Lesson Overview

In this lesson, students will explore various forms of fabric construction while considering ideas of hand work, time invested in creating art, the marketing of textiles, and humans’ use of textiles. Students will view two segments of the Craft in America Industry episode; on the quilts of Gee’s Bend, Alabama, and The Oriole Mill textile factory in North Carolina. Students will examine several concepts introduced in the videos, including the comparison of creating by hand versus by machine, the function of time in the making and valuing of crafts, the marketing of textiles through association with place, and students’ essential connections with textiles. Students will practice their choice of quilting, weaving, sewing, or knitting, and then design and create fabric squares for pieced textiles. Through this work, students will determine their own perceptions of the value of handwork, time, marketing, and their daily use of textiles.

Grade Level: 9-12

Estimated Time: Seven 45-minute class periods

Craft In America Theme/Episode: Industry

Background Information:

In Gee’s Bend, Alabama, quilting has brought economic success to women whose remarkable quilts have astonished the world. San Francisco quilter Joe Cunningham visits Lucy Mingo and Mary Ann Pettway in Gee’s Bend, where quilters learned their skills from generations of women who passed down their expertise, never dreaming that what they were creating would one day be considered art. World-wide attention guarantees a stable income for these pioneers of the creative economy.

“I put that in my quilts. I don’t throw it away.”
–Lucy Mingo, on the old blue jeans she uses in her quilts

“I think textiles are often underappreciated, because they are so much a part of almost every moment of our daily lives.”
–Bethanne Knudson
Key Concepts:
- From infancy, we are connected to textiles on a daily basis.
- Artists often choose to use handwork combined with machine work.
- In craft work, the value of time can be measured in different ways.
- The location of a craft tradition may be used as a marketing strategy.

Critical Questions:
- In what ways do humans rely on textiles?
- How do makers decide when to use handwork and when to use machine work?
- What is the importance of time in craftwork, and how does the monetary value of that time vary?
- How can the location of a craft tradition be used as a marketing strategy?

Objectives:
Students will:
- Describe their personal connection to textiles.
- Compare and contrast ideas about the value of time and handwork related to crafted and manufactured objects.
- Analyze examples of location as a marketing strategy, and find examples in their community.
- Design and construct a pieced textile.

Vocabulary:
Textile, jacquard loom, collective, bottom line, entrepreneur, marketing

At The Oriole Mill in Hendersonville, North Carolina, American textile manufacturing is thriving once again. Deep in an area of the South, once the heart of textile manufacturing, artist Bethanne Knudson is proving, through creativity, expertise and sheer determination, that an industry can revive itself. Knudson is one of the many Western North Carolina artists who have revived the economy of Asheville through their creative endeavors and made it an arts destination.
**Interdisciplinary Connection:**

**History/Social Studies:**
Explore the history of Gee’s Bend, Alabama, through Auburn University’s website:  
www.auburn.edu/academic/other/geesbend/explore/history.htm
Other websites: www.encyclopediaofalabama.org/face/Article.jsp?id=h-1094
Study the history of the United States textile trade:  
www.athm.org/collections
www.textilehistory.org

**Science and Technology Education:**
Electric sewing machines and non-electrified flat-bed knitting machines are two useful studio tools. Both are machines that allow exploration of simple non-digital mechanisms (although computerized versions of both are available.) Understanding how these machines work, especially regarding the timing of the various components, can be an interesting lesson, as well as an introduction to more complex industrial processes. Sturdy older machines can be found in the second hand market for reasonable prices. Additionally, old treadle-based sewing machines, non-electrified and operated by foot pedal, allow students to use an historical artifact. These machines are widely available in functioning condition for prices under $200. Sewing machine attachments that automatically fold, gather, create buttonholes, and more are additional intriguing objects for exploring mechanicals. Regarding knitting machines, a punch card machine that mechanically selects the needles for patterning (similar to a player piano) is another potential studio appliance. These are available used for under $1,000. The punch card machines are reminiscent (though they knit rather than weave) of the jacuard looms at The Oriole Mill that automatically create patterning. Industrial Jacquard looms were the inspiration for the first punch card based computer systems. Read about the Jacquard looms of Joseph Marie Jacquard, and the early punch card extensions (that led to the development of computers) of Charles Babbage and Herman Hollerith:  
history-computer.com/Dreamers/Jacquard.html
en.wikipedia.org/wiki/Joseph_Marie_Jacquard
inventors.about.com/library/inventors/blhollerith.htm
youtu.be/7E9G9QAT1Gg

**Mathematics:**
Designing patterns on graph paper, weaving, and knitting are all processes that use math in embodied problem-solving. Designing on graph paper involves the use of spatial reasoning and playing with fractions in a visual format. Weaving uses repetitive number patterns (and inventing such patterns) to create designs. Knitting uses number patterns, counting, multiplication, and division in the creation of fabrics.

**National Standards for Visual Arts Education:**

Content Standard:
1. Understanding and applying media, techniques, and processes
4. Understanding the visual arts in relation to history and cultures
5. Reflecting upon and assessing the characteristics and merits of their work and the work of others

If Interdisciplinary Connections are incorporated, Standard #6 will be covered:
6. Content Standard #6: Making connections between visual arts and other disciplines.
Resources and Materials for Teaching

Resources:
- Craft in America DVD, Industry. Also, viewable online at video.pbs.org/program/craft-in-america and on the PBS iPhone/iPad app
- Craft in America website, www.craftinamerica.org
- Local experts: If needed, search for local experts in the areas of needlework students will be exploring. Fiber artists will likely be found among students, school staff, or members of the community. Look for individuals knowledgeable about quilting, weaving, sewing, and knitting.
- Gather related instruction books, and make YouTube demonstration videos accessible. There are online tutorials available for each of these crafts.
- There is a selection of Gee’s Bend quilts at this Auburn University website: www.auburn.edu/academic/other/geesbend/explore/catalog/slideshow
- Auburn also has a brief history of the area: www.auburn.edu/academic/other/geesbend/explore/history.htm
- See The Oriole Mill website, with more about their products, history, and processes: www.theoriolemill.com

Worksheet:
- Time, Value, and Place: Ideas About Textiles
- A Collection of Squares: Making a Textile

Materials:
- Images: Print out images of the Gee’s Bend quilts, Joe Cunningham’s quilts, and The Oriole Mill’s product line for student inspiration and reference.
- Have students do an internet search for images of other patchwork quilts and what Libby O’Bryan might describe as “hearty American textiles”; that is, manufactured textiles made in the United States, such as blankets, jeans, and other mill-made products. Print the images for class reference.
- Access to online resources for research
- Drawing paper and graph paper
- Pencils, erasers, rulers, markers, and other drawing tools
- Sewing Machine: The heavy, metal-based but portable machines of past decades are extremely sturdy, and can be found at second hand stores and yard sales for $20 to $200 dollars. Enlist a knowledgeable stitcher to help locate one; two machines are better for an eager class of students.
- Simple pot-holder looms, as many as you can gather (students might have their own.) These inexpensive plastic or metal looms can be used with yarn and other fibers (besides the potholder loops they are normally used with.) String them in one direction to weave a plain or tapestry pattern.
- Sturdy cardboard and/or picture frames for making alternate looms.
- Weaving needles: long, large needles with a large eye for yarn.
- Fabric scraps
- Hand sewing needles
- Threads: embroidery floss, sewing thread, and quilting thread
- Yarn, string, and other assorted fibers
- Knitting needles, especially larger sizes of 6 and up.
- Quilt batting: polyester batting, flannel, or other soft fabric for the filling between the quilt’s face fabric and backing fabric.
• Optional: A small table loom to try weaving. These are available online.
• Optional: A flat-bed knitting machine is another mechanical way of creating fabric, and not often found in an art class. You may want to add one to outfit a textile studio in the art room. These vary from featuring one basic stitch (stockinette) to mechanical punch card machines, which imitate the jacquard looms of The Oriole Mill and create automatically patterned designs (though the process is actually knitting, not weaving as in the jacquard looms.)

Instructional Strategies

Video and Discussion
(one or two 45-minute periods, depending on discussion generated)

The Gee’s bend and The Oriole Mill segments introduce topics including the pleasure of hand work, the value of time in making, the quality that can be achieved by producing things slowly, the location of each crafting site as being integral to its marketing, and humans’ close relationship to textiles.

Begin with introducing students to the overall lesson, describing what they will be doing over the next days. The class will fill out a worksheet considering ideas that will be raised in the segments. They will watch the segments and then discuss their own reactions and ideas. They will fill out a second worksheet that involves planning a textile. Finally, they will create a textile on their own or as part of a collective group.

Before Viewing:

Worksheet: Time, Value, and Place: Ideas About Textiles

Have students discuss and fill out the worksheet, Time, Value, and Place: Ideas About Textiles in anticipation of watching the film segments. Students can work in groups, fostering discussion. Help students find the local businesses and/or industries that may be textile or craft-based, for example, a sign manufacturer that creates and prints vinyl and fabric banners, a sewing factory such as Libby O’Bryan’s, tailors and dressmakers who design and make tailored suits and wedding dresses, awning manufacturers, automatic embroiderers (often at sporting goods stores) auto vinyl/seatwork fabricators, and the like. Discuss their worksheet responses as a class, and then watch the videos. Have students view the segment on Gee’s Bend on the Craft in America Industry episode DVD or online at video.pbs.org/program/craft-in-america. Then view the segment on The Oriole Mill on the Craft in America Industry episode.
After Viewing:

Discuss students’ reactions to the segments. Potential discussion points include their worksheet responses, students’ observations of the films, as well as the following.

Lucy Mingo started quilting at 14. What does she say about her pleasure in quilting?
“It was fun for me; I did it all the time.” – Lucy Mingo

What does she feel about handwork versus machine work?
“Quilting on your hand looks better to me than quilting on the machine. See, quilting on the machine, you can do that anytime but you have to take time and do it real well with the hand.” – Lucy Mingo

Why might sewing by hand look better than machine sewing? Could this refer to the care and the human effort that was used? It appears that the patchwork tops of the Gee’s quilts are sometimes sewn on sewing machines (there is an old image in the video.) Then they are hand quilted. This is also how Joe Cunningham works. What does he say about hand sewing?
“When I sit in my studio and I quilt something by hand…I’ll sit and enjoy the silence for four or five hours a day. It makes me feel wealthy. It makes me feel...like the luckiest guy in the world.” – Joe Cunningham

Why do you think he describes taking that time as feeling wealthy? Think about the saying, “Time flies when you’re having fun” and the saying, “Time is money.” Do these apply to Lucy Mingo’s and Joe Cunningham’s statements about hand work? Gee’s Bend is known for its quilts, and people visit there to see the community and to buy the quilts. Lucy Mingo says that when she makes quilts that are not in the same style as the quilts Gee’s Bend is known for, no one buys them.

“Since we’ve been famous most everybody now wants the old fashioned quilts like my mother and my grandmother and my auntie made. Fancy quilts don’t sell now. Cause I had a couple of fancy quilts. Wouldn’t no one look at those...” – Lucy Mingo

If you could buy a Gee’s Bend quilt, would you want it to be in the old fashioned Gee’s Bend style? What is the paradox of Lucy Mingo’s fancy quilts not being considered part of the Gee’s Bend style?

Considering The Oriole Mill, it is in a location that is known for its rich craft economy. In what ways might the location help the success of the mill? (There was an old mill to be used; there are people from the earlier textile industries who understand the machines, they adopted an artisan identity that matches the philosophy of the craft community.) Note that The Oriole Mill product line uses the names of other locations to describe a sense of place associated with each pattern and colorway, for example Brooklyn and Cape Cod. How do we associate colors, patterns and moods with places?
What connections are there between the Gee’s Bend quilters and The Oriole Mill? Both make textiles, and in particular, both make blankets. What are the meanings and metaphors we associate with blankets? How do the Gee’s Bend and The Oriole Mill processes vary, and how are they similar? While Libby O’Bryan uses machines for sewing The Oriole Mill’s products, what does she say about working fast or slowly?

“It’s not about how fast we can do it, it’s how good we can do it. Taking the time to do things well allows us to extend the life of what we’re making.” – Libby O’Bryan

How does this compare to Lucy Mingo’s comment about hand sewing?

Bethanne Knudson says, “It’s only in recent history that fabric has become a disposable item.”

What made textiles so cheap that they could be considered disposable? What are the benefits and costs of cheap textiles? (They are affordable to more people; they do not last as long; they become a waste problem.) How does The Oriole Mill alter the industrial processes that make textile items cheap? (They slowed down their looms: they use fewer looms and limit their production; they emphasize quality over quantity; they advertise the quality and beauty of the item rather than trying to foster sales with a low cost.) Bethanne Knudson also says, “I think textiles are often underappreciated, because they are so much a part of almost every moment of our daily lives. Right at birth we’re wrapped in cloth, or at least historically we were, and for burial we’re wrapped in cloth. So really from cradle to grave cloth plays a very ever-present part in our lives.”

Do you agree with her? Do you feel you take textiles for granted? Does this make you consider textiles differently?
### Studio Production
(Five or more 45-minute class periods)

“This was my kind of thing; a lot of improvisation. Freedom from rigidity was what I loved most about them. Many of the Gee’s Bend quilts are one large design.” – Joe Cunningham

“The Oriole Mill’s more like a craft art studio than it is like most mills… I’m an entrepreneur. I’m a designer, I’m an artist, I’m a business person.” – Bethanne Knudson

Note: Time to be allowed for studio work will vary according to the scale of the projects you decide on. Allow time for students to learn the technique they are interested in, to design their idea, and then to create the textiles. During studio work, students will design and produce a square of needlework inspired by the Gee’s Bend quilts.

### Worksheet: A Collection of Squares: Making a Textile
(One 45-minute class period)

Have students work on the worksheet, A Collection of Squares: Making a Textile. This worksheet helps students plan their textile project. They may choose to work in groups or separately, and they may plan an intended purpose for their textile design. After they complete the worksheet, have students begin by creating small sketches of square designs on graph paper, dividing the square into smaller squares and then choosing colors and adding surface designs. While allowing for students to pursue alternate ideas they may develop, a square design is a good place to start as it can be created by any of the needlework methods: quilting, weaving, sewing, or knitting. Students can choose whether to make multiple squares and then join them together, or whether to create one whole square with various textures and colors incorporated within it. For example, Lucy Mingo’s “Snake Quilt” appears to be of whole cloth (or very large segments) rather than joined small patches of fabric; it is all white, with the design added by the quilting lines.

Because of the example of collective work in the Gee’s Bend segment, students may decide to join together in a collective effort to produce a project. Some ideas include creating a collective patchwork or woven piece to be displayed in school, crafting small blankets to donate to a shelter or nursing home, or making hats from rectangles for a children’s winter clothing drive.
Techniques:

Quilting differs from patchwork, though the two are often combined. Patchwork is joining together pieces or patches of fabric with hand or machine sewing. The design is created by the different colors, sizes, and patterns of the patches. Quilting refers to the stitching, by hand or machine, that finishes a sandwich of fabric: a top piece, often made from patchwork, a middle section added for warmth, made of batting or a lofty fabric such as wool or flannel, and a backing piece. The sandwich is pinned together with the right sides of the top fabric and the backing fabric each facing outwards. The quilting is the decorative stitching that sews through all three layers and creates the distinctive dimpled appearance. It adds texture and design. The edges of the quilt can be finished in various ways: with a sewn-on binding, or blanket-stitched (an overcast stitch), or zigzag stitched. The edges can also be left rough and fraying for an alternative look.

Weaving will be most accessible (in a classroom without large looms) by using potholder looms; strung not for potholders (with potholder loops) but for regular weaving, and using yarn or string. You can also make looms from sturdy cardboard in the desired size. Cut slits along the top and bottom edge of cardboard to a depth of 1/2". The distance between slots will determine the density of the weave; closer slots will make a more intricate, dense fabric. Warp (thread) the loom by wrapping string or yarn from the top left slot to the bottom left slot, and following with each adjacent slot, from top to bottom and left to right. Fasten the yarn to the last slot so that it may later be untied. If the loom is also warped around to the back, you can create a tube of weaving. Look at online tutorials for how to warp cardboard looms. Woven squares can be sewn or laced together to make larger pieced textiles. Looms can also be fashioned from sturdy picture frames, and this may allow the construction of larger weavings. Hammer a line of small nails (brads) along the top and bottom rungs for warping the loom, or simply warp the frame without nails and use masking tape to hold the warp threads in place at the top and bottom.

Sewing a textile can include patchwork design. Or sewing could involve using whole cloth and embroidering it, or adding applique patchwork on the surface as Joe Cunningham did with his patched quilt, stitched by hand or by machine.

Knitting for beginners is easier on larger needles, sizes 6 to 10, using worsted weight yarn (the most common yarn size.) If help is needed in instructing, there are most likely students or staff who know how to knit and can share their expertise. There are countless forms of knit stitches. A simple square of knitting can become elaborate through the combining of different stitches, different colors, and various sizes, textures, and types of yarns and strings.
Closing Strategies

Reflection:
When the textiles are complete, students can make artist’s statement tags that describe the item, and they can display their work in the school. As a class, discuss student’s perceptions of the project when making their textiles. Did time fly by, go slowly, and was there a sense of finishing (or not) “on time”? What variables affected the time it took? Was the time spent enjoyable? Comparing experiences, which processes seemed to go faster than others? Were some students faster at sewing or weaving or knitting than others? How do students value what they’ve produced in relation to the time it took to make their textile? How do they value it in relation to how it will be used, or in sentimental value? And does any of the work seem to have a sense of location attached to it, either evident in the design, or in the students’ perceptions? How could naming the work potentially connect it to a specific place?

Assessment:
By examining the worksheets, the student’s artwork and artist’s statements, and in discussions with the student throughout the lesson, it should be evident that the student can:
• Compare and contrast ideas about the value of time in handwork and machine made items.
• Describe and analyze their personal connection to textiles.
• Understand the use of locations as a marketing strategy, and find examples in their community.
• Design and produce a pieced textile construction.

Extensions:
Students may examine the work of the following fiber artists on the Craft In America website.

Quilting
• Mississippi Cultural Crossroads features the community group, Crossroads Quilters; a group of artists who create quilts celebrating their traditions and heritage.
• Terese Agnew creates intricately stitched quilts with social and political themes.
• Faith Ringgold creates pictorial quilts that include applique and embroidery. Her quilts have served as illustrations in books.

Weaving
• Lia Cook uses a computerized jacquard loom to make enormous tapestries. She studies the affect of art making on the brain.
• Kay Sekimachi weaves sculptural forms in dramatic shapes.
• James Bassler uses natural dyes for his fibers, and he sometimes cuts apart and reconstructs his weaving.
• Jack Lenore Larsen is a weaver who has designed textiles for furniture, carpets, airplanes, and office buildings.

Author:
The Educators’ Guide for Industry was developed by art educator Amy Albert Bloom under the direction of Dr. Marilyn Stewart, Professor of Art Education, Kutztown University of Pennsylvania, Kutztown, PA. April 2014.
Time, Value, and Place: Ideas About Textiles

Working in a group or on your own, consider these questions about textiles and making art. Be ready to share your (or your group’s) responses.

1. Thinking about making art, do you like to work fast or slowly? Does this vary according to the technique you are using?

2. Do you think things made by hand are more valuable or special than things made on a machine? Does your opinion vary depending on the item?

3. If you were to sell an artwork you made, how would the time you spent become part of the price you would sell it for? Do you add up the time it takes you to make an artwork?

4. Think of items that are made in a particular place and associated with that place. For example, are there brands of clothing or sports gear you like that are made in, or suggest, a kind of place – for example, woods, mountains, beaches, or a particular city? And locally, in your town, is there an artist or craftsperson, or a specialty food location, or a manufacturer that makes a well-known product? Do you think the location affects how you appreciate those items?

5. List all the ways you use textiles on a daily basis. Consider those outside of your home, as well.

6. Which of these textiles are the most essential; that is, that you think you could not live without? Which are the most beloved or sentimental?

7. Do an internet search of textiles with search terms such as industrial textiles and high tech textiles. Create a list of textiles that are new to you. For example, what are space suits made from? Also, going back to number 5, did you include the textiles in your mattress, your home insulation, textiles in your car or the bus you take (even in the engine)? How about packaging such as mailing envelopes?
A Collection of Squares: Making a Textile

“This was my kind of thing: a lot of improvisation. Freedom from rigidity was what I loved most about them. Many of the Gee’s Bend quilts are one large design.” – Joe Cunningham

“The Oriole Mill’s more like a craft art studio than it is like most mills… I’m an entrepreneur. I’m a designer, I’m an artist, I’m a business person.” – Bethanne Knudson

It’s time to plan your textile project. Write your responses to these prompts in your sketchbook or on the back of this paper. Then plan and sketch your design ideas on graph paper.

• You can decide whether to work on your own or with others.

• You can decide which textile art you’d like to work in: quilting, weaving, sewing, or knitting.

• You can decide what you’d like your work to become (a work to hang on a wall, a blanket, a hat, or something else.)

• You can decide whether to work in one large square or in little squares that add up to a larger whole.

• As you make these decisions think about how you like to work: do you like slow handwork, or work that proceeds quickly?

• Do you prefer the bold, bright, and contrasting colors of the Gee’s Bend quilts, or the neutral color combinations of the Oriole Mill textiles, or the monochromatic, textured look of Lucy Mingo’s Snake Quilt that is all white with stitched lines? Or do you prefer a color scheme of your own?

• Do you prefer the random quality of the design in some of the Gee’s Bend quilts, or the all over repeating of patterns in some of the Oriole Mill’s designs?

• If you are knitting, you may choose to make squares all of one color but in different stitch patterns. This creates a variety of textures.

• If you work with others, make a plan for who will do what, and how you will join the pieces together.

• Use graph paper to plot out your design.

• Finally, estimate how long your work will take. When you are finished, check your estimate to see how close you were.