Pacing: Four to five 40-minute class periods
GRADE: 2

LESSON ACTIVITY TITLE: Hidden Figures Rocket Relief Sculpture

ESSENTIAL QUESTIONS:
• What does an illustrator do?
• How does relief sculpture compare to sculpture in the round?

ENDURING UNDERSTANDING:
Exploring visual relationships, aesthetics, and the relationship between form and space helps us understand and critically consider the world around us.

PICTURE THE DREAM REFERENCE BOOK: Hidden Figures by Margot Lee Shetterly, illustrated by Laura Freeman

VISUAL ART GSE TO ADDRESS IN ACTIVITY:

VA2.CR.1: Engage in the creative process to generate and visualize ideas by using subject matter and symbols to communicate meaning.

VA2.CR.2: Create works of art based on selected themes.

VA2.CR.3: Understand and apply media, techniques, and processes of two-dimensional art.

VA2.CR.4: Understand and apply media, techniques, and processes of three-dimensional art.

VA2.CR.5: Demonstrate an understanding of the safe and appropriate use of materials, tools, and equipment for a variety of artistic processes.

VA2.RE.1: Discuss personal works of art and the artwork of others to enhance visual literacy.

VA2.CN.1: Investigate and discover the personal relationships of artists to community, culture, and the world through making and studying art.

VA2.CN.2: Integrate information from other disciplines to engage in the understanding and production of works of art.

VA2.CN.3: Develop life skills through the study and production of art (e.g. collaboration, creativity, critical thinking, communication).
MAJOR CONCEPTS AND VOCABULARY:

- illustrator
- sculpture in the round
- relief sculpture
- wax resist
- emphasis
- tint
- balance

DIFFERENTIATED LEARNING (OPPORTUNITIES FOR SCAFFOLDING AND EXTENSION):

SCAFFOLDS:
Students may use precut shapes to create circles in their artwork.

EXTENSIONS:
Students may use a protractor to draw circles in their artwork. Students may add rocket wings to their paper towel roll sculptures.

MATERIALS:

STUDENT SUPPLIES:
- Crayons or oil pastels
- Markers and colored pencils (optional)
- Watercolor paint
- Tempera paint
- Paint brushes
- Toothbrushes (from the dollar store)
- 9” × 12” drawing paper
- Paper towel rolls
- Scissors
- Glue
- Precut 1” aluminum foil strips (optional)
- Scrap paper for collage
- Yellow, orange, and red tissue paper

TEACHER SUPPLIES:
- The book *Hidden Figures* by Margot Lee Shetterly, illustrated by Laura Freeman
- *Picture the Dream* PPT resource (available at High.org), if needed
- Glue gun
OPENING

HOOK/INTRODUCTION ACTIVITY:

- View and discuss with students the artworks of American illustrator Laura Freeman. [https://www.lfreemanart.com/home](https://www.lfreemanart.com/home)

- Read the book *Hidden Figures* to the class.
  - Link to read aloud, if needed: [https://www.youtube.com/watch?v=WartrMsbMal](https://www.youtube.com/watch?v=WartrMsbMal)
  - Discuss with students using any or all of the following questions:
    - Explore the title “Hidden Figures.” Why might the historical figures in this book be called “hidden”?
    - What is another word we could use for “hidden”?
    - Why might this be an important story to tell?
    - Who are some “hidden” figures in our world today? What are some ways we might make these “hidden” figures in our society more visible?

- Introduce the concepts of wax resist, collage, sculpture in the round, relief sculpture, self-portrait, balance, tint, and emphasis.
- Use the illustration from the *Picture the Dream* exhibition (“. . . Dorothy, Mary, Katherine, and Christine knew one thing: with hard work, perseverance, and a love of math, anything was possible.”) to illustrate balance, emphasis, and tint.
WORK PERIOD

STUDENT AND TEACHER PROCEDURES:

Class One:
- Create a galaxy drawing with crayons or oil pastels.

Class Two:
- Apply watercolor with black and dark blue watercolor paint.
- Create galaxy stars by using a toothbrush to fling tiny dots of white tempera paint all over the composition.

Class Three:
- Choose a tempera paint color for their rocket.
- Create a tint by adding white to the color. This ensures that the brown of the paper towel roll does not show through.
- Paint the paper towel roll.
- While the paper towel roll is drying, draw and cut out a 3” circle for the rocket cone using a stencil or protractor, or use precut circles.
- Design the circle with markers, colored pencils, or crayons.
- Fold the circle into quarters. Open the circle, and put a dot in the center with a pencil.
- Draw a line from the center dot to the edge of the circle.
- Cut along the line to create a slit.

Classes Four and Five:
- Design the rocket by cutting and gluing details such as windows and stripes with aluminum foil or paper collage materials. Remember when applying the glue: “Dot, dot not a lot!”
- Draw or collage a self-portrait into a window on the rocket.

Optional:
- Cut 1” slits on opposite sides of the paper towel roll.
- Fold a piece of colored paper from the collage materials in half. Draw a rocket wing on the fold and cut out to create two symmetrical objects.
- Add a few dots of glue to the slits, and slide the rocket wings into the slits.

Rocket Cone:
- Cut along the line drawn on the circle. Wrap it around to make a cone. Secure the cone with a dot of glue or tape.

Putting It All Together:
- The teacher will glue the cone onto the rocket and the rocket onto the galaxy painting with a glue gun.
• Students will reflect on how art provides an opportunity to look at issues important to ourselves and the world.
• How does it feel to see yourself inside the rocket ship in your artwork?
• How might the women in *Hidden Figures* feel if they saw themselves in a book or movie about their lives?
• Students will reflect, identify, and discuss their work compared to the assignment criteria.
Laura Freeman (American, born 1959), “... Dorothy, Mary, Katherine, and Christine knew one thing: with hard work, perseverance, and a love of math, anything was possible.” Hidden Figures: The True Story of Four Black Women and the Space Race, 2018, written by Margot Lee Shetterly, born-digital art, collection of the artist, XL.2019.37.3.

Ivey Coleman has made her home in Georgia teaching visual arts to students of all age groups and walks of life for twenty-five years. She was honored to have been selected to receive the 2020 National Art Education Association’s Peter J. Geisser Special Needs Art Educator of the Year Award. As an art education advocate, she has served on the Georgia Art Education Association and the National Art Education Association’s boards in many capacities since 2005. She has also written curriculum and assessments for Columbia and Richmond Counties’ boards of education and the Georgia Department of Education. She provides all her students with a visual arts curriculum that promotes student achievement and helps guide awareness of their natural surroundings while building knowledge, skill, and self-esteem—tools necessary to cultivate a successful future, one where they can correlate their personal voice and sense of self and use art to effectively communicate their needs.