

COLORS OF NATURE

The Language of Colors in Nature



Prepared for :
7 - 12th Grade Teachers
in the state of Utah



Artes de Mexico en Utah

We hope to increase cultural understanding and foster deeper appreciation of the main agricultural corps, traditions and knowledge of various Native American groups.



Born from Corn Lessons - 7 - 12th Grade



1) Born from Corn

Time Period: (Ca. 1400 C.E. - 1750 C.E.)

World History Standard 4.3: Students will describe the complex cultures of indigenous societies, such as those in Polynesia, Sub-Saharan Africa, Australia and the Americas.

This lesson will introduce; corn as the source of life and existence for the Indigenous peoples of the Americas (specifically the Maya), practices that are still present today, and the important connection between culture, nature and sustainability.

2) Colors of Nature

Time Period: (1000 B.C.E - 900 C.E)

World History Standard 2.3: Students can make evidence-based inferences about the cultural values of classical civilizations, using artistic expressions of various genres as primary sources.

The second lesson will discuss color from an Indigenous perspective (specifically the Maya). This includes literature, symbolism, murals, and estella paintings. The lesson explores colors and their appearance in the Popol Vuh, the modern day process of natural pigments/dyes, and the importance of weavers in the Maya communities. This lesson also includes a STEAM activity in which students can create their own natural pigments.

3) Food, Land, Power

Time Period: (1914 C.E - 1989 C.E)

World History Standard 6.3: Students can explain the political ideas at the heart of decolonization, independence movements, and the formation of new political systems, such as liberation theology, civil disobedience, autonomy, seperatist movements, and pan-Africanism.

This lesson explores foods that are native to the American continent, the ways food migrates from one place to another, and how the Maya grow crops through a sustainable agricultural system called "La Milpa". There is also a focus on the relationship between food and social justice for Indigenous peoples and how migration changes accessibility to ancestral foods.

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Project Description

Throughout Utah, the U.S. and indeed the Americas, clashes are occurring between Native American communities and overall communities. Much is based on a fundamental lack of understanding of differences in history, religion, world views, and philosophies. A core difference is often basic beliefs as to our human relationship to nature. Indigenous perspectives have not been a central part of the educational system in the United States.

This lesson will introduce educators to the importance and relationship between culture, nature and sustainability, introducing corn as the source of life and existence for the Indigenous peoples of the Americas, which practices are still present today.

Because there is so much misinformation about Indigenous peoples and cultures shown in popular media and even textbooks, *Colors of Nature: The Language of Color in Nature*, seeks to share the meaning and cultural importance from the indigenous perspective of the Maya weavers in our community with our entire community.



Born from Corn

More About the Slides



• Maya vs. Mayan

The term "Mayan" is only used by scholars when referring to the languages spoken by the Maya. There are many Maya languages and many Maya peoples. The term "Maya" is used when referring to people, places, and culture, without distinction between singular or plural.

Example: "It was written in a Mayan language." "The Maya harvest corn."



The Term "Mayan & Indio"

Slide 4

The term "Mayan" is only used by scholars when referring to the Maya languages. There are many Maya languages and many Maya peoples. The term "Maya" is used when referring to people, places, and culture, without distinction between singular or plural.

Example: "It was written in a Mayan language."

The term "Indio or Indian" has a negative connotation in Latin America. This map was created by Aaron Carapella and it shows the actual names of Indigenous peoples by Indigenous peoples.

More about the Maps: <https://www.tribalnationsmaps.com/>

Vocabulary

• Weaving

The craft or action of forming fabric by interlacing threads.



• Backstrap Loom Weaving

a horizontal loom on which one of two beams holding the warp yarn is attached to a strap that passes across the weaver's back.

A family tradition that has been passed down for generations, usually from the parent to their children.

Backstrap Loom Weaving

Slide 6

Backstrap loom weaving is an example of a tradition that has been passed onto many generations for at least four thousand years (2000 B.C.). Usually from mother to daughter, but those limitations are changing. Weaving is now slowly becoming a non-gender specific practice. You can search the story of Alberto Gómez López as an example. You can watch or show this video to see the loom in action. (Video is included in the Slide Deck Presentation)

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More About the Slides



• Sustainability

Avoidance of the loss of natural resources in order to maintain an ecological balance.

Trying not to overuse or pollute natural resources like water, forests, oil, stones, air, etc. to keep a natural balance in nature.



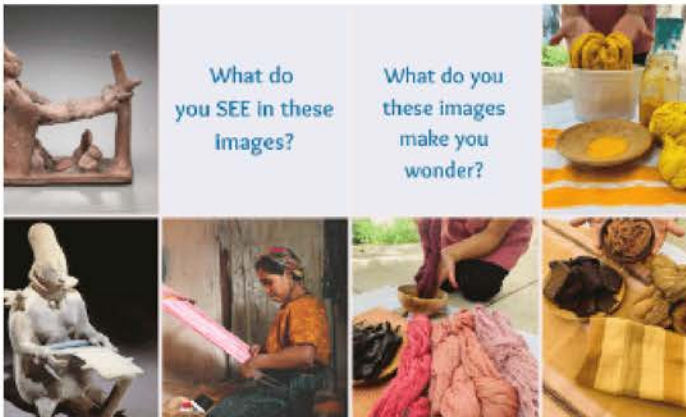
Sustainability and the Cosmovision

Slide 9

Because of Maya cosmovision, taking care of the environment has a direct connection with taking care of one self. It is not a religion, it is a way of life, to see the world, the cosmos, and nature as an extension of ourselves. Sustainability is the outcome of a cosmovision worldview..

What do you SEE in these images?

What do you think these images make you wonder?



SEE, THINK, WONDER

Slide 13

To learn more about this strategy visit:

<https://www.facinghistory.org/resource-library/teaching-strategies/see-think-wonder>

invite students to articulate what they are thinking with the evidence from the picture

The images above depict the process of dye-ing threads by present day Maya weavers.

Teachers can ask students:

- What do they SEE happening in these images?
- What colors do you see?
- What do you THINK they are making?
- What do you wonder?

Born from Corn

More About the Slides



Natural Dyes

The Maya have their own process of dyeing yarn and cloths and have shared it for many generations. Weaving, dyeing yarn and wearing traditional clothing are symbols of survival, resistance and continuation.



Sharing in Our Community

Slide 15

Maya Tselal sisters Maria Elena and Chepita teach little ones how to create dyes for their threads by using elements in nature and the environment. They share their knowledge about weaving and embroidery with their children and grandchildren and expand those practices with our community in Utah.



Color and Creation

In the Popol Vuh (the sacred text of the Maya Quiche), color is associated with the cardinal directions.

The Hero Twins in the story; One Hunahpu and Seven Hunahpu journey to Xibalba (the Maya underworld). On their journey they reach a crossroad with four directions. Each cardinal direction in the story has a color association and meaning.

Creations Stories from the Popol Vuh

Slide 20 & 21

The story of the Hero Twins, One Hunahpu and Seven Hunahpu can be found in the Popol Vuh. The excerpt used in this presentation is from the Allen J Christenson translation. Many scholars have translated the Popol Vuh from its original language, this explains why there are so many variations in the narrative. It is also important to note that the Popol Vuh was written after colonial contact but depictions of the story have been present for thousands of years in Maya art.

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More About the Slides



Maya Blue

Blue has been found on a large number of pre-Hispanic manuscripts and murals. The rare palygorskite clay is only found in the Yucatán peninsula.

Blue is associated with both the daytime sky and water.



The Color Blue

Slide 29

There was one indigo species which was being processed in Europe prior to the contact was assumed that the Spanish had brought it with them; however, there is prehispanic archeological and ethnographic evidence that contradicts the Spaniards' beliefs. In the cave of La Garrafa, Chiapas, the huipil of a girl was recovered together with a blanket and a shirt, as well as several linens dated to the end of the XV century and the beginning of the XVI. The huipil was dyed blue, with a hue that was consistent with the indigo tone, thus reinforcing the notion of its prehispanic use. (Sax and Lewis 1993; Turok 1996:29).

**Yax che'
La Ceiba
The World Tree**

A giant ceiba tree, the sacred tree of the Maya, the yaxche, 'first' or 'green' tree, stands in the exact center of the earth. Its roots penetrate the underworld; its trunk and branches pierce the various layers of the skies. Some Maya groups hold that by its roots their ancestors ascended into the world, and by its trunk and branches the dead climb to the highest sky



More about the Ceiba Tree

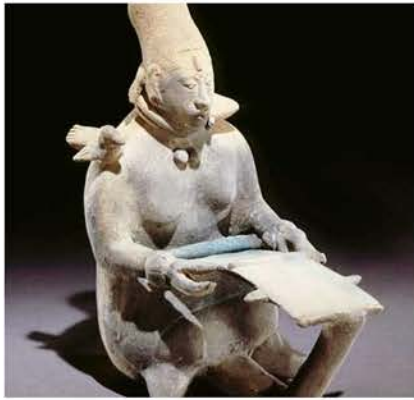
Slide 26

A world tree, which is present in virtually all mythical traditions, connects the underworld (roots) with the sky (branches) and the Earth (trunk). Possibly the most important function that a Mayan ruler could carry out was a ceremony where he assumed the role of the world tree, connecting his people with the gods. **Source:** [FAMSI](#)

This tree is not to be confused or interchanged with the tree of life.

Born from Corn

More About the Images



Weaver Ceramic

Slide 13

This ceramic is said to be made of clay with traces of blue paint. It is a female figure with a loom. The ceramic is from México, Campeche, in the Jaina Island. Dating between 650-850 and hosted in the Los Angeles Angeles County Museum of Art.



Calakmul Mural Paintings

Slide 14

This Maya mural was painted in Calakmul, Campeche, México. Details on the Ch'iik Naanb's mural suggests that it was decorated between A.D. 620-700. Textiles and huipiles have been part of Indigenous attire for a few thousand years.



Diego Rivera Mural

Slide 8

This mural is called the "Pan American Unity", finished in 1940. Rivera painted a group of Olmec artisans at work.



Mural of Bonampak

Slide 19

The mural is found in Chiapas, México. Scholars have proposed that the meaning of the scene was the presentation of the royal heir to the nobility of Bonampak. The mural dates to 790 A.D.



The Hero Twins

Slide 20 & 21

The image above is from the an adapted-illustrated version of the Popol Vuh. Adapted by Victor Montejo, illustrated by Luis Garay and translated by David Unger.



Corn Maidens

Slide 22

'The Painted Murals of San Bartolo" in Guatemala. This image shows the depiction of the Maya Maize God and the creation of the world, surrounding him you can see four kneeling corn maidens.

Born from Corn

More About the Images



La Cruz Maya

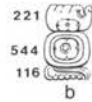
Slide 23

This cosmological Maya cross can be found in San Pedro la Laguna, Guatemala. It depicts the cardinal directions and its symbolic colors.

EAST



WEST



ZENITH



NADIR



Maya Textile Symbol

Slide 23

Five diamond designs mark the four cardinal directions, weavers often put dots of brightly colored threads in the cosmogram designs representing stars, which they call the eyes of the universe.
Source: Weaving-for-Justice.Org

Maya Heiroglyphs

Slide 23

These directional glyphs appear on the Copan Stela A found in Copán, Honduras.

To learn more visit: [Directions and Partitions in Maya World View](#)



Cardinal Colors

Slide 24

The painting is titled "Guía mi Camino/Lead the Way". Art by Vicky K'ulub Lowe, 2019



Maya Cosmvision

Slide 29

This is Ki'nich Janaab' Pakal, a Maya ruler of Palenque. This image is found on a large carved stone sarcophagus lid in the Temple of Inscriptions, Chiapas, México. Depictions of maize can be found in this image.



Painted Figure

Slide 28

Painted Figure, late Classic period, (AD 600 - 900), ceramic & plaster. It shows the image of a man inside a blue araceae flower. The ceramic and plaster object is from Jaina in the Campeche area, México.

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More About the Images



Fragment of the Mural of the Battle

Slide 34

This fragment shows a warrior of high rank, with one of them vanquished. The murals in Cacaxtla have details typical from Teotihuacan, while the figures possess characteristics of the end of the Mayan Classic period. Although these murals have been dated very early (AD 650-750), the fact that the MB pigment is used indicates that it should come after the ninth or tenth century AD. (Reyes-Valerio, 1993).

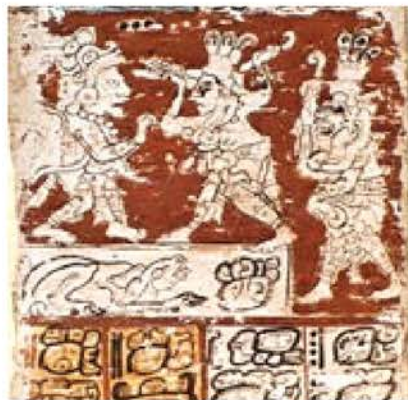
Read More: [The Maya Blue Pigment, Developments in Palygorskite-Sepiolite Research](#)



Codex Dresdensis

Slide 33

Many colors are used in the Dresden Codex. In this section of the Codex we are able to see Maya blue.



Codex Dresdensis

Slide 30

The Dresden codex has many scenes showing the gods which appear in Tzakol and Tepeu Maya pottery.

Learn More: [FAMSI](#)



Mask of the Red Queen

Slide 31

This is the malachite funerary mask of the "Red Queen". She can be seen at the Museo de Sitio de Palenque, México.

Born from Corn

More about the Images



Tomb of the Red Queen

Slide 31

When scholars opened the Red Queen's Tomb they found the interior painted with crimson cinnabar. Her body, ornaments and offerings were also covered with a thick layer of cinnabar.



Figurine Fragment

Slide 32

Late Classic Period. Found in Tenam-Rosario, Chiapas, México. Currently hosted in the Centro Cultural de los Altos de Chiapas, Mexico.



Codex Dresdensis

Slide 33

The god Itzamna emerging from a caiman. This image can be found in the Dresden Codex. Individual paragraphs with cochineal (squashed cactus beetle) and three shades of red, a blue obtained from herb blossom, chili-red and dark green dyes from trees.



Maya Jade Mask

Slide 34

Maya Jade Mask of Kinich Hanab Pakal, Ruler of Palenque, 615-683 AD. Currently in the National Museum of Anthropology, Mexico City.



Quetzal Feathers

Slide 34

In ancient times, Maya rulers formed their most prized headdresses with Quetzal feathers, like this student replicates here.

Courtesy of: coeduc.org



Earflare Frontals

Slide 34

Jadeite comes in array of colors (from purple to green to cloudy white), though bright green and deep blue-green varieties were most prized by the ancient Maya.

Courtesy of: [The Met Museum](http://TheMetMuseum)

Born from Corn

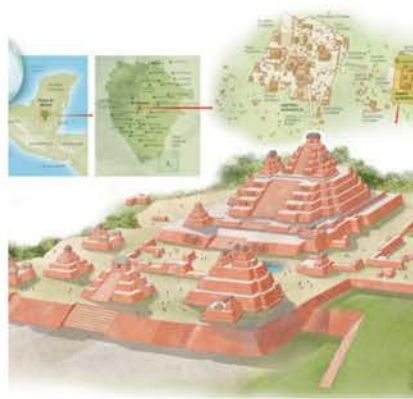
More about the Images



Bonampak Mural

Slide 34

The mural is found in Chiapas, México. Jaguar pelts were used by the elite as a symbol of their high status



Mirado Basin

Slide 35

An infographic illustration by Pedro Velasco.

Courtesy of: [Smithsonian Magazine](#).



Uxmal

Slide 35

View of the Pyramid of the Magician and Birds Court in Uxmal. 3D Model by Andrés Armesto and Anxo Miján Maroño for the National Geographic Archaeology Collection.



Palenque

Slide 35

Recreation of Palenque in the Classic Maya (200 AC - 900 DC) Artist Unknown.



Temple of the Skull

Slide 35

Temple of the Skull is found in Palenque, México.



Nunnery Quadrangle

Slide 35

Reconstruction of the Nunnery Quadrangle in Uxmal. 3D Model made by Anxo Miján Maroño and Diego Blanco for the National Geographic Archaeology Collection.

Born from Corn

More about the Images



Maya Weaver

Slide 13

This figurine is of a woman weaving from the Maya Classic period (600 Ad - 900 AD). Found in the Island of Jaina and Photographed by Werner Forman.



Weaver with Birds

Slide 13

This particular ceramic is Weaver with Back-Strap Loom and Birds. It is from the Jaina Island in Mexico (Late Maya Classic period) Currently at Yale University Art Gallery.

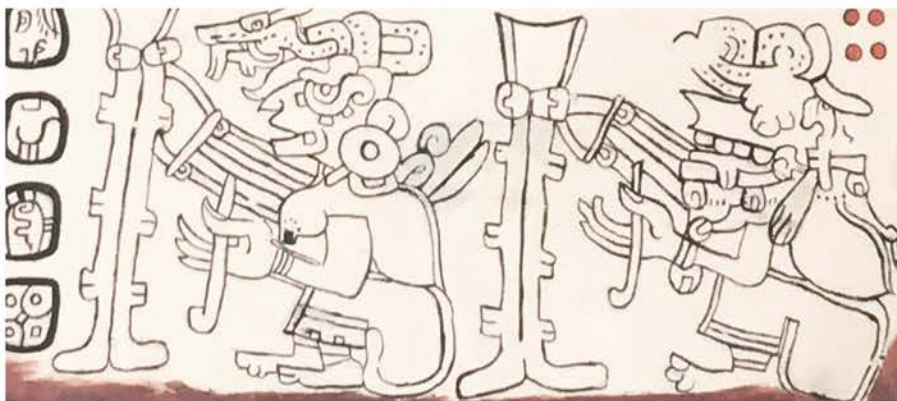


Ix Chel

Slide 17

This art was created by Thalia Took. Ix Chel is shown here in three of her many aspects. Her name means Lady Rainbow.

[>> Support the Artist](#)



Madrid Codex

Slide 14

The above image is a hieroglyph of a female weaver on a backstrap loom found in the Madrid Maya Codex (post-Classic period 1400 CE). Some scholars believe that the Madrid Codex portrays the goddess Ix Chel. She is the partoness of womanly crafts, healing and fertility.

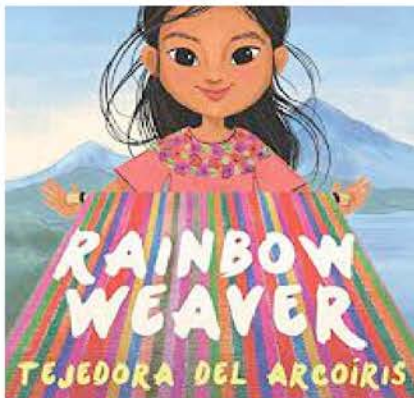


The Weaver 1936

Slide 41

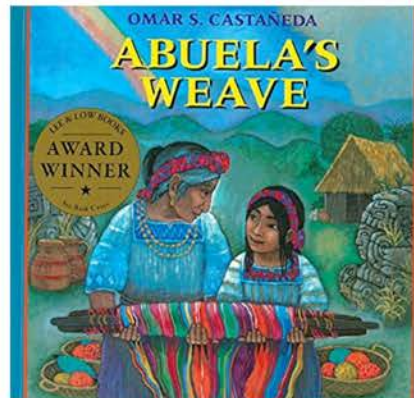
This painting was created by Diego Rivera and it is currently at The Art Institute of Chicago, USA.

Born from Corn Books and More



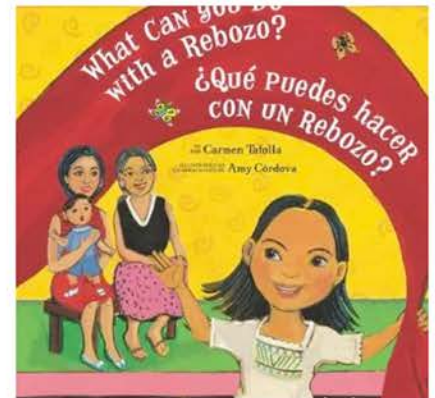
Rainbow Weaver

Written by Linda Elovitz Marshall and Illustrated by Elisa Chavarri



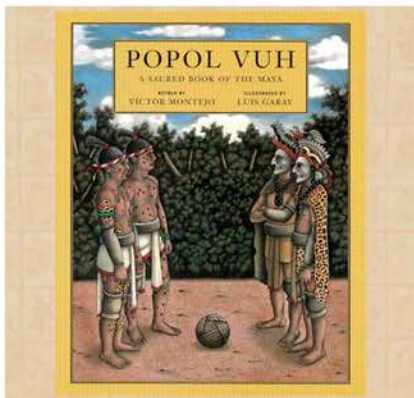
Abuela's Weave

Written by Omar S. Castaneda and Illustrated by Enrique O. Sanchez



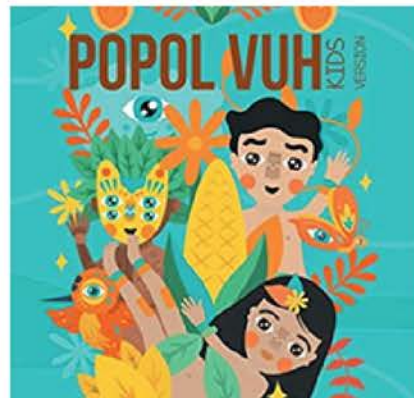
What can you do With a Rebozo?

Written by Carmen Tafolla



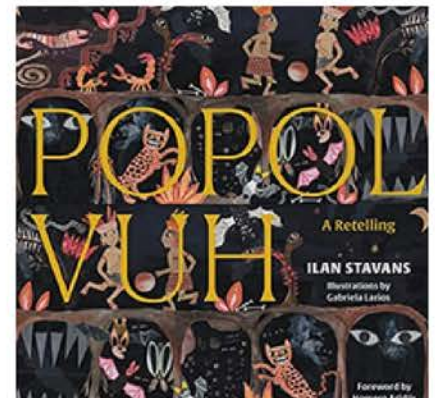
Popol Vuh: A Sacred Book of the Maya

Adapted by Victor Montejo, illustrated by Luis Garay and translated by David Unger.



Popol Vuh: Kids Version

By Irina Rohmoser Moreno



Popol Vuh

By Ilan Stavans and Illustrated by Gabriela Larios

Born from Corn

Video Resources



Porfirio Gutiérrez: Ka Duu (Natural Color)

Porfirio Gutiérrez and his family are from a long line of master weavers who work with the 2,000 year old Zapotec weaving tradition.

Watch:

<https://youtu.be/kyM97s9Rrrs>



Natural Zapotec Dyes of Porfirio Gutiérrez & Family

For over a thousand years, the Zapotec people of Oaxaca Mexico have been weaving with yarns that they have dyed using the natural elements found in their environment.

Watch:

<https://youtu.be/kyM97s9Rrrs>



Teixel Mayan Women's Weaving Cooperative in Guatemala

This is why we weave exclusively with nontoxic eco-dyes and natural dyes, because our land is not only ours but that of the generations to come.

Watch:

<https://youtu.be/iN7Jiuf89eE>



Manuela & Esperanza: The Art of Maya Weaving

Manuela Canil Ren and Esperanza Pérez of Guatemala, expertly share the art of back-strap weaving at its finest and most colorful.

Watch:

<https://youtu.be/BrBdRbrXMVw>



Century of Color: Maya Weaving & Textiles

This documentary shows the effects of cultural change brought about by: the recent 36-year Civil War; introduction of Spanish language in rural schools; proliferation of mass media; increased tourism and artisan organizations; changes in the role of women; pressure from a globalized world economy; and, importation of vast quantities of cheap, new and used clothing.

Watch:

https://youtu.be/Ehwx_ZGXcVY



COLOURS OF NATURE

FIELD ACTIVITY



NAME:

DATE:

Part 1: Predict

Collect plants, flowers, minerals, or any natural elements that you think you can use to create a dye. Make sure you don't touch unsafe plants, go with with an adult and do your research about safe and unsafe plants around you. Some plants Maya weavers use are:

Element	Color it Makes	Action
Palo Brasil - Brazilwood	Dark Pink	(Boil and let soak for a few days)
Red Utah Sand	Light shades or orange	(Let soak for few days)
Purple Onion Skin	Lilac	(boil and let cool off)
Black Beans	Shades of Blue	(soak the beans and use the leftover water)
Yellow Onion Skin	Green, Yellow & Brown	(Boil and let cool off)
Avocado Seed	Light Pink	(Boil and let cool off, this one ccan be toxic, do no reuse containers or spoons)

YOUR TURN! What other natural elements do you think you can use?
What colors do you think they can make?

Element	Color you predict it will make

Part 2: Experiment

Mix your natural dyes in different containers (ice trays work well, but don't forget to label them) See what happens when you add lime juice, baking powder or salt. It is important that you don't use containers or utensils for eating after you make your dyes. Nature is chemistry, some of the chemicals in the plants can be harmful.

Natural dye only	+ salt	+ baking soda	+ lime/lemon juice	Notes

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Painting with nature. When you're done: draw, paint with your dyes and take notes. Watercolor or card stock paper work well for painting. Have fun!



DISCLAIMER

Out of respect for Indigenous cultures, we ask that you share this knowledge in a spirit of respect.

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