

# Interactive Activity Using an Artifact/Object in a Gallery

Find a cart object/artifact that fascinates you and that you think museum visitors will enjoy learning about!

**Purpose:** To engage adult visitors in your gallery talk or tour through inviting them to handle an artifact/object/material while they learn about the people, their culture, way of life, and beliefs.

**Choose the information that works best for you!**

**Gallery Name:** Ancient Arts of China

**Docent Name:** Rhonda Nalisnik

## Cart Artifact/Object/Approved Material:

- (1) Life cycle of silkworm (in interactive learning station).
- (2) Samples of fabric. Suggestions include: synthetic, ramie (from flowering nettle plant), cotton, linen, and wool. Then pass around samples of silk showing numerous types/weights of silk, depending on the weave: brocade, damask, duponi, velvet, satin, taffeta, chiffon, and raw silk.

## Gallery Artifact/Map or Visual/Concept:

Silk Robes, noble women's headdresses.

**Connection:** What is the relationship between the two items to be presented? Think about how they are made or used or the concept they illustrate. What do they tell you about the people, their culture, way of life, and beliefs?

-The robes you see behind me are made of silk fabric worn by the nobility of ancient China. Silk has been a fabric usually worn by the upper classes of cultures both past and present because of its expense.

-Silk remains a luxury today and is considered the queen of fabrics.

-Silk may be considered China's crowning achievement and continues to be of commercial importance today with China producing more than 1/2 of the world's silk.

-In ancient times outside of China silk became synonymous with the land that produced it, hence the ancient Romans called the land "Serica," after the Latin word for silk, *sericum*.

-The fabric was so valued by upperclass Romans that a pound of silk cost a pound of gold, or literally silk was 'worth its weight in gold,' an expression we still use today.

Its profitability was described by a Roman cloth merchant who had inscribed on his vestibule,

*Salve Lucrum: Hurrah for Profit!*

China has been making silk since the Neolithic era more than 5,000 years ago.

The earliest fabric found dates to 3630 BCE.

Silk has been written about throughout China's history, beginning with China's earliest writing:

- References made in the Shang dynasty oracle bones
- Zhou dynasty *Book of Odes* with poetry written about mulberry trees and the shimmer of the fabric
- Han dynasty treatises on large-scale manufacture of silk (for Silk Road trade)

China has used silk throughout its long history in a variety of ways:

- Currency for payment of taxes, especially by peasants in silk-producing regions who had to pay taxes in autumn after the harvest of cocoons and fabric was woven, payment for purchase of horses, and gifts and bribes by the emperor

- Silk was among the materials used for writing before the invention of paper during the Han dynasty. Silk offered permanency, durability, and flexibility to fold up or roll onto a scroll.

- Paintings and maps (were impervious to water damage if used outside)

- Other uses included: all manner of clothing, temple banners, furnishings, curtains, decorative items like fans, coverings for tomb objects, and wrappings for the deceased

Silk has been an important part of commerce, beginning with the trade of bolts of fabric along the Silk Road from 3rd-9th century, which opened China to goods/ideas from India, Central Asia, and Mediterranean.

- By 16th century the sale of silk, along with porcelain and spices, in exchange for New World silver catapulted China into the world economy

- By 18th century silk was desired throughout most of the western world, especially by upper classes

The desirability of silk continues today.

**Interactive activity description:** Steps in presenting the activity.

### **STEP 1: Use artifacts - FABRIC Pieces**

“What makes silk so desirable as a fabric? If any of you own silk, what do you like about it?” (responses vary, then mention qualities not included by audience responses)

- Lustrous: reflects light, dyes well with brilliance, colors/fabric can sparkle/shine
- Comfortable to wear year round: absorbs 30% of dry weight in moisture, breathes, cool in heat, warm in cold, warm without weight, liner for gloves and sleeping bags
- Strong: fibers finer than human hair but as strong as iron wire of the same diameter
- Natural elasticity: stretches 10-20% without breaking fibers, added to wool and linen to keep shape
- Resistant: to mildew, mold, moths, and dust mites

Pass around fabric samples.

### **STEP 2: Use Life Cycle of Silkworm in Interactive Learning Station**

“Where does silk come from and how is it made?” (Answers will vary.)

Silk comes from the filament of a silkworm as it spins its cocoon. In the wilds this life cycle occurs once a year, but in captivity the domesticated silkworm *Bombyx mori* produces silk cocoons 3X/per year.

The life cycle of the silkworm is interesting. (Pass around moth, then leaf, then worm, then hatching out.)

1. An adult female moth lays up to 350 eggs, which are temperature sensitive.
2. Egg is the size of a . (period); must be kept warm to hatch. Ancient Chinese women carried eggs in a pouch inside their clothes to keep eggs warm.
3. When egg hatches, worm is 1/8” long and hairy; eats tender mulberry leaves.
4. Worm grows so rapidly will shed its skin 4X; must be fed by hand 24 hours a day.
5. In 20-30 days silkworm is size of ring finger, and ready to spin cocoon.
6. Takes 2-3 days to spin cocoon. The filament is a single strand of semi-liquid proteins that solidify when in contact with air, a fact that causes translucency of fabric, one continuous strand one mile long.
7. In 10-12 days moth formed, will secrete acid mixture from mouth that breaks cocoon fibers, then pushes out head, and emerges as adult moth.
8. Adult moths do not eat or drink, they mate, female lays eggs, and then they die.

Domesticated silkworms cannot fend for themselves. Moths can't fly, and are blind. Worm barely moves a few cm. to get food, can't defend from predators, and must be taken care of by humans.

The creamy white moth and white color of cocoon comes from diet of silkworm on mulberry leaves. 90% of silk produced today comes from mulberry silk since white is easily dyed.

Other silkworms in the world create differently colored cocoons because of different diets. A Japanese tasar silkworm that eats oak leaves produces a green thread; “Eri” silk comes from a silkworm that eats the leaves of the castor oil plant and produces a brick red thread; “Muga” silkworms in Assam, India produce an unusual golden yellow thread.

“How do you get silk fabric from a cocoon?” Heat cocoon to kill pupa, stir in warm water to remove sticky covering on thread, carefully unwind cocoon, and wind filament onto reel, combine several filaments and wind as one thread.

Thread is then woven into fabric on looms. It takes 650 cocoons to make a silk blouse.

In order for China to have large scale production of silk, the spinning wheel, silk winding frames and treadle operated looms were put together to become the precursor to the industrial revolution textile mill machines, long in advance of Europe. Used in China in 11th and 12th century.

Sericulture, or the processes of making silk are labor intensive, demands constant close attention, and involves four stages in the lengthy production, employing mainly women even today:

1. Cultivation of mulberry trees and bushes.
2. Raising silkworms.
3. Retrieving silk from the cocoon.
4. Spinning and weaving the fabric (includes color dye, specific weave for texture/sheen/quality).

**Sample interactive questions (2-3) for the audience:**

1. What makes silk so desirable as a fabric? If any of you own silk, what do you like about it? (Describe the properties of silk that make it unique and desirable.)
2. Where does silk come from? Do you know how silk is made? (Describe life cycle of silkworm and process of sericulture-how to make silk from thread of cocoon.)
3. How has the modern world and technology changed the use and production of silk? Do we sacrifice quality for profit?
4. In what other areas of art and economy have women dominated or been instrumental?

**Cross-cultural connections or related folk tale to engage people further; or research or story books.**

“The process and secrets of silk-making were protected under penalty of death in ancient China. How did the rest of the world learn of sericulture?”

Many legends and stories surround how silk’s secret left the borders of China. In Khotan, a city on the southern edge of the Taklamakan desert and Silk Road, the oral tradition and writings of a Buddhist monk tell of the ruler of Khotan marrying a Han princess. The ruler stated he did not need a dowry of precious jewels, but rather the bride should bring with her three things: the seeds of the mulberry tree, the eggs of the silkworm, and the male technicians to make silk. The seeds and eggs were smuggled across the border in the bridal headdress of the princess, looking much like the headdresses we see here in the museum. When the ruler asked the princess where the male technicians were, she addressed the ruler: “My lord, my maidservants are the makers of silk, the women in China are entrusted with the care of the mulberry trees, the raising of silkworms, and the spinning and weaving of silk.” Khotan is one of the largest producing areas of silk in China today.

This story is illustrated by a painting displayed in the British Museum that comes from a Buddhist sanctuary in Khotan, painted sometime between the 7th-8th centuries CE that depicts the tale of the “Silk Princess” arriving in Khotan with a basket full of cocoons. In it, one of her servants points to the princess’s hair, and another girl is shown weaving. It is shown in the British Museum book, *100 Objects that Shaped World History*.

Thus, we have women to thank for the production of a fabric that has impacted the world both historically and economically.

**Bibliography**

Vainker, Shelagh. *Chinese Silk: A Cultural History*. New Jersey: Rutgers University Press, 2004. (This book is available in the Docent Library.)

<http://www.womeninworldhistory.com/silk-road>

United Nations International Sericultural Commission: <http://inserco.org>

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