

ANNA VON MERTENS

Glass, Metal, Thread: Building Our Observable World

Educator Handout: Grades K-6

ABOUT THE EXHIBITION

Encompassing astronomy, history, materiality, attention, and labor, [*Glass, Metal, Thread: Building Our Observable World*](#) presents drawings and textiles made by artist [Anna Von Mertens](#) from 2015 through 2022. She writes, “I think objects can absorb time, absorb our physical presence. That is why I make detailed drawings; that is why I sew quilts by hand.” The artist’s close observation and meticulous making are evident in the three discreet (yet in dialogue) series on view: [Remnants](#), [Measure](#), and [Objects \(100 Emojis\)](#).

ABOUT THE ARTIST

Anna Von Mertens is based in Peterborough, New Hampshire. She received her M.F.A. from California College of the Arts and her B.A. from Brown University. Her work has been exhibited at Radcliffe Institute, Harvard University; Berkeley Art Museum, Berkeley; Museum of Fine Arts, Boston; Allen Memorial Art Museum, Oberlin College; Elizabeth Leach Gallery, Portland; and National Museum of Art, Architecture, and Design, Oslo, Norway, among others. Her work is included in the collections of Smithsonian American Art Museum’s Renwick Gallery, Washington, D.C.; RISD Museum, Rhode Island School of Design; Museum of Fine Arts, Boston; Berkeley Art Museum, Berkeley; Frances Young Tang Teaching Museum and Art Gallery at Skidmore College, Saratoga Springs, New York; and International Quilt Study Center and Museum, Lincoln, Nebraska, among others. Von Mertens has been awarded a Smithsonian Artist Research fellowship, United States Artists fellowship, and a Louis Comfort Tiffany Foundation Biennial Award.

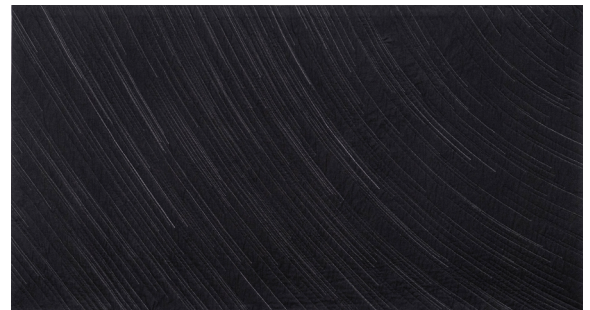
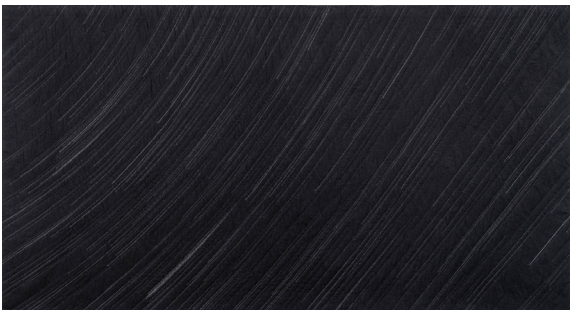
VOCABULARY

- **Cyanotype:** a light-sensitive photo emulsion (chemical mixture) that produces a blue image
- **Glass plate photographic negative:** an image that is created when light is focused through a lens and lands on the surface of a glass plate coated in light sensitive materials.¹ This process creates a reverse image—areas in highlight become darkened and areas in shadow appear as white or light shades of gray.
- **Medium:** refers to the type of art (such as drawing, quilting, or photography), as well as the materials an artwork is made from (such as graphite, fabric, or colored pencil)²
- **Research-based art:** artwork created in response to research

¹ Texas State University Archives. (n.d.). *A Brief History of Glass Plate Photography*. <https://exhibits.library.txstate.edu/univarchives/exhibits/show/cen-tex-glass-plates/mystery-deliv/glass-plate-negs>

² Tate (n.d.). *Art Term: Medium*. <https://www.tate.org.uk/art/art-terms/m/medium>.

³ Margolis, E. A., and Thompson, S. (2021, December, 28). *Remembering Astronomer Henrietta Swan Leavitt*. Center for Astrophysics: Harvard & Smithsonian. <https://www.cfa.harvard.edu/news/remembering-astronomer-henrietta-swan-leavitt>



Left: Anna Von Mertens, *The stars fading from view on the morning of Henrietta Leavitt's birth, July 4, 1868, Lancaster, Massachusetts*, 2018. Hand-stitched cotton. Courtesy of the artist. Photo credit: Jade Nguyen. Right: *The stars returning into view on the evening of Henrietta Leavitt's death, December 12, 1921, Cambridge, Massachusetts*, 2018. Hand-stitched cotton. Courtesy of the artist. Photo credit: Jade Nguyen.

CLASSROOM ACTIVITIES AND DISCUSSION QUESTIONS

CONNECT - VA:Cn.11: Relate artistic ideas and works with societal, cultural, and historical context to deepen understanding.

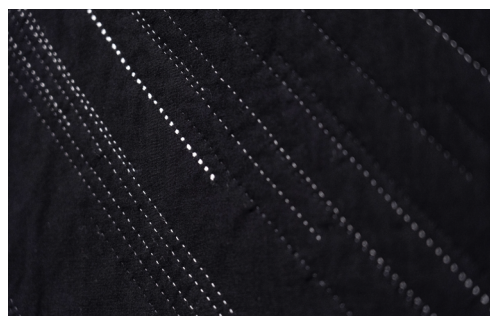
Introduce students to Anna Von Mertens's work that respond to her research about astronomer [Henrietta Leavitt](#).

Working at the Harvard College Observatory in the late 1800s and early 1900s, Leavitt studied [glass plate photographic negatives](#) of the night sky. By comparing the brightness of stars, Leavitt made discoveries that allowed astronomers to measure the distance to faraway stars. She did not live to see the impact her work had on our understanding of the universe, and she is not widely known today outside the field of astronomy. To honor Leavitt's legacy and to share her story, Von Mertens created [hand-sewn quilts](#) that illustrate a time-lapse of the stars on the morning of Leavitt's birth and the evening of her death.

RESPOND - VA:Re.7 - Perceive and analyze artistic work

Discuss the following questions as a class:

- Why do you think Von Mertens chose to focus on the movement of stars to honor Henrietta Leavitt's life?
 - What references can you find in this [artwork](#) to Leavitt's study of the brightness of stars?
- Quilts are made by sewing layers of fabric together. Their stitches are usually arranged in a pattern that holds personal meaning to the maker.
 - Why do you think Von Mertens chose to use the [medium](#) of quilting for this artwork?
 - Each photographic plate Leavitt studied contained thousands of stars. Her research consisted of closely examining every star, looking for the smallest change in brightness.³ How is the act of hand-stitching related to Leavitt's work?



Anna Von Mertens, *The stars returning into view on the evening of Henrietta Leavitt's death, December 12, 1921, Cambridge, Massachusetts* (detail), 2018. Hand-stitched cotton. Courtesy of the artist. Photo credit: Jade Nguyen.

CONNECT - VA:Cn.10: Synthesize and relate knowledge and personal experiences to make art.

1. As a class, learn about the life and accomplishments of an underrepresented historical figure (see the list of resources below). Have students work together to create a timeline documenting important events in this person's life.

2. Guide students to use [star mapping software](#) to visualize the movement of the stars at the time and place that these events occurred.

- Open the star mapping software.
- See the sidebar to change the location.
- Select "Change Time" to adjust the time and date.
- Adjust the field of view using the bar above the sky view.
- Below the sky view, adjust the color scheme to printer greyscale.
- Adjust the display to show only the information you would like to include in your print. Consider de-selecting deep sky, constellation names, stick figures, and all labels.
- In the color scheme section, select Export PNG.

3. Consider the following approaches:

- Print the images onto paper.
 - Prompt students to draw or collage images related to the events that occurred at the dates, times, and locations.
- Print the images on transparencies.
 - Layer multiple transparencies for a time-lapse image.
 - Consider using these transparencies to create [cyanotype](#) prints.
- Project the images onto paper or fabric.
 - Draw the projected star maps.
 - Sew or glue the star maps together to create a quilt representing the major life events of the historical figure.

- [30 Multicultural Children's Books About Women In STEM](#)
- [29 Children's Books About Female Scientists](#)
- [Rainbow Revolutionaries by Sarah Prager](#)
- [New York Public Library: Black History STEAM Book List for Kids, Teens & Adults](#)
- Educator resources are available on the exhibition [webpage](#).

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