



# “Interwoven Fibers’ Optics”

Lourdes Fuller

[lfuller@dadeschools.net](mailto:lfuller@dadeschools.net)

Shenandoah Museum Magnet Middle School

#6841

For information concerning Ideas with IMPACT opportunities including Adapter and Disseminator grants, please contact:

Debra Alamo, Interim Program Manager

Ideas with IMPACT

The Education Fund

305-558-4544, Ext. 105

Email: [dalamo@educationfund.org](mailto:dalamo@educationfund.org) [www.educationfund.org](http://www.educationfund.org)

## Table of Contents

|  |    |
|--|----|
| Goals and Objectives: We are all interwoven and connected            | 3  |
| Florida Standards  | 4  |
| Course Outline and Overview:   |    |
| Getting Creative   | 7  |
| Finishing Touches: Displaying the artwork                            | 10 |
| Lesson Plan: Interwoven Fibers' Optics                               | 11 |
| Handouts:  |    |
| Elements of Art  | 12 |
| Principles of Design   | 13 |
| Weaving Techniques   | 14 |
| My Weaving Reflection (student rubric and self evaluation)           | 15 |
| Resources: Cultural Interwoven Connections                           |    |
| African Weaving: Kente Cloth   | 16 |
| Mesoamerican Weaving: The World of Ancient Mayan Women               | 18 |
| Navajo Blankets: An important element of the tribal economy          | 23 |
| Artists: Fiber optics and much more                                  | 25 |
| Supplies: What you will need, what you will want and where to get it | 29 |
| Field Trips: American Museum of the Cuban Diaspora                   | 31 |



**Goals and Objectives:** *We are all interwoven and connected*

The purpose of this project is to introduce students to one of the oldest crafts in the world: **weaving**. Weaving is the primary methods of textile production and one of the oldest forms of human technology, yet because today, most weaving is done by machines many students have no clue to how their clothes are made. Textile art—which encompasses weavings, embroideries, tapestries, fiber arts, carpet design, and more—has undergone a renaissance over the past century, as artists have pushed the boundaries of what can be considered a textile, as well as how a textile can be considered art.

A secondary goal is for students to to understand how a variety of cultures (eg., Mayan, African, Navajo) all have strong weaving traditions, and how they have artistically expressed themselves through these traditions. By learning about both their own and others' cultures and valuing each others' heritage, they can develop stronger self concepts and deeper bonds with each other.

A third goal is for students to broaden their concepts of utilitarian art. Most students tend to focus on mastering techniques, and they typically define art as Western European, drawing and painting. This mind sets leads to not valuing or fully understanding utilitarian art. In this lesson it is important to make a distinction and focus equally between technique and design involved in the weaving process. So while one needs to master the technique, designing is a higher cognitive process, that requires creative solutions.

## **Florida Standards**

### **Visual Arts Standards**

**VA.68.F.1.1:** Use non-traditional thinking and various techniques to create two-dimensional artworks.

**VA.68.F.2.1:** Investigate career opportunities available in the visual arts to determine requisite skills and qualifications for each field.

**VA.68.F.3.4:** Follow directions and complete art tasks in a timely manner to show development of 21st-century skills.

**VA.68.C.2.3:** Examine artworks to form ideas and criteria by which to judge / assess and inspire personal works and artistic growth.

**VA.68.C.3.2:** Examine and compare the qualities of artworks and utilitarian objects to determine their aesthetic significance.

**VA.68.C.3.4:** Compare the uses for artwork and utilitarian objects to determine their significance in society.

**VA.68.S.1.4:** Use accurate art vocabulary to explain the creative and art-making processes.

**VA.68.S.3.1:** Use two-dimensional art materials and tools to understand the potential and limitations of each.

**VA.68.S.3.3:** Demonstrate understanding of safety protocols for media, tools, processes, and techniques.

**VA.68.O.1.2:** Identify the function of structural elements of art and organizational principles of design to create and reflect on artwork.

**VA.68.O.2.4:** Select various media and techniques to communicate personal symbols and ideas through the organization of the structural elements of art.

**VA.68.H.1.3:** Analyze and describe the significance of artwork from a selected group or culture to explain its importance to the population.



**VA.68.H.2.1:** Describe how previous cultural trends have led to the development of new art styles.

**VA.68.H.3.3:** Create imaginative works to include background knowledge or information from other subjects.



## **Social Studies Standards**

**SS.6.G.2.6** Explain the concept of cultural diffusion, and identify the influences of different ancient cultures on one another.

**SS.8.A.1.6** Compare interpretations of key events and issues throughout American History.

**SS.8.A.1.7** View historic events through the eyes of those who were there as shown in their art, writings, music, and artifacts.

**SS.6.W.2.10** Compare the emergence of advanced civilizations in Meso and South America with the four early river valley civilizations.

## **World Languages Standards**

**WL.K12.NM.6.1** Recognize basic practices and perspectives of cultures.

**WL.K12.NM.6.4** Recognize products of culture (e.g., food, shelter, clothing, transportation, toys).

**WL.K12.AH.6.4** Analyze diverse cultural products among groups

### **Science Standards**

**SC.6.E.7.7** Investigate how natural disasters have affected human life in Florida.

**SC.5.L.17.1** Compare and contrast adaptations displayed by animals and plants that enable them to survive in different environments such as life cycles variations, animal behaviors and physical characteristics.

**SC.8.N.1.1** Define a problem from the eighth grade curriculum using appropriate reference materials to support scientific understanding, plan and carry out scientific investigations of various types, such as systematic observations or experiments, identify variables, collect and organize data, interpret data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions.

## Course Outline/Overview: *Getting Creative*

Weaving is so basic it can be done with small cardboard looms that the students can make themselves. I have worked at both elementary and middle school levels, with large classes of 40 plus students all weaving simultaneously. Individual weavings can be stored in gallon size plastic bags. In these projects, each student produces a small weaving which at the end is woven together or sewn to a large piece of fabric for an elaborate group art piece.



Also, simple burlap can be used for weaving without looms. Students can also weave with paper. You can even take unsuccessful watercolor drawings and/or paintings from a previous class, cut them up and use them for weaving. This is a good way of allowing your students to explore a variety of media without the fear of creating massive wastes of paper and paints. With elementary students, I have read stories to them while they were weaving but I find that middle school age students prefer the freedom of talking during class. Insist that they have appropriate inclusive conversations and that they put the phones away, except for researching weavings.



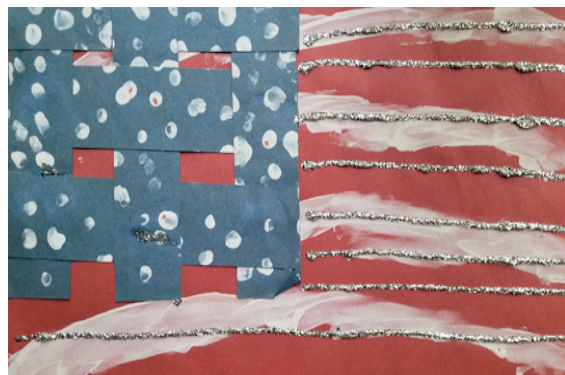


Middle and high school students enjoy working with larger, sturdier looms, like hub caps, because they can add more materials to the piece. If the loom is big enough, you can have about 4 to 5 students per loom working simultaneously per class. Students can bead, wrap, coil or braid strands and take turns weaving. Students can also collect or create decoration to weave or sew into their work. I have had students sew feathers, twigs, buttons, repousse metal drawings, soda can pull-up tabs, shells, etc. Naturally, these weavings are more complex and sophisticated and require stitching.





Students can also create weavings for another class where they weave characters from a story or explain scientific classifications through the weaving. This can make it a STEAM project. For an environmental conservation message my students have collected and repurposed discarded plastic bags into woven blanket. These are actually very warm and waterproof. My students want to do these to donate to the homeless.







## Finishing Touches: *Displaying the artwork*

As with any art, the work is meant to be seen, so planning to display the weaving requires some consideration. The weavings can be sewn together on a large piece of fabric to create a large tapestry which can be supported with a dowel or strung together on ribbons or strings. It can also be mounted on construction paper or colored cardboard and framed with a matt. Another idea is for students to find twigs, recycled objects or make ceramic frames to display their weavings.



## Lesson Plan: *Interwoven Fibers' Optics*

# Visual Arts Lesson Plan

Per.

Grade 6-8

Date(s)

|  |   |
|--|---|
| <b>Lesson:</b> Weaving   | <b>Media:</b> Fabric  |
| <b>Materials:</b><br>Looms or cardboard to make the looms<br>Yarn<br>Needles (recommended)<br>Thread<br>Ribbons<br>Beads<br>Buttons<br>Fabric remnants<br>Sequins<br>Scissors<br>Plastic forks (optional)  | <b>Visual/Resources:</b><br>Sample projects<br>Weaving technique charts (laminated)<br>Elements of Art<br>Principles of Design<br>Visuals from Mayan, Inca or African weavings<br>Visuals from artists<br>Videos<br><br><b>Esol Strategies:</b><br>Demonstrations and visuals   |
| <b>Procedures:</b><br>Discuss historical perspectives of weavings. Review the Elements of Art and Principles of Design. Have each student sketch a possible design solution. Designs may be influenced or inspired by different artists or cultures but should not plagiarized. Note: designs may change during the creative process.<br>Give each student a loom or have students make their looms out of cardboard or burlap.<br>Demonstrate the warp techniques.<br>Demonstrate weaving techniques using the guide as a visual resource. Provide students with a variety of weaving materials and encourage students to bring some on their own.<br>Weave using a variety of techniques. Add details such as tassels, beads or sequins to create texture.<br>Remove from the looms. Plan a way to display the weavings by hanging individually from twigs or dowels, mounting on board and matting or sewing all the weavings together to create a large fabric tapestry. |   |
| <b>Vocabulary:</b><br>Design<br>Pattern<br>Yarn<br>Warp<br>Weft<br>Loom<br>Weaving Techniques: Tabby, Egyptian Knot, Inserted Weft, Rya, Interlocking, Dovetail, Slits   | <b>Performance Assessment</b><br><input type="checkbox"/> Observation of final product<br><input type="checkbox"/> Interview with student<br><input type="checkbox"/> Group assessment (critique)<br><input type="checkbox"/> Observation of process (student working)<br><input type="checkbox"/> Self-assessment by student<br><input type="checkbox"/> Portfolio<br>A. tracking<br>B. demonstrates growth<br>C. compiles a variety of processes, techniques, and media<br><input type="checkbox"/> Journals<br>A. ideas for projects<br>B. sketches<br>C. teacher-generated assignments<br><br><b>Base Assessment</b><br><input type="checkbox"/> Vocabulary test<br><input type="checkbox"/> Weekly test<br><input type="checkbox"/> Unit test<br><input type="checkbox"/> Essay<br><input type="checkbox"/> Report |
| <b>Sketchbook/Journal or Home Learning:</b><br>1 Plan and sketch your design in your sketchbook.<br>2 Copy weaving vocabulary.<br>3 Gather possible weaving materials (such as recycleable plastics, shoe laces, strips of fabric, soda can tops, twigs, shells, leaves, etc.) to incorporate in your weaving or share with your friends.  |   |

# Elements of Art

These are the basic elements that are used by Artists in creating Art; they are what you use to create an aesthetically pleasing work. When we make Art, we need to understand and apply these seven Elements of Art.



## Line

A mark made by a pointed tool such as a brush, pen or stick; a moving point.



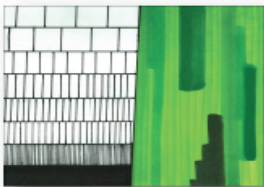
## Shape

A flat, enclosed area that has two dimensions, length and width. Artists use both geometric and organic shapes.



## Color

Is one of the most dominant elements. It is created by light. There are three properties of color; Hue (name,) Value (shades and tints,) and Intensity (brightness.)



## Value

Degrees of lightness or darkness. The difference between values is called value contrast.



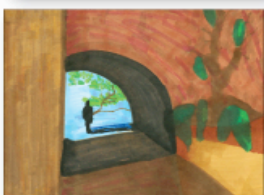
## Form

Objects that are three-dimensional having length, width and height. They can be viewed from many sides. Forms take up space and volume.



## Texture

Describes the feel of an actual surface. The surface quality of an object; can be real or implied.



## Space

Is used to create the illusion of depth. Space can be two-dimensional, three-dimensional, negative and/or positive.



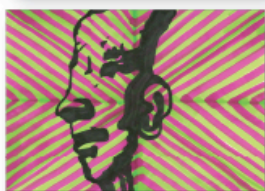
# Principles of Design

These are the standards or rules to be observed by Artists in creating works of Art; they are how to create and organize Artwork. When elements are utilized with the principles in mind, outstanding Artwork is created.



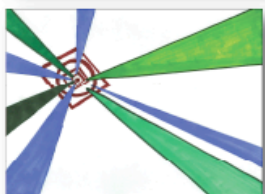
## Balance

A distribution of visual weight on either side of the vertical axis. Symmetrical balance uses the same characteristics. Asymmetrical uses different but equally weighted features.



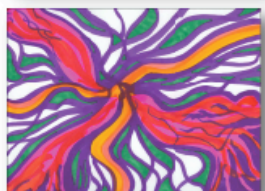
## Contrast

The arrangement of opposite elements (light vs. dark, rough vs. smooth, small vs large, etc...) in a composition so as to create visual interest.



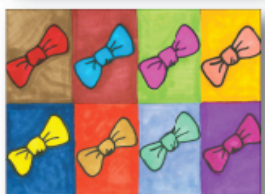
## Emphasis

Used to make certain parts of an Artwork stand out. It creates the center of interest or focal point. It is the place in which an Artist draws your eye to first.



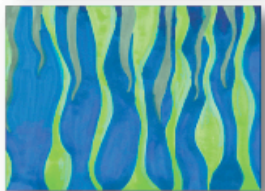
## Movement

How the eye moves through the composition; leading the attention of the viewer from one aspect of the work to another. Can create the illusion of action.



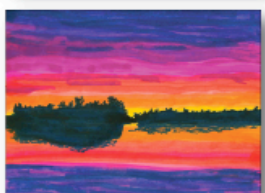
## Pattern

The repetition of specific visual elements such as a unit of shape or form. A method used to organize surfaces in a consistent regular manner.



## Rhythm

Regular repetition of, or alternation in elements to create cohesiveness and interest.

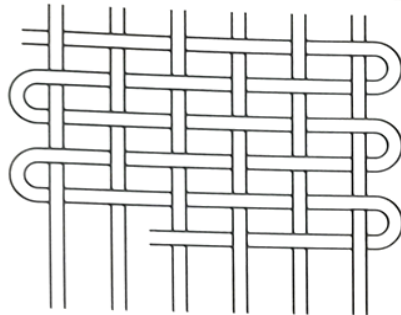


## Unity

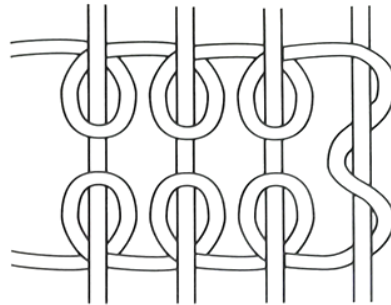
Visually pleasing agreement among the elements in a design; It is the feeling that everything in the work of Art works together and looks like it fits.

# Weaving Techniques

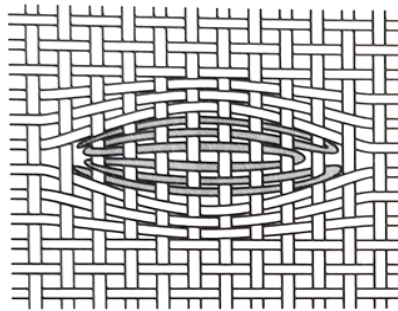
Tabby weave



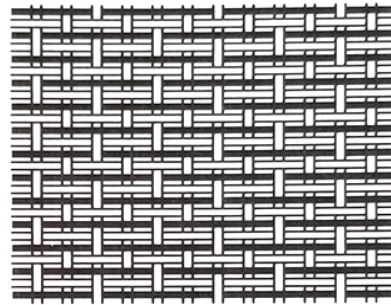
Egyptian knot



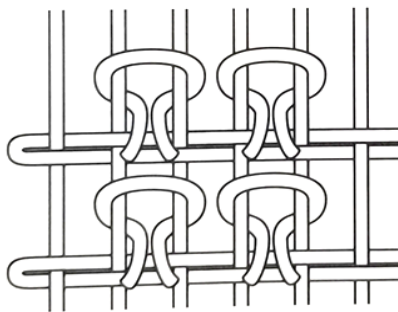
Inserted weft



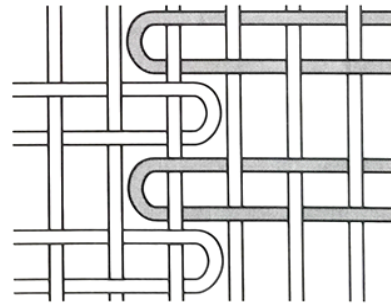
Supplementary weft



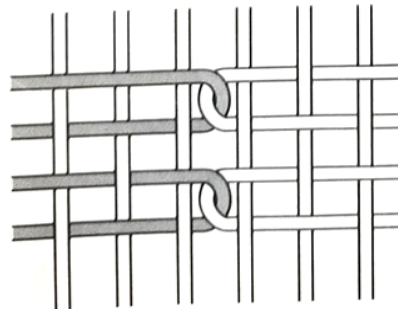
Rya (Shag)



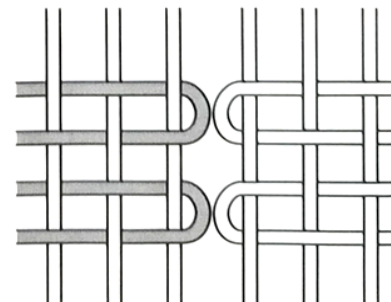
Interlocking



Dovetail



Slits



Name \_\_\_\_\_ Period \_\_\_\_\_ **Total Points:** Student \_\_\_\_\_ Teacher \_\_\_\_\_

## My Weaving Reflection

### Perseverance and Work Habits:

1. I have successfully **completed** my weaving! \_\_\_\_\_ 20 points \_\_\_\_\_

### Design Composition:

2. My design/drawing is an original artwork \_\_\_\_\_ 5 points \_\_\_\_\_

3. How did I show UNITY ( \_\_\_\_\_ . \_\_\_\_\_ 5 points \_\_\_\_\_

4. How did I show CONTRAST \_\_\_\_\_ . \_\_\_\_\_ 5 points \_\_\_\_\_

5. What is my center of interest \_\_\_\_\_ . \_\_\_\_\_ 5 points \_\_\_\_\_

6. **Colors:** I chose a colors scheme that is aesthetically pleasing: (*Choose the one you used one*)  
analogous \_\_\_\_\_ complementary \_\_\_\_\_ primary \_\_\_\_\_ neutrals \_\_\_\_\_ 5 points \_\_\_\_\_

7. **Textures:** I have created a variety of textures with different weaving techniques and materials:

(Please check up to 4 that you used for a maximum total of 20 points) 20 points \_\_\_\_\_

- a. Tabby weave \_\_\_\_\_
- b. Egyptian knot \_\_\_\_\_
- c. Inserted weft \_\_\_\_\_
- d. Rya shag \_\_\_\_\_
- e. Interlocking \_\_\_\_\_
- f. Dovetail \_\_\_\_\_
- g. Tassels or fringe border \_\_\_\_\_
- h. Ribbons or braids \_\_\_\_\_
- i. Slits \_\_\_\_\_
- j. Sequins, buttons and/or beads \_\_\_\_\_

### Craftsmanship quality of my weaving

8. All the **Weft** ends are secured and not showing \_\_\_\_\_ 5 points \_\_\_\_\_

9. All **Warp** yarns are secured with a knot \_\_\_\_\_ 5 points \_\_\_\_\_

10. I have trimmed tassels and or fringes \_\_\_\_\_ 5 points \_\_\_\_\_

11. The **Warp** lines are are straight and not curving in \_\_\_\_\_ 5 points \_\_\_\_\_

12. The weaving is tight without loose gaps \_\_\_\_\_ 5 points \_\_\_\_\_

### Finishing:

13. I have framed or found a way to display my weaving \_\_\_\_\_ 5 points \_\_\_\_\_

14. I have incorporated a recycled and/or a natural found object \_\_\_\_\_ 5 points \_\_\_\_\_

## Cultural Interwoven Connections

Since weaving is an ancient universal activity touching on many aspects of daily life, cultures throughout the world have traditions incorporating weaving. History or Social Studies teachers can discuss the American textile industry and the invention of the cotton gin in 1790. The first factory ever built in the United States was a textile spinning plant. And the nearly 3,000 textile factories that followed became by an integral part of the Industrial Revolution, which brought about technological improvements, making it possible for America to produce textiles more efficiently than any other nation at the time and increasing the ever growing demand for cotton which in turn increased the slave trade.

### **African Weaving:** *Kente cloth (Asante and Ewe peoples)*

[www.khanacademy.org/humanities/art-africa/west-africa/ghana/a/kente-cloth](http://www.khanacademy.org/humanities/art-africa/west-africa/ghana/a/kente-cloth)



### **Inspired by a spider's web**

Among the Asante (or Ashanti) people of Ghana, West Africa, a popular legend relates how two young men—Ota Karaban and his friend Kwaku Ameyaw—learned the art of weaving by observing a spider weaving its web. One night, the two went out into the forest to check their traps, and they were amazed by a beautiful spider's web whose many unique designs sparkled in the moonlight. The spider, named Ananse, offered to show the men how to weave such designs in exchange for a few favors. After completing the favors and learning



how to weave the designs with a single thread, the men returned home to Bonwire (Bonwire is the town in the Asante region of Ghana where kente weaving originated), and their discovery was soon reported to Asantehene Osei Tutu, first ruler of the Asante kingdom. The *asantehene* adopted their creation, named *kente*, as a royal cloth reserved for special occasions, and Bonwire became the leading kente weaving center for the asantehene and his court.

### **A royal cloth**

Originally, the use of kente was reserved for Asante royalty and limited to special social and sacred functions. Even as production has increased and kente has become more accessible to those outside the royal court, it continues to be associated with wealth, high social status, and cultural sophistication. Kente is also found in Asante shrines to the deities, or abosom, as a mark of their spiritual power.

### **Weaving kente**

Kente is woven on a horizontal strip loom, which produces a narrow band of cloth about four inches wide. Several of these strips are carefully arranged and hand-sewn together to create a cloth of the desired size. Most kente weavers are men.

### **Videos of kente weaving for your students:**

[Kente Weavers of Asante](#), [Bonwire Kente](#), [Bonwire Kente weavers](#)

[“Wrapped in Pride” from the National Museum of African Art](#)

[“Asante Textile Arts” from The Metropolitan Museum of Art’s Heilbrunn Timeline of Art History](#)



### **Mesoamerican Weaving:** *the world of ancient Mayan women*

Mayans have been weaving for over two thousand years. In the early 1500's when Spanish conquistadores arrived, they encountered incredibly beautiful weavings. Although there have been many changes in types of threads and designs over the centuries, the basic backstrap loom has changed little. In Guatemala and highlands Chiapas, Mexico, weaving is an integral part of a Maya woman's daily life and is an important responsibility she passes on from generation to generation. When a baby girl is 3 weeks old, the midwife bathes her in the temascal (Maya sweat lodge). The girl's mother gives the midwife her baby daughter's weaving instruments, all miniature in size, including strands of thread, a tiny weaving loom, scissors, basket and needle. The midwife opens the newborn's hands and passes each instrument over them, praying that the baby girl will become a proficient weaver, and maintain the ancient weaving art traditions as her mother, grandmother and great-grandmother did.

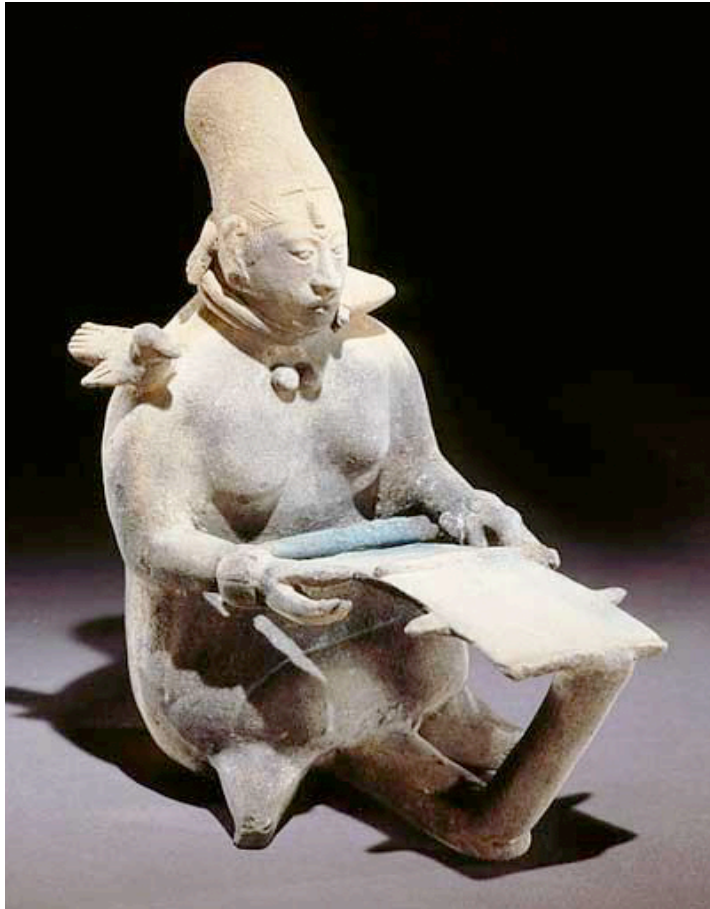
Contemporary Mayan women continue the tradition of fine weaving in the lovely fabrics of Chiapas and Guatemala. The ancient art of backstrap weaving is still thriving and an entire industry has developed around weaving and textiles. Numerous collectives and individuals produce shawls, spreads, bags and clothing that have become sought-after by visitors from around the world.



Weaving colorful cotton fabric was an art form among high ranking ancient Mayan women. The Mayas cultivated cotton and used natural dyes from plant, animal and mineral sources. They used spinning whorls to create thread that was dyed vibrant red,



yellow, green, and blue. A backstrap loom was used to weave patterns, usually glyphs, geometric shapes, plants and flowers. Maya women wore shift dresses that hung to mid-calf and were adorned by borders around the neck, sleeves and hem. This dress is called *ypil* (*huipil*) and is still worn by modern-day Mayas, (see Guatemala below for more information).



Ancient Mayan art often shows women spinning and weaving with backstrap looms. One exquisite figurine of a woman weaving comes from the island of Jaina, off the coast of Campeche, Mexico. Jaina was a burial place for nobles and is famous for its figurines. These figurines were burial relics and portrayed the activities of the deceased. The Jaina weaver figurine represented the goddess Ix Azal Uoh, considered the "weaver of life" and a symbol of the sacred spirit within all. Drawings of goddesses in codices depict Ix Mukane the Grandmother, who transforms energies on earth, and Ix Otzil who weaves the threads of destiny and symbolizes the internal weaver inside each person.

As the Cosmic Weaver, Ix Chel is depicted sitting with the backstrap loom, one end tied to a tree and the other around her waist. She weaves with the shuttle in her left hand. Today,



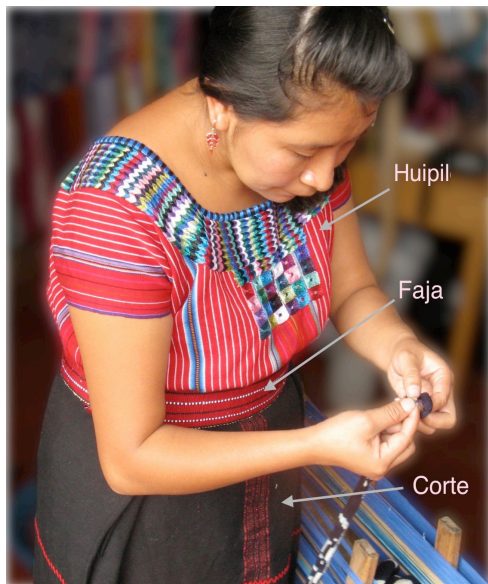
Mayan women in the highlands weave fine textiles in exactly the same way. These looms can be carried easily and set up at home or in the fields.

Weaving fine clothing was the purview of noble women. Beautiful woven fabric was both an artistic expression and a source of wealth, often given as tribute to rulers. When marriages were negotiated, the bride's skill at weaving was an important factor in determining the marriage gifts. Noble girls were taught to use the backstrap loom and to spin thread with whorls for making gauzy cotton and brocaded fabrics. All Maya women learned to weave, the commoners using lesser grade cotton and making simple garments.

**Bolivia:** *Aguayo – a traditional woven blanket used to carry babies*

Bolivia is famous for its blankets used to carry babies and small children, as well as all kinds of items, wrapped on their backs. The native aguayo is a big square, handmade from wool of llama, alpaca or sheep and would be knotted at the front. These blankets typically feature colorful stripes intercalated with rhombuses and other figures with symbolic values. The aguayo is mostly associated with Aymara and Quechua culture. Today you can find multi-colored aguayos made with synthetic materials and their production is semi-industrial, making them amazingly affordable.

**Guatemala:** *Huipil traditional garment worn by women from Central America.*



A **huipil** is a shirt, or if long enough, a dress. The design is simple; a rectangular width of backstrap loom woven fabric, or two sewn together lengthwise, with a hole cut in the center for the head. The sides are usually stitched closed leaving openings at the top for the arms. Huipiles are usually heavily decorated with Maya symbols, either during the weaving

process with brocade or afterwards with intricate embroidery. If it is a traditional huipil the colors and design will mark it as being from a particular pueblo though in recent years the traditional colors are sometimes being replaced by an array of colors leaving the design as the main indicator of a pueblo.

**Corte** means length, which is exactly what it is - a single long rectangular length of fabric worn as a skirt. A full corte is a little over 7 yards long by 1 yard wide and a woman with a wide stature will use the entire length. Less prodigious women can get by with a half corte.

A **faja** is a belt or sash, woven on a backstrap loom and is the primary means of holding up the corte. The weft for the first half of the faja is woven with a stiff fiber such as cordage from the agave plant or black bailing twine that once woven has had its ends melted. This gives the faja "body" so that it will not fold at a women's waist. A women's faja measures around 2 1/2 yards long and anywhere from 3" to 8" wide. Fajas are wrapped rather tightly around the waist and often serve to hold any number of smaller objects such as cell phones, keys, handkerchiefs. The braided (or unbraided) ends of the faja are tucked under the sash and secured by friction and pressure. A faja can be woven as part of traditional traje denoting a particular pueblo by its color and design or made with an original design to be worn for its beauty. Fajas can be of a simple one-color backstrap loom woven design or lavishly decorated with beadwork, brocade, jaspe, thread, cross stitch, painting, or crochet.

Though fading from daily use in many towns a **Cinta** is a hair wrap/adornment worn by Maya women throughout Guatemala, especially on feast days. The cinta is a long and narrow band of (generally) backstrap loom woven material with brocade and/or embroidery embellishments. The designs and colors on the cinta often have cosmological significance and the manner in which it is wrapped may also indicate marital status, motherhood, or matriarchy.



**Navajo Blankets:** *an important element of the tribal economy*

<http://navajopeople.org/navajo-rugs.htm>

Weaving plays a role in the creation myth of Navajo cosmology, which articulates social relationships and continues to play a role in Navajo culture. A Navajo legend credits a deity named Spider Woman with teaching them weaving. The first loom was said to be of sky and earth cords with tools of sunlight, lightning, white shell, and crystal. In reality, Pueblo Indians taught the Navajos how to weave.

The Pueblo people of Northern New Mexico were cultivating cotton around 1300 AD, which they used for weaving. They practiced finger weaving, and had also learned the use of the backstrap loom from Mexican Indian tribes.

Weaving was a woman's activity in most pueblos. The Navajo wove in the kiva, or ceremonial room, a cramped space that inspired the invention of the upright loom. The arrival of the Spaniards and their Churro sheep in the 16th century led to a change from cotton to wool as weaving material for the Pueblo Indians as well as the Navajos, who learned the technique from their neighbors in the late 1600s. The Spanish also introduced indigo (blue) dye and simple stripe patterning.





The railroads have always had a major impact on the Indians of the Southwest by supplying goods to trading posts; for groups such as the Navajo, who lived in scattered family settlements, this was particularly important. Traders also encouraged Navajo women to make their weaving more marketable by introducing new designs and aniline dyes that complemented Victorian drawing rooms in the East. For Eastern markets, Navajo women began to weave rugs instead of blankets; they had already replaced the blankets they wove for their own use with machine-made blankets from mills in Pendleton, Oregon.

Among the oldest products of Navajo weaving is the woman's dress, which uses two identically shaped and woven blankets to make a straight, sleeveless dress belted at the waist. Unable to obtain a red color from vegetable dyes, Navajo women prized *bayeta* (baize), which they unraveled and rewove in their own blankets. Through trade with Pueblo middlemen, and with Europeans during times of peace, the Navajo acquired English-made red flannel cloth, which was transported by way of Spain and Mexico. In the early 1800s Navajo women began to weave chief's blankets, which were so widely traded that they were worn by Indians from the northern Great Plains to the Mexican border. While not a badge of chieftainship, these blankets symbolized power and affluence. Three phases of increasing complexity in design share an underlying structure based on broad black and white stripes, interspersed with bands of indigo blue, plain bars of *bayeta* red, or geometric figures, usually a serrated diamond shape.

**Artists:** *fiber optics and much more*



## **Sheila Hicks**

I like to introduce my students to Sheila Hicks because I feel she has done so much to advance the textile medium. She is a contemporary American artist known for her innovative use of weaving and sculptural installations. Ranging from small wall hangings that the artist refers to as *minimes*, to enormous site-specific works, Hicks's works blur the distinction between fine art and craft. "Textile had been relegated to a secondary role in our society, to a material that was considered either functional or decorative," she explained. "I wanted to give it another status and show what an artist can do with these incredible materials." Born on July 24, 1934 in Hastings, NE, Hicks learned to sew from her grandmother at an early age. She went on to study under [Josef Albers](#) at the Yale University School of Art and Architecture, where she received both her BFA and MFA. During her time at university, Hicks was awarded a Fulbright Scholarship to study and produce art in Chile. While abroad, she photographed Peruvian and Bolivian archaeological sites and studied pre-Columbian textile techniques. Moving to Paris in 1964, Hicks has been continually relevant in the contemporary art world, participating in the 2014 Whitney Biennial and the 2017 Venice Biennale. The artist continues to live and works in Paris, France. Her works are held in the collections of the Art Institute of Chicago, the Tate Gallery

in London, the Stedelijk Museum in Amsterdam, and The Museum of Modern Art in New York, among others.

*“It is so important to make every day. The discovery comes in the making.”*

**Videos to show your students:**

1. Biennale Arte 2017, Sheila Hicks, Hanging by a thread,  
<https://www.youtube.com/watch?v=JUYijp4Np2A>
2. The Duke Endowment Textile painting with thread, Jan 24, 2017,  
<https://www.youtube.com/watch?v=ybcKszPgaggw>
3. BiennaleChannel Colors- Jun 3, 2017  
<https://www.youtube.com/watch?v=8yk5bxjzLGw>
4. Sheila Hicks: Begin with Thread,  
<https://www.youtube.com/watch?v=s6AmOfuBw5s>
5. The Artist's voice at ICA Boston,  
<https://www.youtube.com/watch?v=iGre6Bw7LzE>
6. The Artist Project: Sheila Hicks,  
<https://www.youtube.com/watch?v=KQQRfNX47w8>
7. Sheila Hicks: Weaving as Metaphor, <https://www.youtube.com/watch?v=u-wwbMxZFcs>
8. Exhibition (in French) [https://www.youtube.com/watch?v=Es15XZ7\\_4os](https://www.youtube.com/watch?v=Es15XZ7_4os)





**El Anatsui:** *humble scraps transformed into shimmering tapestries*

I also like to show students the work of El Anatsui who is a Ghanaian sculptor who weaves discarded recycled objects and visually transforms them into huge monumental shimmering tapestries. He has drawn particular international attention for his iconic "bottle-top installations", distinctive large-scale assemblages of thousands of pieces of aluminium sourced from alcohol recycling stations and sewn together with copper wire, transformed into metallic cloth-like wall sculptures in a way that can "draw connections between consumption, waste, and the environment". El often uses humble items that as a single item, are quite small, but when you put them all together, they become monumental.

*"As individual pieces, they are not linked," explained El.  
"But when linked together they become powerful."*

### Videos to show your students:

1. El Anatsui, untitled, Smarthistory. art, history, conversation,  
[https://www.youtube.com/watch?v=4zatyfXy\\_D0](https://www.youtube.com/watch?v=4zatyfXy_D0)
2. Gravity and Grace: Monumental Works by El Anatsui,  
<https://www.bing.com/videos/search?q=anatsui&&view=detail&mid=57F2724CB8E006F92EF457F2724CB8E006F92EF4&&FORM=VDRVRV>
3. Gli (Wall),  
<https://www.bing.com/videos/search?q=anatsui&&view=detail&mid=826BFF8AAF67C68004FD826BFF8AAF67C68004FD&&FORM=VDRVRV>
4. Studio Process El Anatsui, <https://art21.org/watch/extended-play/el-anatsui-studio-process-short/>
5. Language and Symbols, <https://art21.org/watch/extended-play/el-anatsui-language-symbols-short/>
6. Change, <https://art21.org/watch/art-in-the-twenty-first-century/s6/el-anatsui-in-season-6-of-art-in-the-twenty-first-century-preview/>
7. Broken Bridge II,  
<https://www.bing.com/videos/search?q=anatsui&&view=detail&mid=3FB7F3575DA3EBC945E33FB7F3575DA3EBC945E3&&FORM=VRDGAR>



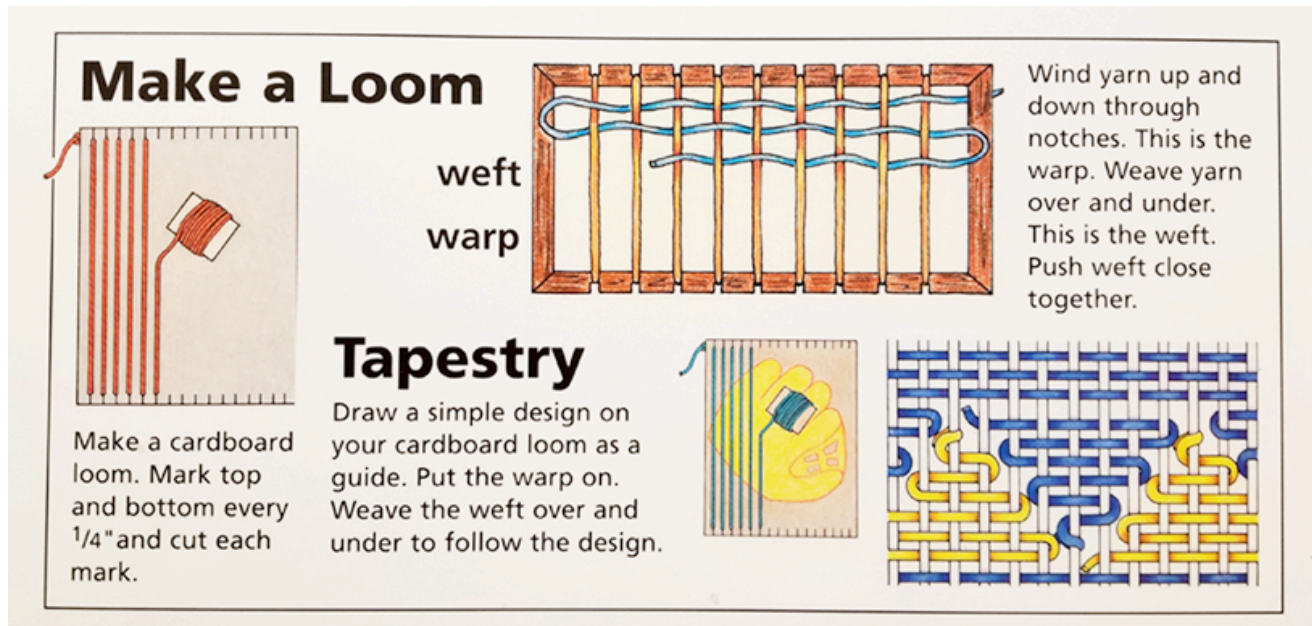
El Anatsui, Gli (Wall) Art Basel 2016



**Supplies:** *What you will need, what you will want and where to get it*

Looms (*you can also make your own cardboard looms for free*) 6 X 10 12 for \$7.60 Note: you may also be creative and use recycled hub caps, old picture frames or canvas stretchers.

Colored Burlap (*optional to be used as looms instead of cardboard looms*) \$3.25 a yard



## Looms

You will need a loom, an apparatus for making fabric by weaving yarn or thread. It can be store bought or made from cardboard or recycled objects.

Universally the loom is a symbol of cosmic creation and the structure upon which individual destiny is woven. This symbolism is encapsulated in the ancient Greek myth of Arachne who was changed into a spider by the goddess Athene, who was jealous of her skill at the godlike craft of weaving. In Mayan Culture the goddess Ixchel who is symbolized by the moon, taught the first woman how to weave at the beginning of time. Once you have your loom you are ready to make history, but first you will need to weave the **Warp**. If your weaving is tight your warp lines won't show so don't worry too much about colors. You can use yarn or heavy cotton warp thread.

**Warp** - the vertical threads on a loom over and under which other threads (the weft) are passed to make cloth. If you are weaving in a circular pattern, your warp will be concentric



lines from the center. Your designs, will all be created by the weft lines. Here is where color, texture, pattern all take an important role.

**Weft** - the crosswise or horizontal threads on a loom over and under which other threads (the warp) are passed to make cloth.

### **You will need:**

Needles (recommended)

Blunt tapestry #13 12 for \$5.00

Plastic weaving, #6 12 for 3.00

Tapestry #18 (sewing) 12 for \$2.00

Yarn (different colors, textures and sizes)

Trait-Tex Cotton Warp -Heavy 800 yards \$10.00 (recommended)

Thread (optional, for sewing or beading)

Ribbons

Beads

Buttons

Sequins

Fabric remnants

Scissors (recommended - fabric scissors \$3.60 each)

Plastic forks (optional)

Twigs *and* Raffia

Raffia



*Hint: you can find many of these supplies for **FREE** at the Ocean Bank Center for Educational Materials, (the creative teachers' warehouse)*

### **Material Suppliers:**

1. Jo-Ann Fabric and Craft Stores, [joann.com](http://joann.com)
2. Dick Blick Art Materials, [dickblick.com](http://dickblick.com)
3. Jerry's Artarama: [jerrysartarama.com](http://jerrysartarama.com)
4. Artists and Crafterman, [artistcraftsman.com](http://artistcraftsman.com)

## Field Trips

American Museum of the Cuban Diaspora  
1200 Coral Way, Miami, FL 33145



The museum is currently hosting an exhibition commemorating the life of iconic Cuban singer Celia Cruz. On display are a dozen of the famous costumes that the singer used during her legendary career, including the dresses she wore in her shows at Havana's famed Tropicana Night Club in the 1950s.