked deer hide, size 13 Czech charlotte cut beads, including 24K gold cut see beads, brass cuff

Private Collection, image courtesy of the artist

©Monica Jo Raphael

Time: **Five 30-60 minute class sessions**

Grades: **3–5**
(can be adapted for younger or older students)

Indiana Academic Standards:

Visual Arts:

Anchor Standard 1: Generate and conceptualize artistic ideas and work.

Enduring Understanding: Creativity and innovative thinking are essential life skills that can be developed.

Anchor Standard 2: Organize and develop artistic ideas and work.

Enduring Understanding: Artists and designers experiment with forms, structures, materials, concepts, media, and art-making approaches

Anchor Standard 3: Refine and complete artistic work.

Enduring Understanding: Artist and designers develop excellence through practice and constructive critique, reflecting on, revising, and refining work over time.

Social Studies: Geography

3.G.5 Explain that regions are areas that have similar physical and cultural characteristics. Identify Indiana and the local community as part of a specific region.

4.G.5 Describe Indiana's landforms (lithosphere), water features (hydrosphere), and plants and animals (biosphere).

5.G.7 Describe the ways Native Americans, Africans, immigrant groups, and colonists adapted to variations in the physical environment.

English & Language Arts:

Speaking and Listening: Discussion & Collaboration—

3.CC.1 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) on grade-appropriate topics and texts, building on others' ideas and expressing personal ideas clearly.

3.CC.2 Explore ideas under discussion by drawing on readings and other information.

Background

The world is full of color everywhere you look, sometimes from unexpected places. Many natural dyes can be created from things you may have in and around your house. The skins of an onion that you may throw away can create reddish-brown, orange, or yellow dyes. Dandelions can create vibrant to muted yellows, or if modified with iron, olive greens to dark browns. Beets can give you anything from pink to dark red. Even red cabbage brings beautiful hues of purple and blue.

In 1856, the first synthetic dye was created by an 18-year-old chemist who was trying to find a way to create artificial quinine to treat malaria. While this discovery began a sort of chain reaction—with new colors being artificially created quickly—natural dyes have been in use for at least 5000 years. These new synthetic dyes were swiftly embraced by artists around the world because they were easy to produce, required fewer materials, took less time to make (some natural dyes require tens of thousands of specimens to produce a pound of dye), and the color possibilities were endless. In the middle of the industrial revolution, it seemed as if these new chemical dyes were the sustainable wave of the future. Whether they are or not is a far more complicated question to answer.

Today, Native American peoples use both natural and synthetic dyes in their art. Using both traditional knowledge and prepared dyes that can be found at many major retailers, they create weavings that dazzle, quillwork like Monica Raphael's that stuns, and basketry that amazes. From dyes that have been around thousands of years to those recently discovered, a rainbow of colors that range from vibrant to muted is at every artist's fingertips.



Monica Jo Raphael
(Anishinaabe / Sičáŋǵu Lakota,
born 1964)
*Zaagi-Mashakiki "love
medicine" Amulet*, 2021,
Birch bark with naturally and
commercially dyed porcupine
quills, tanned and smoked deer
hide, size 13 vintage and Czech
sterling silver charlotte cut beads,
bull elk ivories

Private Collection, image courtesy of the artist
©Monica Jo Raphael



Monica Jo Raphael (Anishinaabe /
Sičáŋǵu Lakota, born 1964)
Gizhe' Manido Gitigaan "Gods' Garden",
2022,

Birch bark with naturally and
commercially dyed porcupine
quills, caribou hair, sweetgrass, artist
designed silk charmeuse fabric, tanned
and smoked deer hide, size 11 Czech
True Cut and vintage French
glass beads, buckskin

Smithsonian National Museum of the American
Indian, image courtesy of the artist
©Monica Jo Raphael

Materials

- ▶ **Monica Raphael introductory video:**
https://youtu.be/p5S_3gLyZuk
- ▶ **Monica Raphael quillwork video:**
<https://youtu.be/5bv2J7CZrlg>
- ▶ **Dye Supplies: Materials to dye (paper, cloth, cotton balls), natural dye materials to experiment with (onion skin, dandelions, coffee grounds, berries), gloves, 8 or 16-oz glass jars with lids, stir sticks or plastic spoons, distilled water, vinegar**
- ▶ **Art Examples by Monica Raphael**



Monica Jo Raphael
(Anishinaabe / Sičánǰu
Lakota, born 1964)
Nagamo "She Sings", 2019
Birch bark with naturally and
commercially dyed porcupine
quills, size 12 vintage Italian
glass beads, size 13 24k gold
plated Charlotte true cut seed
beads, smoked buckskin
2019 Eiteljorg Museum Indian
Market and Festival Harrison Eiteljorg
Purchase Award
2019.3.1 A-B



Monica Jo Raphael
(Anishinaabe / Sičánǰu
Lakota, born 1964)
Anama'ewin Omaajiitoo
"He / She takes our prayers",
2021
Birch bark, sweet grass,
porcupine quills (natural and
commercial dyes), porcupine
guard hair, oak, brain tanned
smoked deer hide, size 13
beads, and 24K gold Czech
charlotte cut beads, thread
25 x 3 x 3 in.
2021 Eiteljorg Museum Indian
Market and Festival Harrison Eiteljorg
Purchase Award. 2021.2.1

Words you need to know:

Synthetic – Made from chemicals or artificial ingredients instead of natural materials.

Mordant – Something that fixes a dye to a material permanently.

Dyeing – The process of coloring something.

Helpful links:

Monica Raphael:
monicajoraphael.com

gtbindians.org

<https://www.rosebudsiouxtribe-nsn.gov/history-culture>

sicangu.co

<https://ojibwe.lib.umn.edu/>

Dyeing with Plants:

<https://www.fs.usda.gov/wildflowers/ethnobotany/dyes.shtml>

www.textileindie.com/list-dye-yielding-plants/

<https://naturaldyes.ca/instructions>

History of Artificial Dyes:

www.sciencemuseum.org.uk/objects-and-stories/chemistry/colourful-chemistry-artificial-dyes

General Plant Information:

Indiana Native Plant Society
www.indiananativeplants.org

USDA Plant Database
<https://plants.usda.gov/home>

Lesson Steps

1 (Class 1) Introduce the lesson by asking students if they are familiar with dyes and how students have used them

(some examples: food coloring, Easter eggs, tie-dyeing t-shirts, etc.).

Show Monica's videos linked above and encourage students to look closely at her artwork examples included in this lesson. Explain that Monica harvests quills from porcupines (roadkill) and dyes the quills herself using natural and synthetic dyes to create her stunning quillwork art.

Discussion:

What natural materials might be used to get different colors?

(examples: onion skins, coffee grounds, berries)

What readily available synthetic items could be used?

(examples: food coloring, RIT dye, Kool-Aid)

Why dye things at all?



2 Explain that some materials Monica uses are things she gathers herself. Show students examples of the natural materials that can be used for dyeing. Ask students how many they recognize. Have students guess which colors each natural material might produce. Can only plant materials be used for dyeing? What about animal products? Stones or dirt?

3 (Class 2) Experiment with natural dyes.

Guide students in gathering natural materials that might make good dyes. See this list for inspiration: <https://www.textileindie.com/wp-content/uploads/2020/04/Dye-Yeilding-Plants-List.pdf>

Have students predict which color(s) will be produced by each material.

Crush berries and chop plant parts, then add them to small jars. Add distilled water to the jars, screw on lids, and store jars in a sunny place for several days.



Lesson Steps

(Class 3) Next, strain the liquid through a strainer and discard the plant materials. Add $\frac{1}{4}$ cup of vinegar to each jar and stir. Add the item(s) to be dyed to each jar (fabric, cotton balls, yarn, etc.) and return to the sunny location for several days.



(Class 4) Finally, remove the dyed materials from jars and hang or lay flat on paper towels and allow to dry thoroughly.



4 (Class 5) When students have completed their project, encourage them to share in writing or words which colors they preferred, if the colors were what they expected, and what other natural materials they would have used to create dyes if they could. If students dyed various materials (i.e. wool, cotton, paper, etc.), did the dye color turn out the same across materials? Why or why not?

Extension

Use the dyed items to create a class art project, inviting each student to add a small piece of dyed material to a larger composition.

Artist Biography

The Anishinaabe word for “old woman” is Mindimooyehn and when broken down translates to “one that holds it all together”; the Mindimooyehn is the foundation for many Anishinaabe families. Monica Jo Raphael (Anishinaabe-Lakota) considers herself a mindimooyehh who likes to create art and share stories of creation from Mother Earth. A culture bearer, knowledge keeper, grandmother and fifth generation quill worker, Monica has dedicated her life to preserving her culture’s traditional teachings, stories, language, and practices, and sharing her cultural knowledge with others to be carried on.



Born to the Ginew “golden eagle” clan of the Anishinaabek, Monica is an enrolled member of the Grand Traverse Band of Ottawa and Chippewa, a descendant of Chief Spotted Tail of the Sičǎŋǵu Lakota, and the Huron and Pokagon Potawatomi. She learned the traditional art form of quill and birch box making while living in the village of Peshawbestown on the Grand Traverse Band Reservation. Quickly mastering both the woodland flora and fauna designs for which her family was known, Monica has excelled in creating even more complex designs while using traditional materials and techniques along with bright modern colors to create a modern twist to a timeless art form. When creating her interpretation of an art that predated European contact and the introduction of glass seed beads, Monica feels as if she is having a dialogue with her ancestors. She was and is inspired to create art as a form of peaceful resistance; a way to share that “We as Native peoples are still proudly here and have survived despite the devastating effects that settler colonialism created for our ancestors and people”.

After working for over 25 years to uplift the youth in tribal communities and making data-driven change in her community, Monica made a career change to becoming a full time, self-sustaining artist. In 2021 she was awarded the prestigious First Peoples Fund Cultural Capital Fellow and the Native Arts and Cultures Foundation LIFT Fellowship.

Her award-winning work is quickly becoming known all over the world for its clear intention to craftsmanship, unwavering dedication to patience. It has received awards at the Smithsonian National Craft Show, SWAIA Santa Fe Indian Market, Cherokee Art Market, Eiteljorg Indian Market Festival, Heard Indian Market, Abbe Museum Indian Market, Autry Indian Market, Southeastern Art Show and Market, Artesian Arts Festival, and the Woodland Indian Market. Her celebrated work can be found in several personal collections, including the Gochman Family Collection at the Forge Project, the Eiteljorg Museum of American Indians and Western Art, the Hood Museum of Art at Dartmouth College, and the Smithsonian National Museum of the American Indian.



In September 2023, Monica relocated from Oklahoma to Indianapolis accepting the position of Thomas G. and Susan C. Hoback Curator of Great Lakes Native Art, Cultures and Community Engagement at the Eiteljorg Museum of American Indians and Western Art.

Monica Jo Raphael (Anishinaabe / Sičǎŋǵu Lakota), Nuh-Mah-Nuh Daawina Akiin (Homelands of the Comanche People), 2020, birch bark, natural and dyed porcupine quills, antique and 24k gold Czech seed beads, antique brass thimbles and hawk bells, black fire polished antique glass beads, dyed horsehair, and traditionally brain-tanned and smoked deer hide.

Hood Museum of Art, Dartmouth: Purchased through the Phyllis and Bertram Geller 1937 Memorial Fund; 2022.59.
Image courtesy of the artist. © Monica Jo Raphael