

A World of Learning

The Embroidered Globes of Westtown School

MARY UHL BROOKS



Photo by Terence Roberts, courtesy of Esther Duke Archives, Westtown School

Each Westtown School embroidered globe, including these three terrestrial globes in the school's collection, reflects a particular student's needlework skills and dedication to her geography lessons.

How many of us can say that something we created in school as a child is now worthy of a place in a museum or that it is considered an important piece of material culture that helps us understand in significant ways the education of a specific group of students at a particular place and time? The beautiful embroidered silk globes created by female students at Westtown School during the early nineteenth century are such pieces. Over 200 years later, they still fascinate and educate us.

Quaker girls and boys first entered Westtown School, a coeducational boarding school near West Chester, Pennsylvania, in 1799, and today it is a thriving Quaker boarding and day school for pre-kindergarten through 12th grade. Established by the Philadelphia Yearly Meeting of the Religious Society of Friends, the school's daily rituals and classroom work in the early years were designed to immerse young students in ways that would reinforce the Quaker disciplines of simplicity, integrity, pacifism, and spiritual circumspection in all activities. Classroom work included attention to useful subjects such as writing, grammar, reading, arithmetic, geography, natural sciences (including astronomy), and bookkeeping—plus surveying for boys and

sewing for girls. It is the intersection of the study of astronomy, geography, and sewing that likely spawned the creation of embroidered silk globes at Westtown School.

FROM GEOGRAPHY LESSONS TO GLOBES

Early school records reveal that manufactured globes, both terrestrial and celestial, were purchased for the school, along with books on geography and astronomy. A little over a year after the school opened, the Visiting Committee appointed by the Yearly Meeting to examine the progress of the school suggested an addition to the curriculum to “promote



Southwest view of Westtown Boarding School. Chester County, Pennsylvania. Instituted 1794, opened 1799, enlarged 1847. Drawn on stone by John Collins, 1858.

Image courtesy of the Library Company of Philadelphia

Teaching Geography, [and] the use of the Globes in the Girls School, and if they find it needful encourage one of the Men Teachers to attend occasionally.”¹ From the opening of the school, girls were treated as scholars along with the boys based on the Quaker belief in the equality of all, but for many years, all aspects of the school were separated by gender; records do not reveal how often—if ever—male teachers were called upon to assist with girls’ geography lessons.

The girls’ lessons were based on several geography textbooks purchased for the school, plus a particular book on globes believed to be in the school by 1800, *A Treatise Describing the Construction, and Explaining the Use, of New Celestial and Terrestrial Globes* by George Adams, Sr., one of the foremost instrument makers in eighteenth-century London.”² This book would have offered Westtown

students thorough lessons on how globes were marked and employed (including the meaning of terms such as longitude and latitude, the equator, ecliptic [the path of the sun], celestial meridians, etc.) and how terrestrial and celestial globes were used in combination to understand the relative movements of the earth and heavens.

Since the sixteenth century, when a new understanding emerged of a sun-centered rather than earth-centered universe and exploration by sea necessitated navigational tools, globes were commonly made and used in pairs of terrestrial and celestial ones. Those few globes purchased by the school in the early years were so well used that in 1824, it was reported that “the globes at the School having become much defaced, the committee on books are directed to purchase two pair if it be found those in use cannot be repaired.”³



Hannah B. Gibbons created this globe while attending Westtown from March 1817 to September 1818, using watercolor to distinguish various land boundaries.

Photo by Terence Roberts, courtesy of Esther Duke Archives, Westtown School



Left: A view of the southern sky on young Phebe Peirce's globe includes the constellation Centaurus represented by a half-man, half-horse figure, along with a wolf—representing Lupus—in the centaur's grasp. The zodiac constellations Libra and Sagittarius are marked on the globe with no corresponding illustration. *Right:* Susan Ecroyd of Muncy, Pennsylvania, is credited as the maker of this terrestrial globe, and the red leather disk at the northern pole is still intact.



Photo by Terence Roberts, courtesy of Esther Duke Archives,
Westtown School

THE SINGULAR STITCHED GLOBES OF WESTTOWN

Unfortunately, what is not found in early school records is whose idea it was for girls to make their own embroidered silk globes. Much of Westtown's needlework—and other aspects of the school—was modeled on Ackworth School in England, which had opened before the London Yearly Meeting in 1779. But known Ackworth needlework includes neither flat maps nor globes.⁴

So how did the embroidered globes come to be at Westtown? Was it the idea of a teacher or teachers? Or perhaps an ambitious student? Was it spurred by the limited number of globes purchased for the school? No matter the origin, the existence of these globes handmade by the girls reinforces an understanding years later that the school's curriculum was aligned with the Quaker vision that education should include knowledge of the physical world for both useful and spiritual reasons. Natural sciences offered practical information for using and stewarding resources of the physical world, while also reaping the spiritual benefit of growing closer to God. For Quakers, the more one understood the universe, the more one understood the Creator.

The embroidered globes, generally about 6 inches in diameter, are crafted of silk, linen, and raw wool, and they are marked with thread, ink, and watercolor. Underneath the outer layer of plain-weave silk is a linen sphere, probably constructed first

and then stuffed with raw wool from sheep on the school's farm.

One of the globes in the school's collection has a small opening in the north polar area, offering a view of the stuffing. Some globes are densely stuffed and quite firm; others are a bit lighter. Covering the linen substrate with silk was accomplished either by constructing the silk sphere separately (stitching most of the silk gores together, inserting the linen sphere, and then closing the silk sphere with stitches along a seam between two gores) or by stitching each gore separately onto the linen. A girl then had a blank silk sphere to mark—whether it was to be a terrestrial or celestial globe. Her geography or astronomy lesson awaited.

As challenging as the endeavor was to construct a silk globe, improvement of one's needlework skill was secondary to the experiential learning of marking a globe. For terrestrial globes, girls set about marking lines of longitude and latitude, the equator, the ecliptic, and the Arctic and Antarctic circles with silk threads laid and couched. Globe makers chose the thread colors for this, often using multiple rows of thread to better showcase lines such as the equator.

Some makers stitched the outline of the continents with running stitch and then enhanced it with watercolor, while others outlined land masses with only stitching or only ink and watercolor. Names of land masses and bodies of water were lettered in ink, a practice familiar to the girls from drawing flat



Sampler (Globe Sampler) made by Ruth Wright. Westtown School, Pennsylvania, United States, 1815. Silk, ink graphite, and linen. View 1; 1969.0046A; Museum purchase.

maps on paper in geography class. But lettering on silk is another matter, and the small-scale lettering on some globes illustrates the challenge of this needlework exercise.

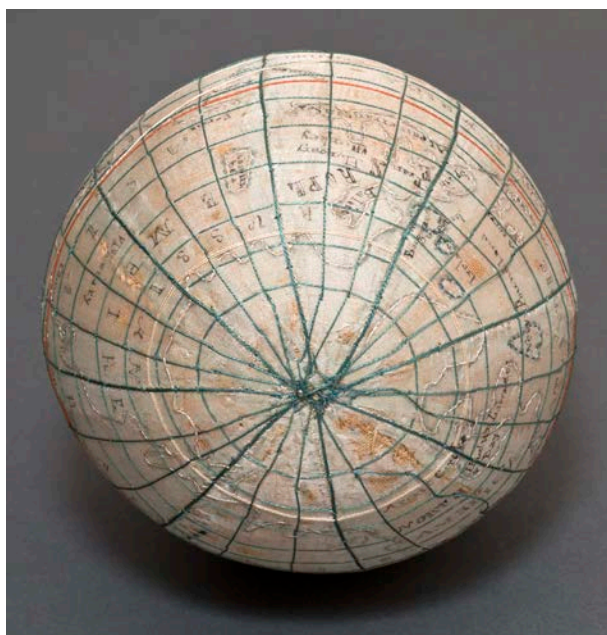
As one might expect, there is variation in the appearance and even substance of the terrestrial globes. Some girls were more ambitious than others in recording place names on the globe—and, as would be expected in a classroom, some were more accurate regarding the placement of geographical names. Geographic place names on the embroidered globes reflect those in use at the time or, more certainly, those in the printed sources used in geography class. New Holland is found as the historical European name for mainland Australia, and New Spain was then in use for colonial Mexico.

Over 275 flat samplers stitched in sewing class at Westtown School between 1799 and 1843 have been identified, but embroidered globes from Westtown are rare. Only 44 have been identified to date, and of those, only 6 are celestial. Why is there a disparity in the number of terrestrial and celestial globes still in existence?

First, not every girl in sewing class who stitched flat samplers also undertook the task of creating embroidered globes. Of the six known celestial globes, five are paired with a terrestrial globe by the same maker. Many girls simply did not go on to make a celestial globe after completing a terrestrial globe, as it seems unlikely there are multiple undiscovered celestial globes separated from their terrestrial mates.

The challenge of time or technique, or a combination of both, likely deterred many girls from making a second globe. Rachel Cope, who entered Westtown School in February 1816 at age 16, wrote about making globes in sewing class in a letter to her parents, noting, “I expect to have a great deal of trouble making them, yet I hope they will recompense me for all my trouble. . . .”⁶ She clearly anticipated making a pair of globes, yet her descendants have only the terrestrial globe Rachel completed at Westtown.

While the terrestrial globes are numerous and quite marvelous on their own, the celestial silk globes are even more wondrous. Like the terrestrial globes, they exhibit similar construction with threads laid and couched to mark various lines, but these feature objects and figures associated with the constellations artfully drawn with watercolor



Sampler (Globe Sampler) made by Ruth Wright. Westtown School, Pennsylvania, United States, 1815. Silk, ink graphite, and linen. View 8; 1969.0046A; Museum purchase.

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and ink. Constellations in the zodiac family were represented by animal and human figures of the 12 signs of the zodiac. Other known constellations are identified and illustrated with their corresponding symbols in watercolor. Mary Dickinson's celestial globe showcases all of this, including a maiden for Virgo and balance scales for Libra, plus symbols for constellations in the southern sky including a peacock for Pavo and a hunter for Orion.

Phebe Peirce's celestial globe is a different presentation. Phebe, who entered the school from Philadelphia at age nine, marked her celestial globe with stars, perhaps inspired by a similar globe in the school. She includes some constellation names and figures, but her young age may have influenced the substance of the drawings and information on her globe.

Such time and attention to detail surely imparted knowledge to the girls who crafted these artistic yet useful pieces. Rachel Cope's letter to her parents confirms as much, as her comments about making the globes continue, "I hope they will recompense me for all my trouble, for they will certainly be a curiosity to you and of considerable use in instructing my brother and sisters, and to strengthen my own memory, respecting the supposed shape of our earth, and the manner in which it moves (or is moved) on its axis, or the line drawn through it, round which it revolves every twenty-four hours."⁶ Small leather disks at the polar ends of many globes are further evidence that the globes were made to be used. Several are mounted in wooden stands that might be original, but there is no documentation about affixing the globes to these mounts at school.

The embroidered globes from Westtown School are objects that transport the observer to a different time and place as one wonders about the students who crafted them and the lessons they learned about the world. Many of the globes themselves have been on journeys, now finding homes in collections near and far from their place of

creation; nine terrestrial globes are at Westtown School, with others nearby at the Chester County History Center, Winterthur Museum Garden & Library, Monroe County (Pennsylvania) Historical Association, and Monmouth County (New Jersey) Historical Association. Others have found their way to the Kenneth Spencer Research Library at the University of Kansas, the Minneapolis Institute of Art, and the Los Angeles County Museum of Art. Many are in private collections or remain with family members. All are teaching objects and objects of amazement still. ❖

NOTES

1. Minutes of the Acting Committee, October 24, 1800, Esther Duke Archives, Westtown School.
2. "Westtown School to Joseph & James Crukshank" (manuscript) in Bills and Papers Relating to the Accounts of Westtown School 1796–1816, Esther Duke Archives, Westtown School.
3. Minutes of the General Committee, December 17, 1824, Esther Duke Archives, Westtown School.
4. Carol Humphrey, *Quaker School Girl Samplers from Ackworth* (Ackworth: Needleprint & Ackworth Estates Limited, 2006), 153.
5. Rachel Cope to parents, October 15, 1816, quoted in Helen G. Hole, *Westtown through the Years 1799–1942* (Westtown, PA: Westtown Alumni Association, 1942), 56.
6. Cope, 56.

MARY UHL BROOKS was the archivist at Westtown School for 27 years before retiring in 2022. In 2011, she cocurated an exhibit at the Chester County History Center, *In Stitches: Unraveling Their Stories*, which combined pieces from Westtown School and the history center. She is the author of *Threads of Useful Learning: Westtown School Samplers* (2015), which discusses this important collection of schoolgirl needlework in the context of Quaker history, faith, and education. The book was published by Westtown School and is currently available only through the school's website, westtown.edu.