



COLORS OF NATURE

6th Grade Standard

Standard I: Students will understand how ancient civilizations developed and how they contributed to the current state of the world.

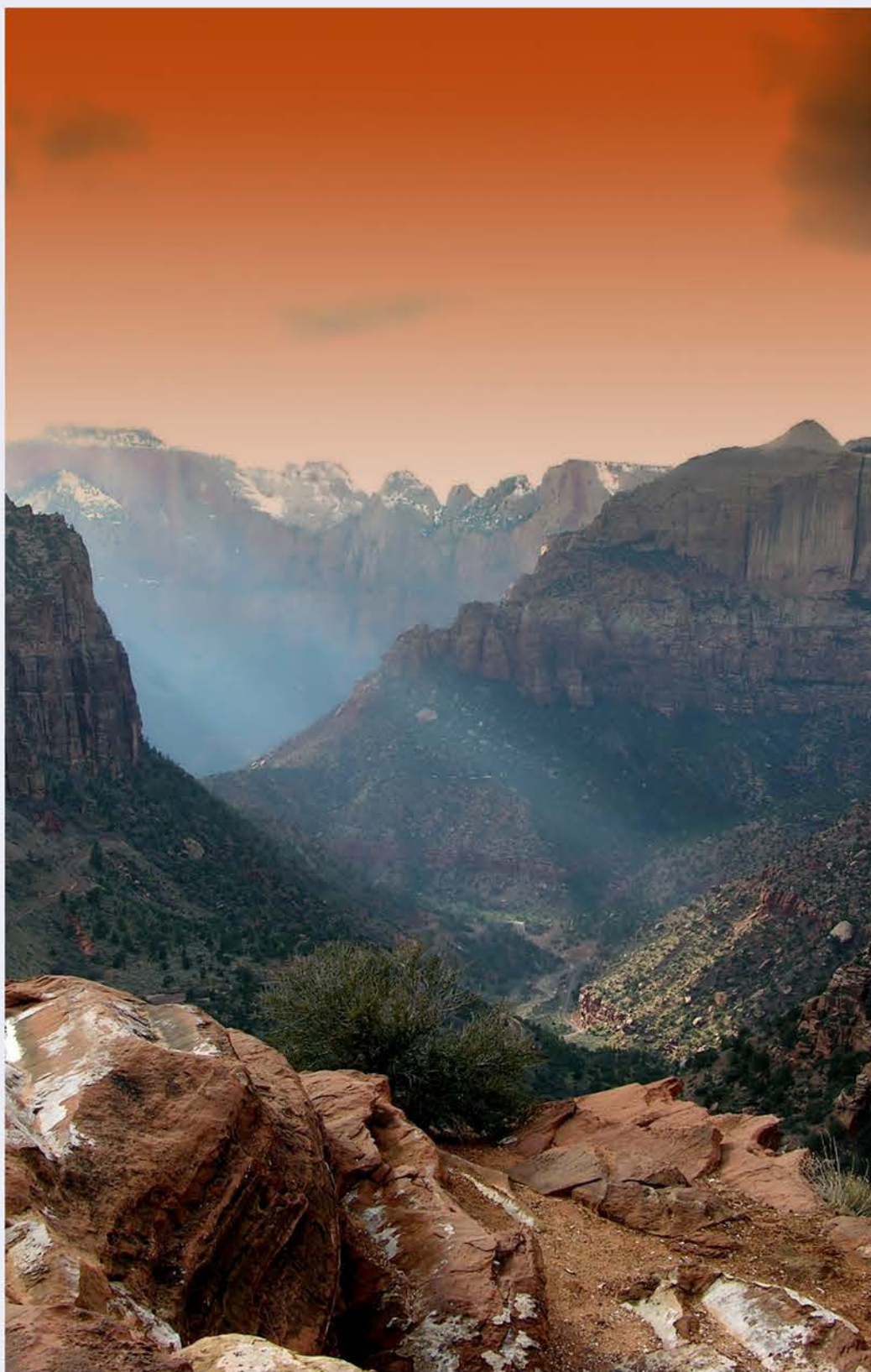
Objective 4:

Analyze how the earliest civilizations created technologies and systems to meet community and personal needs.

(C) Identify cultural expressions that reflect these systems (e.g. architecture, artistic expression, medicine, philosophy, drama, literature)



Introduction



The Born from Corn series seeks to increase cultural understanding and foster a deeper appreciation of the main agricultural crops, traditions, and indigenous knowledge of the Indigenous peoples of the Americas, specifically the Maya, with our entire community. We acknowledge that this land which we now know as the state of Utah, is the traditional and ancestral homeland of the Ancestral Puebloans, the San Juan Southern Paiute, Dine (Navajo) Nation, Ute Mountain Ute-White Mesa Community, Paiute Indian Tribe of Utah, Ute Tribe, Northwestern Band of Shoshone, Skull Valley Band of Goshutes, and the Confederated Tribes of the Goshute Reservation. We recognize and respect their relation with this land as the original people of this place. We acknowledge and amplify the true history of the Indigenous peoples of this continent and their resilience against colonizer efforts to eliminate indigenous cultures, languages, traditions and beliefs. Through these lessons we hope to increase cultural understanding and foster a deeper appreciation of the art of weaving, the creation of natural dyes and how these practices are scientific, technological, and mathematical skills. These are traditions and knowledge that original peoples of this continent have been practicing for thousands of years.

Vocabulary



- **Indigenous**

Indigenous means to be native or occur naturally in a particular place. Indigeneity is then applied to groups of people that lived in the Americas before the arrival of the Europeans. [>>Watch the video<<](#)

- **Tradition**

The handing down of information, beliefs, or customs from one generation to another.

Example: Painting Easter eggs during Easter every year.

- **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.

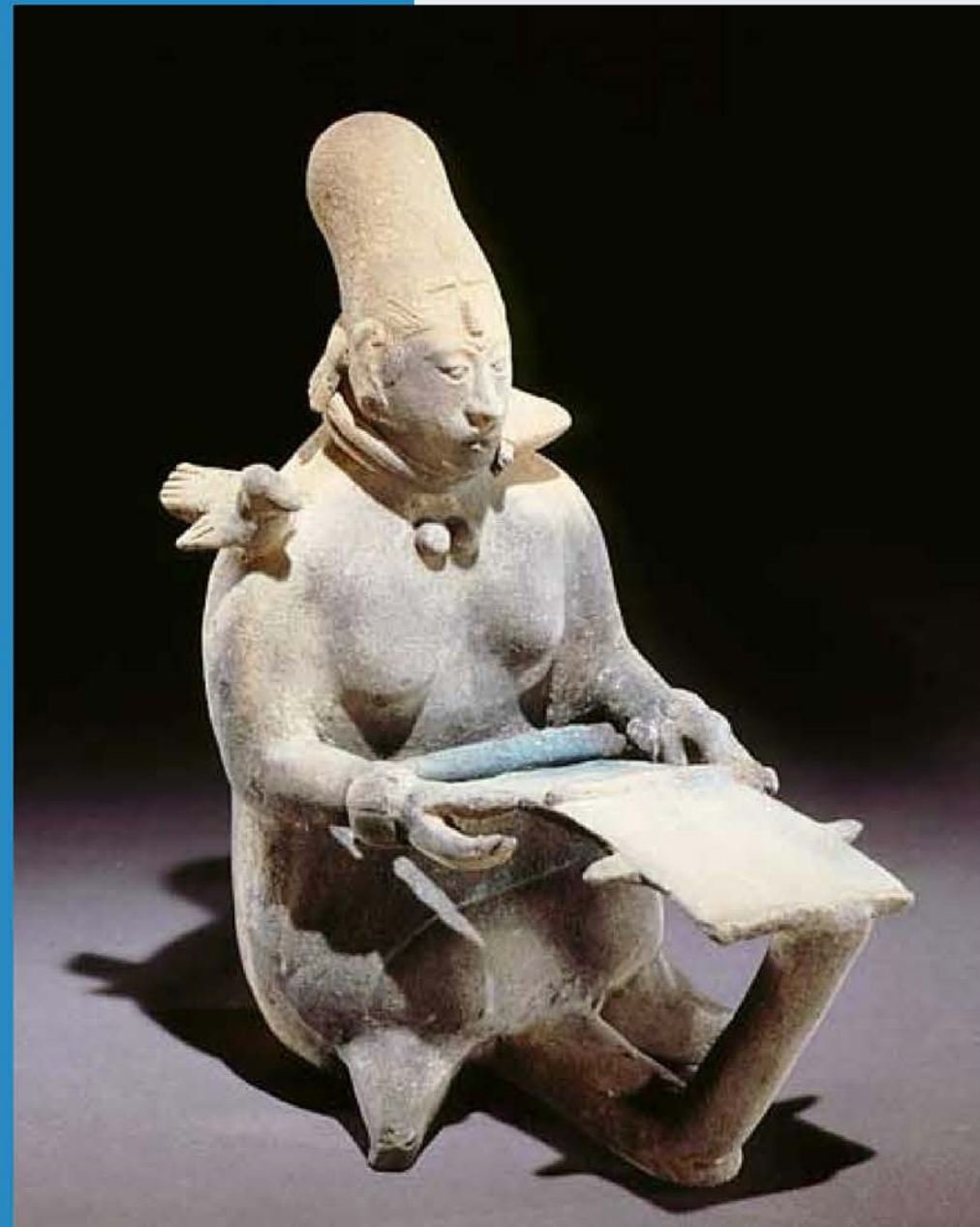
Example: "It was written in a Mayan language." "The Maya harvest corn."



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.

- **Textiles**

A type of cloth or woven fabric. Maya weavers usually embroider elements of nature and the cosmos as part of their traditional blouses known as a **huipil**.

- **Cosmovision**

A cosmovision, or worldview, is the way we see the world and how nature, and everything around us, like animals, the universe, stars, air, and earth, are connected and related to us, humans.





● Natural dyes

Natural dyes are dyes derived from animal or plant material without any chemical treatment. They are obtained from sources like flowers, leaves, insects, bark roots etc.; however, they are not readily available and involve an extraction process

● Pigment

Pigments are also natural elements that can be used to paint. Dyes easily dissolve in water and many solvents while pigments do not dissolve in water.

● Sustainability

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

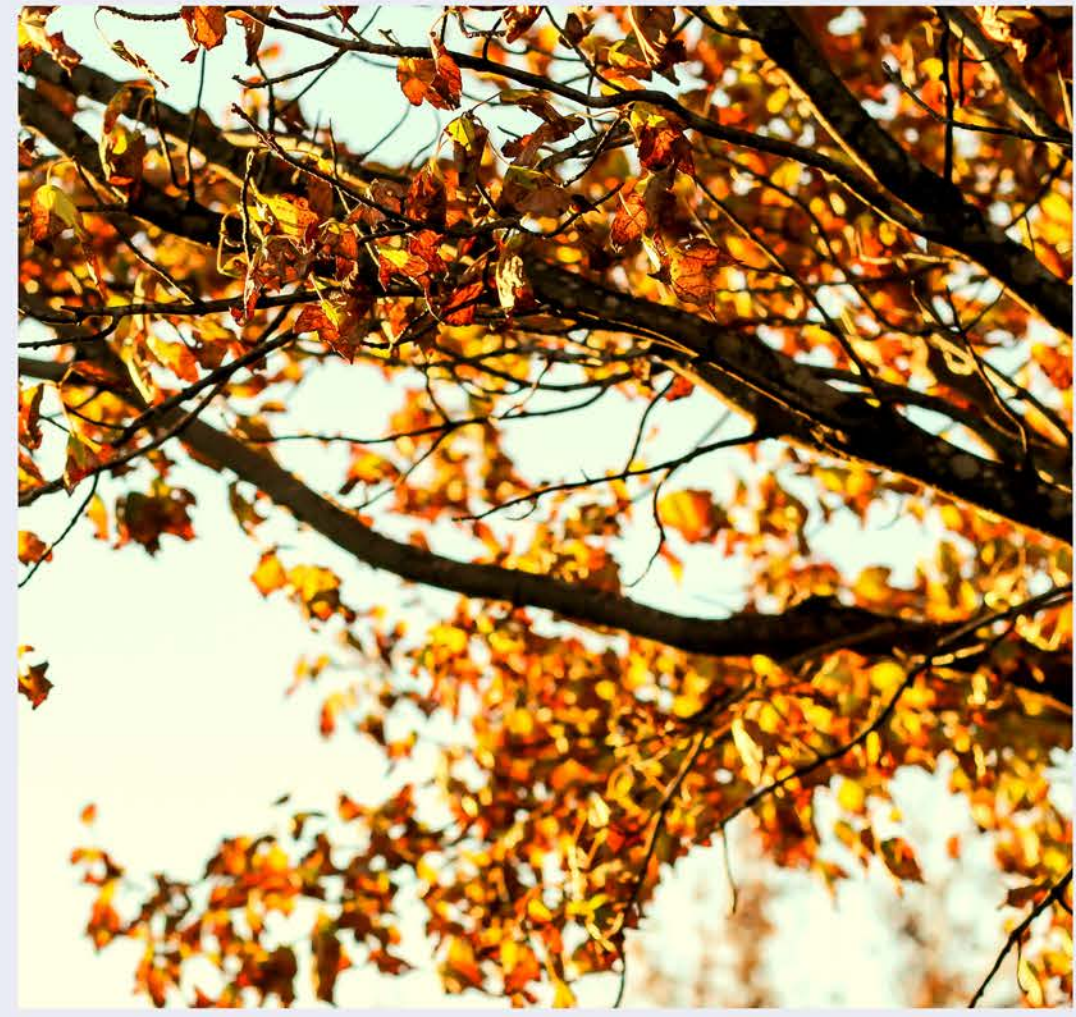
Trying not to overuse or pollute natural resources like water, forests, oil, stones, air, etc. to keep a natural balance in nature.

● Technology

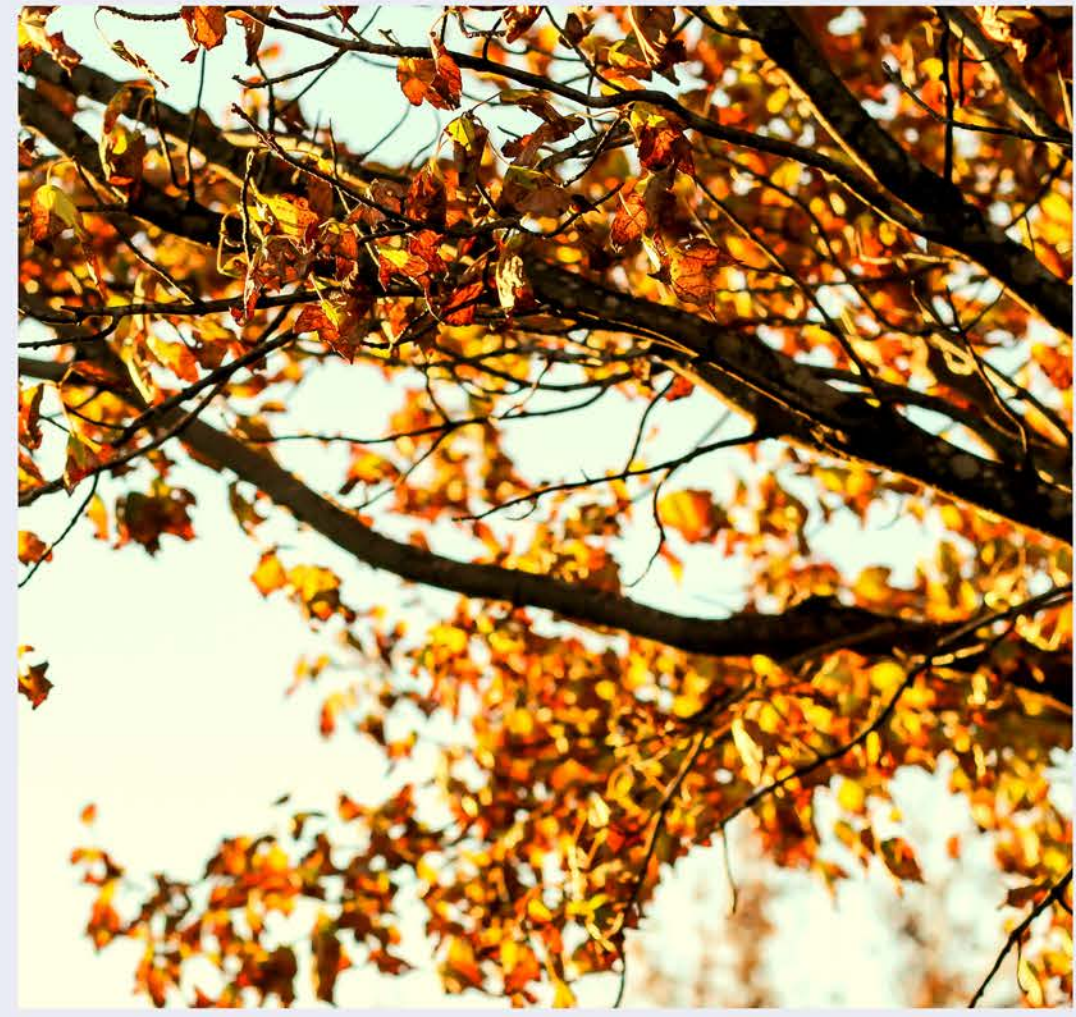
The use of knowledge to invent new devices or tools. Anything created to solve a problem.



What colors do you see when you are out in nature?



What colors do you see when you are out in nature?



A close-up photograph of a wooden paint palette with a grid of 20 compartments. Each compartment contains a different color of pigment, ranging from dark blues and purples to bright reds, oranges, and yellows. The pigments have a fine, powdery texture. A semi-transparent white rectangular box is overlaid in the center of the palette, containing text.

What do colors mean to you?

What colors do you see in your state?

How do they make you feel?

Share with a partner

Colors of Culture

When you think of color, do you think about cultural celebrations and holidays?





What do you SEE in these images?



What do these images make you think?



What do these images make you WONDER?



Natural Dyes

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



Weaver of Colors

Many Maya use these threads to create Huipiles (embroidered Maya dress/blouse).



Natural Pigments

If you visit countries like Mexico and Guatemala, you will see vibrant beautiful colors on the buildings and murals.

Many Maya today create colors by using natural dyes and pigments but this practice and knowledge all started long ago with the ancient people of Mesoamerica.

*Mesoamerica is a geographical region sometimes also known as "Central America" and includes Mexico. This word is used when talking about peoples and cultures before the Spanish Colonizers.





For the Maya...

Colors are symbolic, they represent memory, direction and creation.

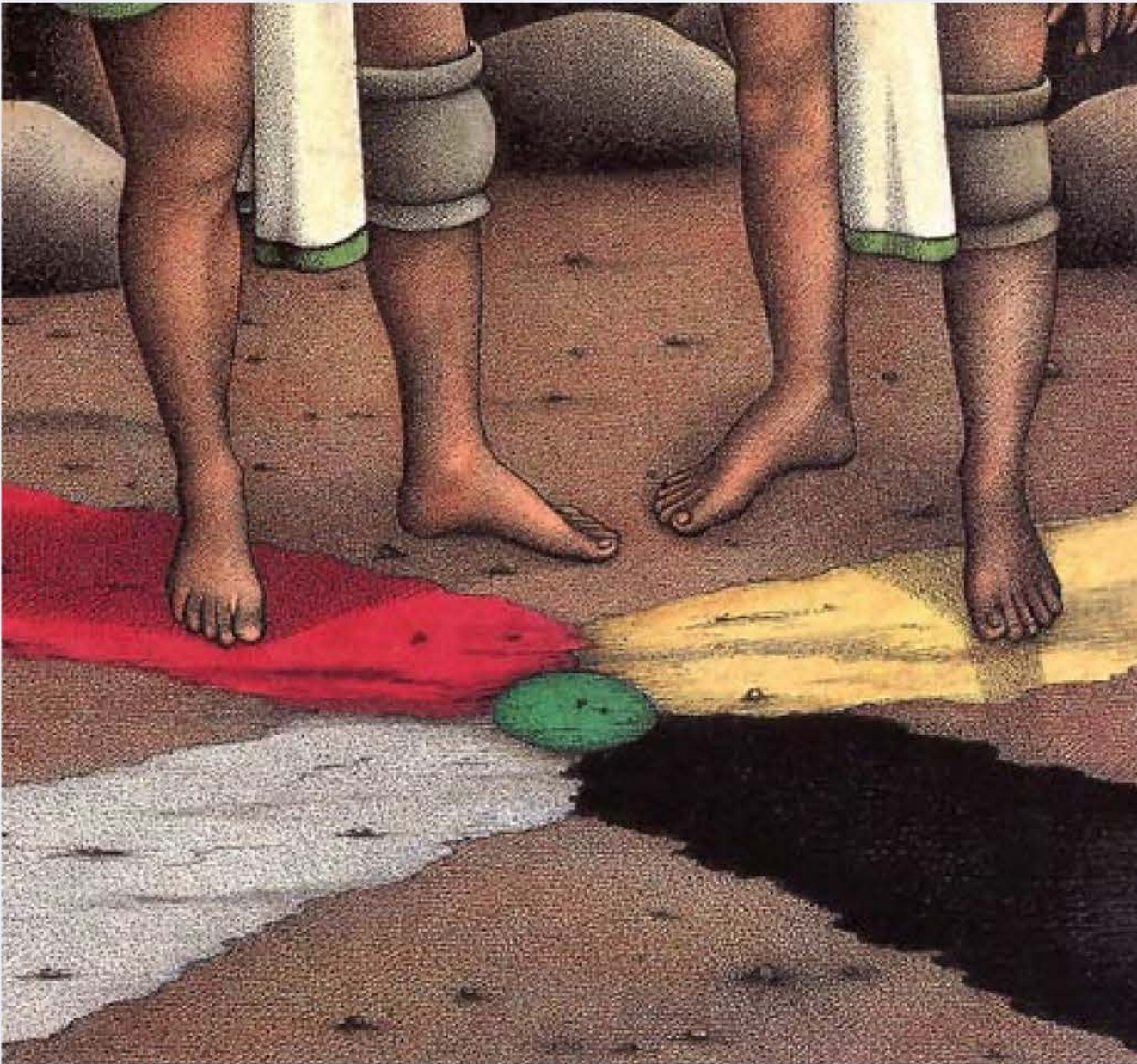


Color and Creation

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.

The Popol Vuh: The Hero Twins and the Cardinal Directions



"At length they arrived at a crossroads, 257 and it was here at the four crossing roads that they were defeated. One was Red Road and another was Black Road; White Road was one while another was Yellow Road.²⁵⁸ Thus there were four roads. Now this, the black road said: "Me! Take me, for I am the lord's road." Thus spoke the road."

FROM THE POPOL VUH, THE SACRED TEXT OF THE
MAYA QUICHÉ

Modern rituals often begin by placing candles with these corresponding colors at the cardinal directions in order to symbolically delimit the corners of the world. Thus the brothers were tricked into following the black, or west, road—a premonition of their defeat and death since this is the road that the sun takes when it sinks into the underworld.

Corn and the Corn Maidens

There are many Indigenous stories about the colors of corn. Sometimes each color of corn was represented by a girl or a lady. The stories talk about the ladies as agricultural teachers, mothers of the harvest, the creators of blue or red corn, or the providers for their families. These stories have been passed on for thousands of years.



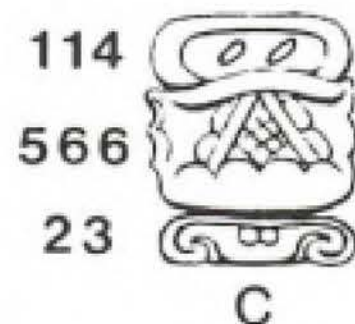
East



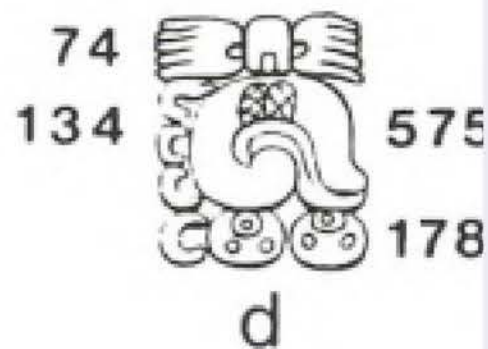
West



North



South



THE CARDINAL COLORS

In common with other Mesoamerican cultures, the Maya combined the four world directions and the center of the world with colors and various attributes which were believed to be associated with these world directions. There are other cultures that also designate colors to the cardinal points, these color connections vary. The Maya used the following color scheme:

East is associated with 'red' sunrise, North with 'white' mid-day, West with 'black' sunset, and South with 'yellow' sun, The fifth color term, 'blue/green' is associated with the 'Center' earth.

COLORS OF CORN

The colors of these cardinal points are also the colors of corn. We know about the four corn sisters, each one with one color of corn. So we see that the use of these colors were not chosen randomly. Another connection with the colors of corn and Popol Vuh is the fact that the maya people, according to the creation story, were made out of masa from the four different colors of corn.



By Artist Vicky K'ulub Lowe

MAYA GREEN: YAAX

Greens are related to Maize, the main source of sustenance and also the sacred material of creation.

Green colors were usually produced by mixing or layering blue and yellow pigments and dyes. In most cases a yellow dye was mixed with a blue hybrid pigment.

* It is important to note that Mayan languages do not make a primary distinction between the colors blue and green and see them as a single color, commonly referred to by the name "Yaax".



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.

- (THOMPSON, 1970:195)





Green Crosses

Green is the color chosen to color the green/blue crosses found as sacred markers in many Maya communities in Chiapas.

The cross has been present in the Maya world since before European invasion. It was not related to Christianity. It is a symbol of the connection between all the dimensions, the heavens, the earths and the underworld. Blue and green - generally linked to the central axis mundi of the Maya world and the connection of the underworld to the heavens.

MAYA BLUE GREEN: ALSO YAAX

Blue colors are among the most famous products of ancient Mesoamerican technology.

Blue, a hybrid pigment is made of indigo and a palygorskite base. This color is associated with both the daytime sky and water.



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.



MAYA RED

Red has been associated with the east where the sun rises, life force, human blood, fertility, fire.

It was made of different materials, like cochinilla insects but also minerals such as cinnabar.



THE RED QUEEN

We can look at the findings in Palenque, Chiapas, where "La Reina Roja" was found covered in red paint. The tomb of the Red Queen was located in Temple XIII-sub of Palenque, Chiapas.

Its name is due to the fact that it had a rich outfit and was painted red with cinnabar.

Cinnabar is a toxic mercury sulfide mineral. It is the only important ore of mercury. It has a bright red color that has been used as a pigment for thousands of years.

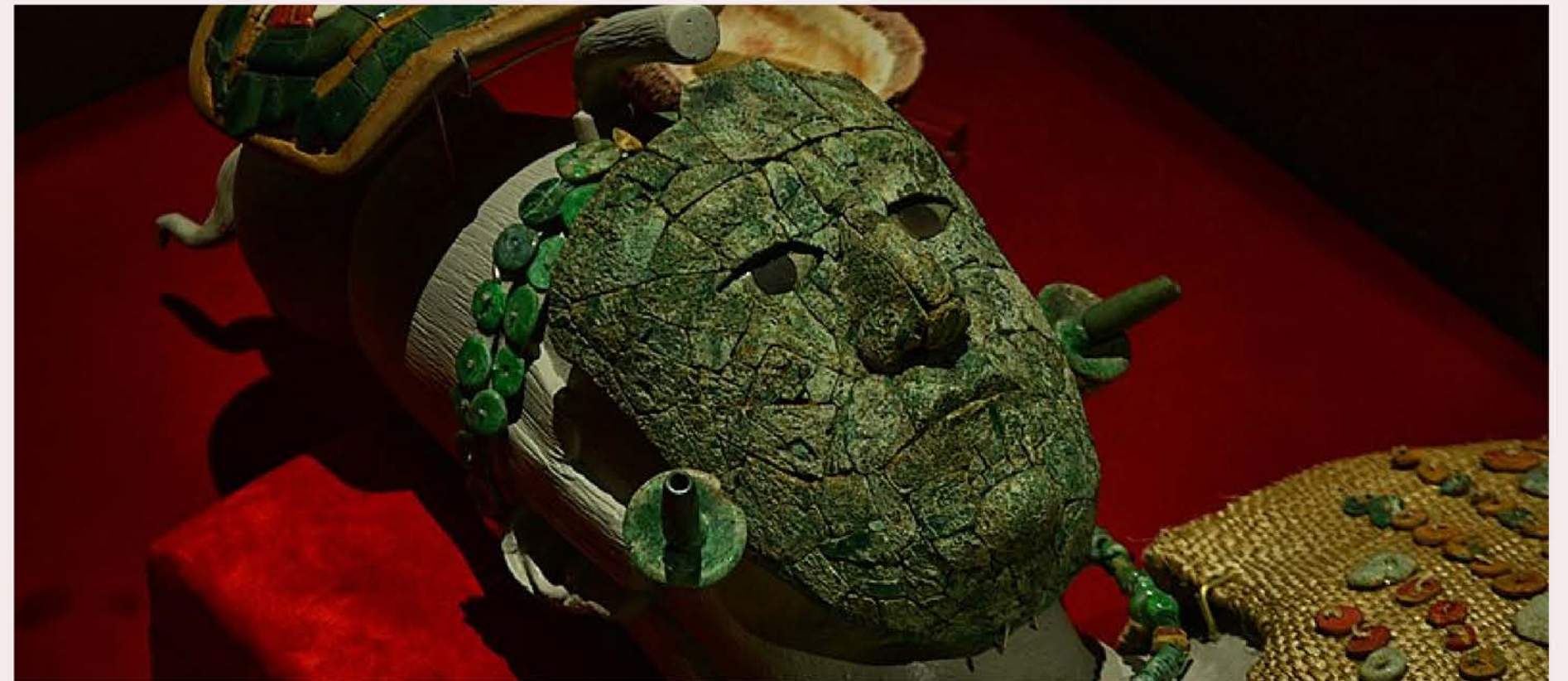
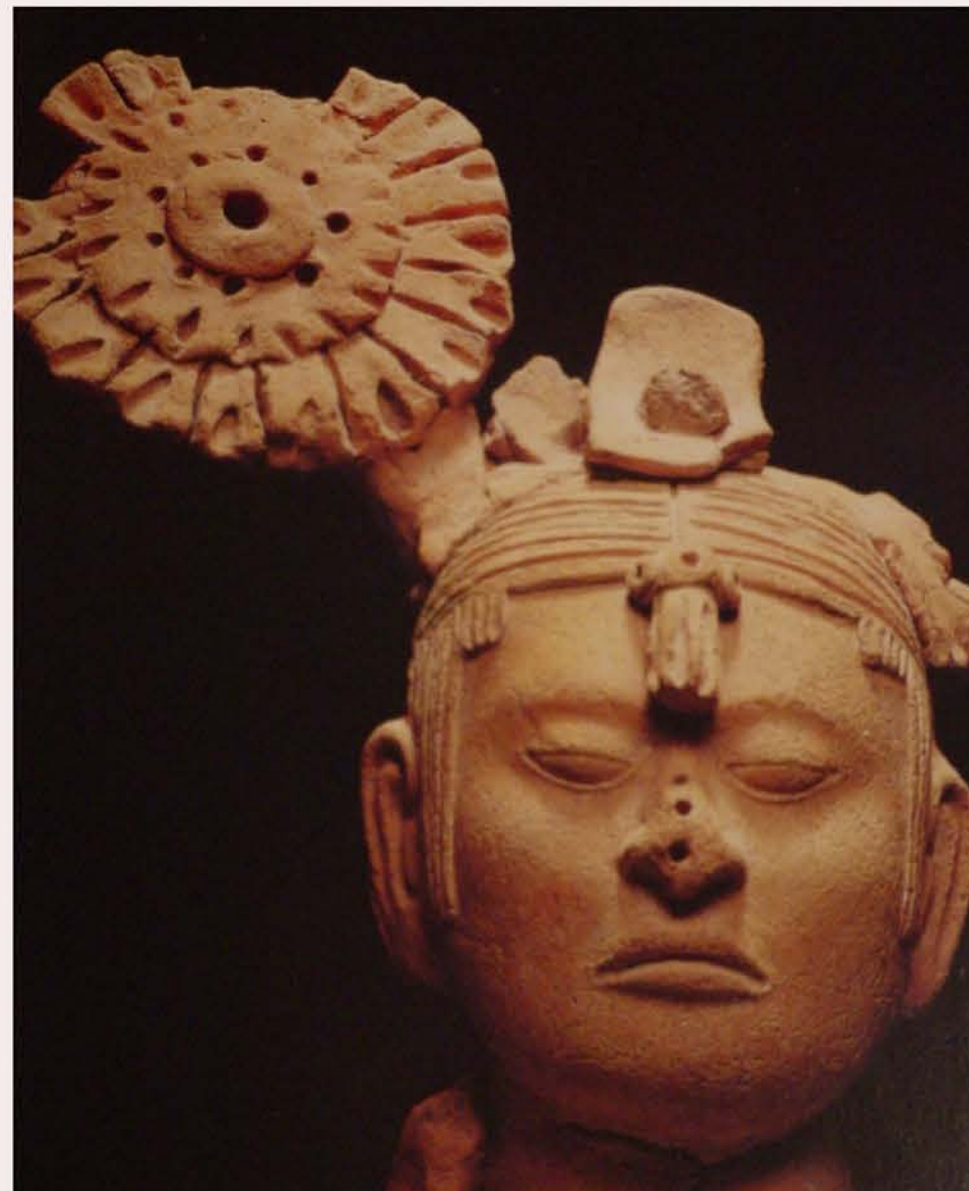


Photo: Javier Hinojosa

MAYA YELLOW

Yellow is associated with the sun. Obtained both from flowers and plants such as cempasuchitl, palo amarillo, and xochipalli. And minerals, like ground up yellow stone called tecozahuitl, which translates into yellow ochre.

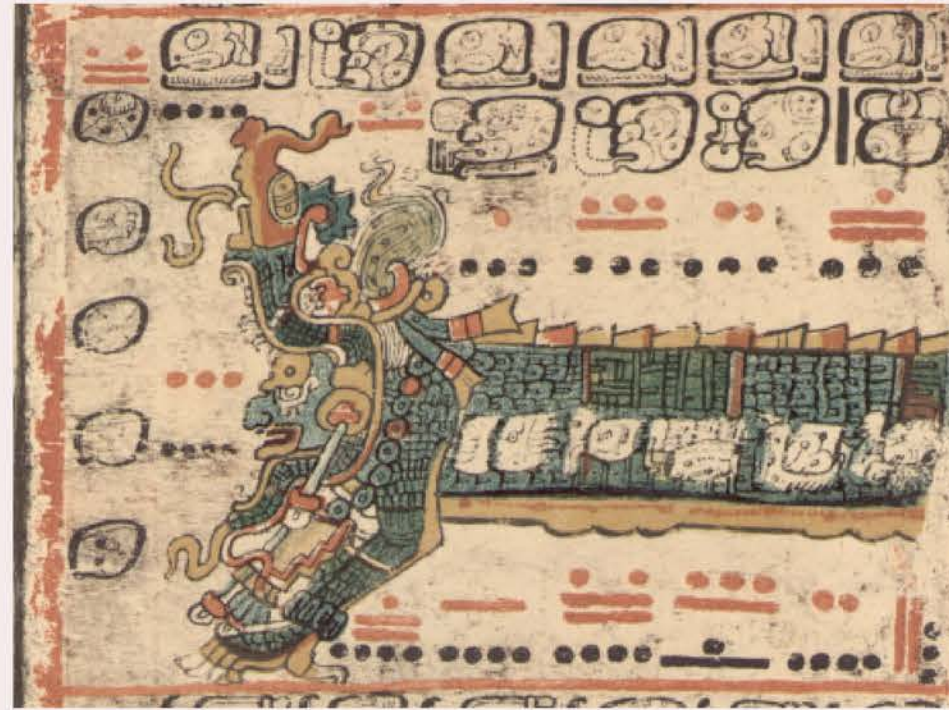
Sunflowers can be seen in a few instances in ancient Maya art. They may have been associated with the color of the sun, highly revered in Maya cosmology.



MAYA BLACK

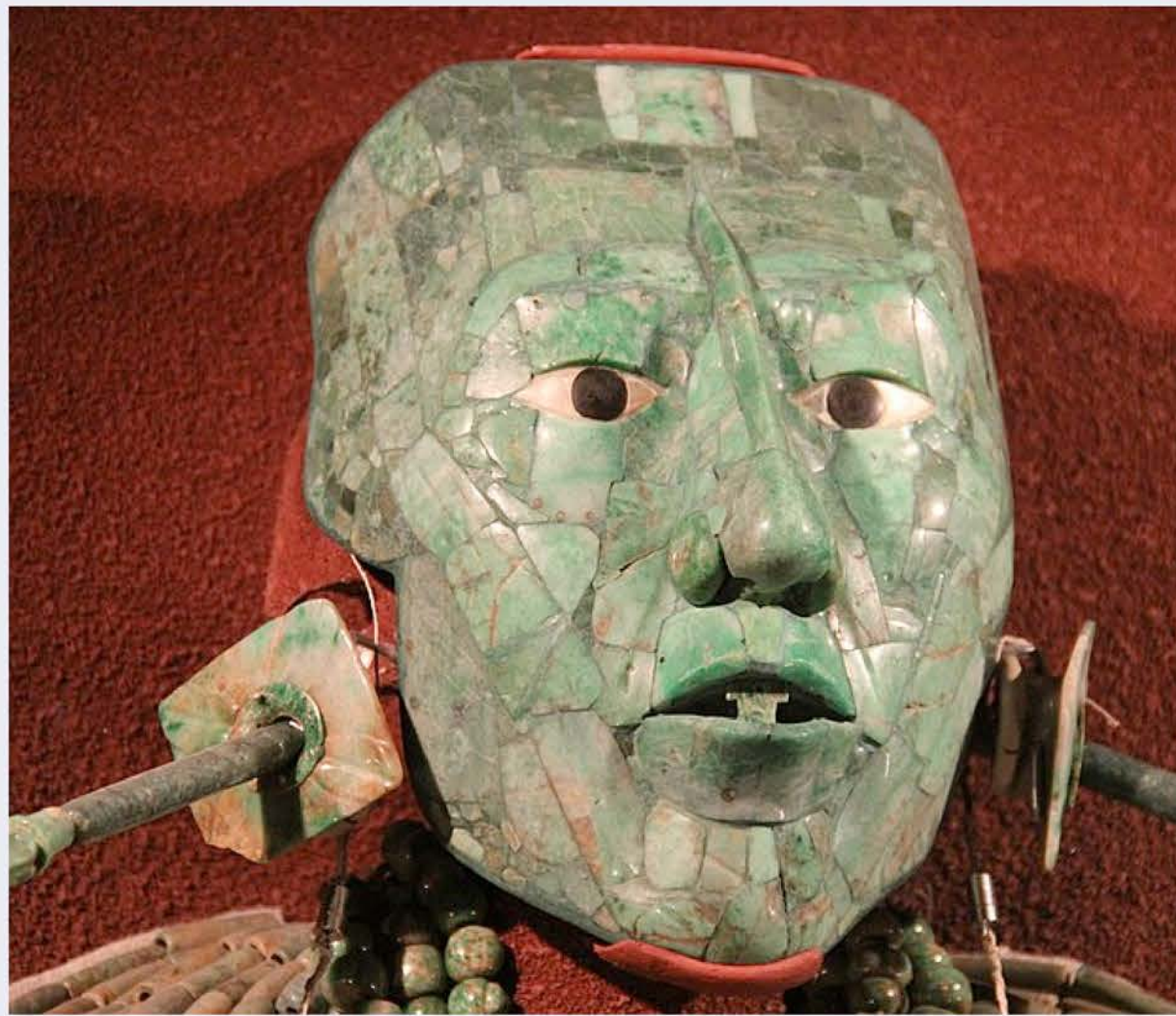
The color Black from charcoal, was attributed to the Lords of the Night.

The black ink found on the Dresden Codex was carbon-black from soot, reds were made from hematite (iron oxide), and lovely bright blues, greens and yellows were also present.



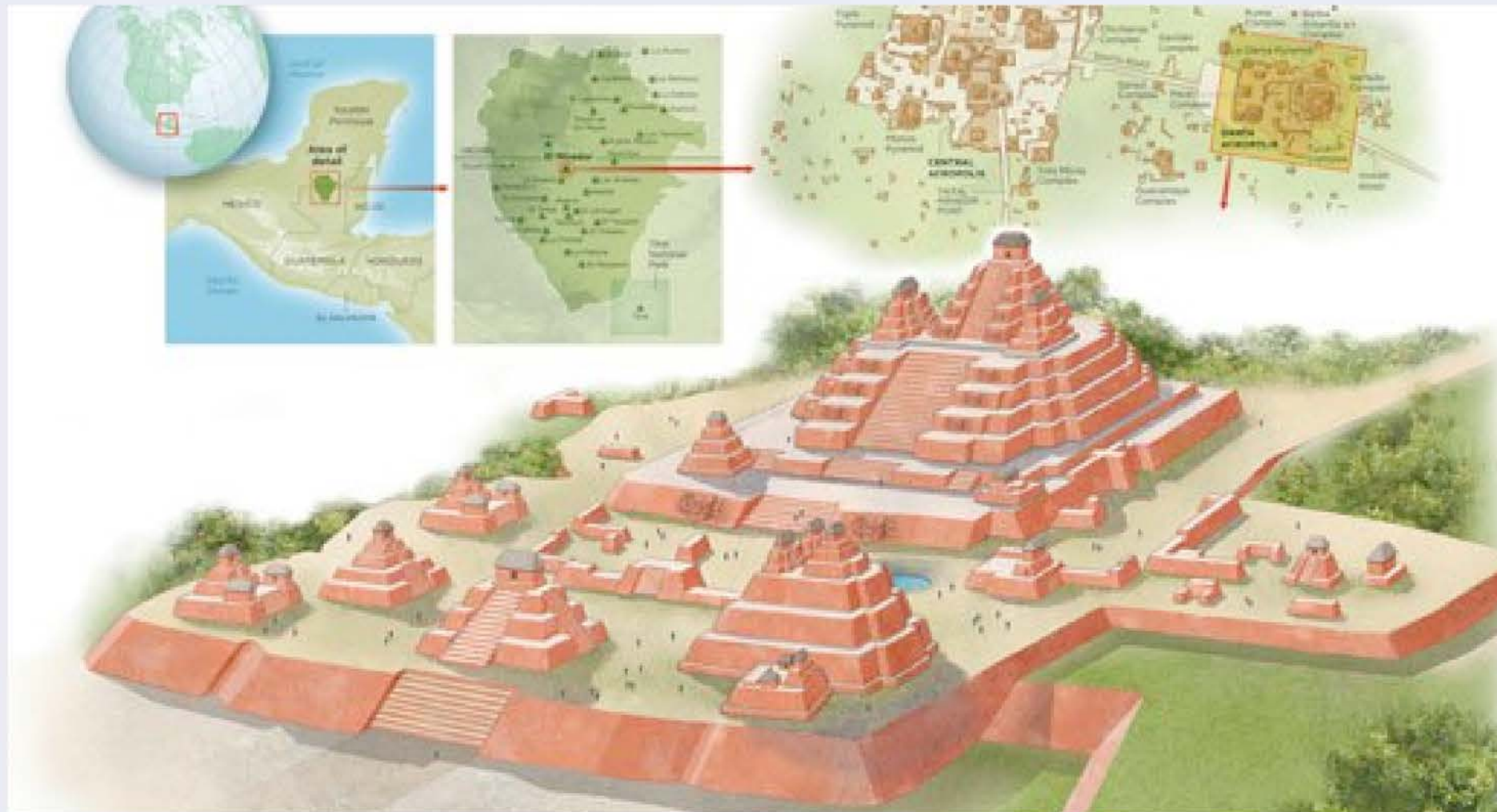
Status

Color was not only used as a decoration, but also as a way to mark important status, like jade and quetzal feathers, jaguar pelts, etc.



Mesoamerican Cities

The Maya had great city-states, temples and buildings were covered with a beautiful vibrant red that has lasted for at least two thousand years.





Copán

From archeological studies we know that the surfaces of the big temples and sacred sites were painted with red dyed stucco that covered the surface. The color of the temples and structures against the colorful and green environment around it was a vibrant combination of the colors of nature. (Schele & Friedel)

The colors on the buildings might have faded, but we can still find some of the tones and natural dyes used in the temples. Such is the case of the Rosalila temple in Copán Honduras.





Colors of Nature

The Maya use avocados to create a reddish-pink color. The indigo plant for a blue-ish colorant. Marine molluscs for a purple color, boiled banana stalks to make a lilac color.



Recall

How do the Maya respect, maintain and continue their cultural traditions?





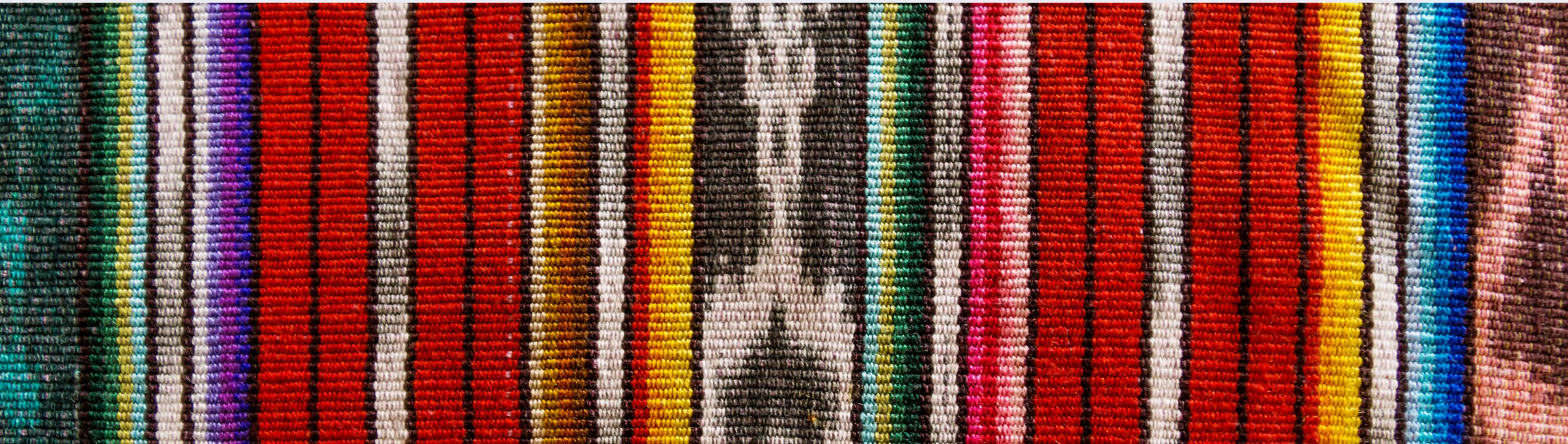
Connect

With a partner describe how the use of weaving and natural dyes serve as expressions of culture.



Reflect

Why is it important for the Maya to keep their traditions alive?





Respect
Educate
Amplify
Listen



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