



Printing & painting on silk using Nasco replicas



Objectives

Students will...

- Design, paint, and print on silk using dye and Nasco replicas
- Learn about the history of silk, including the uses of silk over time and cultures
- Study historical and contemporary silk painting, aesthetics, and art criticism

Standards

VA:Cr2.1.5a

Experiment and develop skills in multiple art-making techniques and approaches through practice.

VA:Re.7.1.6a

Identify and interpret works of art or design that reveal how people live around the world and what they value.

VA:Re8.1.7a

Interpret art by analyzing art-making approaches, the characteristics of form and structure, relevant contextual information, subject matter, and use of media to identify ideas and mood conveyed.



History of silk

Over the centuries, from woven fabrics of Kente cloth and Scottish tartans to the felts of Mongolia and Scandinavia, people have used local resources to create and decorate fabrics and fibers. One of the oldest forms of fabric, and the best-kept secret for centuries, was silk. According to Chinese legend, around 2640 BCE, a cocoon fell from a mulberry tree into the tea of 14-year-old Lady Hsi Ling Shih, wife of the Yellow Emperor. She noticed that a fine delicate thread started to unravel from the cocoon. Lady Hsi Ling sponsored the beginning of silk production with the development of the loom and silkworm rearing. This unique fabric was regarded as magical and was to be used only by the royal family and special members of the royal court. As improvements in the cultivation of silkworms developed, silk became more available. Eventually, silk was worn by common people, and put to industrial use. Silk was used for musical instruments, fishing lines, and even paper.

By the third century BCE, demand for the lustrous fabric created a trade route from China to Persia and Japan known as “The Silk Road.” Silk soon became the currency of traders. The earliest evidence of the silk trade was the discovery of an Egyptian female mummy with silk, dated 1070 BCE. By the height of the Roman Empire, silk had made its way to Europe. But the Romans knew nothing of the origin of this luxurious fabric, which was expensive, costing more than a soldier’s annual salary. The Chinese had guarded the secrets of silk production for over 3,000 years by searching travelers at the borders. Anyone caught smuggling silkworm eggs or cocoons was executed. This monopoly was maintained until about 200 BCE when Chinese immigrants in Korea started the industry there. Silk production mysteriously started in India about 100 years later.

In 552 CE, Byzantium Emperor Justinian ordered two monks who were traveling to China to smuggle back silkworm eggs. The monks hid the eggs in their walking sticks and silk production spread even farther from China. Today, China is again the leader in silk production, or “sericulture,” and is the largest exporter of raw silk. The earliest examples of painting on silk can be traced back to the fourth century BCE. With the advent of modern dyes and inexpensive silk, the painting and the surface design of silk have become popular with fiber artists.

Preparations

Introduce silk and silk painting by explaining the history of silk in different cultures. Show examples, such as photos of clothing made from silk and oriental and Persian carpets. Hold a class discussion regarding design aspects and review color theory. It is recommended that beginning students stay within an analogous color scheme for the washes and it is best to attempt silk painting and printing after students have been instructed in watercolor painting and block printing. Many of the techniques transfer across mediums. Such similarities with watercolor include transparency, wet washes, resists, and salt.

Students will need an understanding of basic color theory since colors often overlap and mix. From previous experiences with block printing, students should be able to judge the appropriate amounts of ink to use to get the best print possible. However, with good instruction and supervision, students can proceed without previous art experience in these areas.

Silk scarves can be painted without the use of a stretcher frame and expensive steamer to set the dyes. Though stretching the silk provides a bit more control, students can also lay the fabric on plastic sheeting and paint directly onto the silk. Steam fixing makes the dye colors a bit stronger in intensity. If a steamer is not available, using Jacquard’s® Permanent Dye Set with the Jacquard® Silk Dye will work very well, especially in a classroom setting.

Instructions

1. Demonstrate the whole process to the class, so students will understand the steps from beginning to end.
2. Start either with painting a background wash first, then stamp the scarf. Or start with stamping the scarf and end with painting a wash around the stamped images. Whatever method you choose, remember to let the silk dry and set the dye between the painted wash and stamping steps.
3. Have students create colored thumbnail sketches of their design to scale. This is an important step, since silk scarves and the silk hoops are not the same proportions as a regular sheet of drawing paper.
4. **Prepare silk** by spraying with water and iron the scarf to remove folds and wrinkles. Stretch on a frame if one is available. If a stretcher frame is not available, see other options under Step 6.
5. **Background wash:** The easiest way to paint the background wash is to paint clear water over the cloth, much like a wet-on-wet watercolor painting. Blot away any puddles or drips. Mix about a teaspoon of the Jacquard® Silk Dye with water until you get the desired color. This is a strong dye and a little dye goes a long way. Test the colors on white paper or scrap cloth. Final colors will be just a little bit lighter once dry. Paint the scarf with dye washes. Since you will be printing over this wash, it is suggested that the wash is light in value. Another option is to apply the washes so there are areas of lighter values in which to stamp. If desired, sprinkle salt while the wash is still wet to create starburst effects. Dry the scarf in a horizontal position. A hair dryer or fan can be used to speed up the drying process. If the images were stamped or printed first and the dye was set, the wash can be painted right over the printed image. Don’t hang the scarf folded over a surface like a clothes line or hanger. If you do, there will be a line showing on the final product.
6. **If you don’t have a stretcher frame:**
 - Lay scarf on top of plastic sheeting and paint washes with the dye. Let the scarf dry in this position or hang to dry. If it is really wet when hung, the colors may run, but this can be a nice effect, too.
 - Lay the scarf on the grass and paint it.
 - Crumple up the scarf (dampened first with water), put it in a plastic container, and drip dye onto it for a tie-dye look. Hang by edges to dry.
 - Completely submerge the scarf in a dye bath (this one uses more dye). After submerging scarf, squeeze out excess dye (wear plastic gloves) and hang by the edges to dry. Put newspapers down to catch any dripping dye.



7. **Set the Dye:** The colors are stronger if you wait until the next day to set the dye. Wearing plastic gloves, set the dye with Jacquard® Permanent Dye Set concentrate. Mix 1 oz. (3 tablespoons) of dye set per 1 quart of cold tap water. You will need about 3 quarts of dye set for a 45" square of fabric. Immerse the fabric in the dye set bath and stir for about 5 minutes. Rinse in a container with liquid soap and running water, then hang to dry. A fan or hair dryer can be used to speed the drying process. If this dye setting step is skipped, watermarks from the stamping and any accidental drips will spot the silk.
8. **Applying dye to the replicas:** Using the foam brayer, spread a thin layer of dye on the inking tray. When the ink is smooth on the brayer, gently roll the brayer over the replica image. It is best to apply the dye by rolling it on, rather than by pressing the replica into the dye, much like applying ink when block printing. Test your image on paper or scrap cloth. When you have achieved a clean practice print, you are ready for the silk.
9. **To print on silk:** If the silk is not stretched, have another person hold the silk taut where you want the stamped image to be located. You can also use an embroidery hoop to stretch the area. Gently apply the replica to the underside of the silk facing up, using the flat part of your fingers to gently go over the surface of the silk, applying pressure where the replica is located. If you apply the replica on the bottom side, facing up, you can see how the image is appearing on the top. Be careful not to rub too hard or the image will be smeared. Repeat inking and stamping until design is complete, then let dry.
10. The next day, set the dye again as directed in Step 7. Hang by edges to dry.
11. Iron the scarf when dry. Then your scarf is hand washable or dry cleanable.

Tips

- Dyes used for this lesson will stain hands and natural-fiber clothing. Linoleum floors, plastic laminate countertops, and stainless sinks do not seem to stain.
- Print Paste Mix SH will work on both cotton and silk. Jacquard® Procion dyes (those for tie-dye) can be thickened with the same paste and used for stamping on cotton.
- Print Paste Mix F is primarily for silk and gives a sharper image, but SH works well on silk.
- Create your own unique stamp by carving a 4" x 6" piece of Nasco Safety-Kut™ (9704655).



Jacquard® Silk Color Kit



Large Fish: approx. size 8"-18½"



Tropical Fish Mini: size 3"

Materials

- Jacquard® Silk Scarves ([9705821](#)) or Jacquard® Stretched Hoop ([9720265](#))
- Jacquard® Silk Color Kit ([9710905](#))
- Nasco Replicas:
 - Fish, set of 6 ([9724022](#))
 - Tropical Fish Mini Gyotaku, set of 7 ([9724210](#))
 - Leaf Stamp, set of 6 ([9714351](#))
 - Flying Insect Stamps, set of 6 ([9717986](#))
- Nasco "Pro-formance™" Camel Hair Watercolor Brushes, set of 6 ([9742344](#))
- Alvin® Heritage Arts™, 4" Foam Brayer ([9713195](#))
- Giant-Size Ink Mixing Tray ([SB11438](#))
- Latex Free Poly PPE Gloves, medium size, box of 100 ([2100320](#))
- Small plastic containers
- Newspapers
- Proctor-Silex® Nonstick Iron ([WA31927](#))
- RITZ® Natural Ironing Board Pad and Cover Set ([NE40310](#))
- Rags for cleanup
- Salt (optional)
- Clear plastic sheeting or plastic tarp (optional)



Reference

[History of the silk road](#)

