Project Blue Boy Activity Guide

School Programs and Partnerships

THE HUNTINGTON
Library, Art Museum, and Botanical Gardens

What is conservation?

Why are there so many blues?

What is Project Blue Boy?

Explore the intersections of art, primary sources, and science. The resources in this Activity Guide packet provide teachers and students with an understanding of the technical examination and conservation treatment of Thomas Gainsborough's *The Blue Boy* at The Huntington Library, Art Museum, and Botanical Gardens. Christina O'Connell, senior paintings conservator, is using a medical microscope used for eye surgery, the Haag-Streit Hi-R NEO 900 surgical microscope, in addition to other conservation tools such as optivisors, silicone-tipped tools, cotton swabs, brushes, and a palette.

During this two-year project, there are four main steps:

1) surface cleaning and removal of non-original varnish (finished)
2) structural work on the canvas (off view)
3) the in-painting process (in the gallery)
4) preparing *The Blue Boy* for re-installation

The following resources highlight aspects of conservation through activities such as: examining color through chromatography, exploring tint, tone, and shade, studying the impact of sunlight with sun paper, and sculpture assessment. While the activities are designed for elementary students, they can be adapted for middle and high school students.

All activities align with...

The Huntington Framework

- Observe & Describe – *What do you see?*
- Explain & Interpret – *What does it mean to you?*
- Reason with Evidence – *What makes you think that?*
- Wonder & Question – *What questions do you still have?*

Science & Arts Standards

- NGSS: 3-ESS3-1 *Science affects everyday life*

- NCAS:VA: Cr 3.1.3a Elaborate visual information by adding details in an artwork to enhance emerging meaning.

- NCAS: VA: Pr6.1.3a Identify and explain how and where different cultures record and illustrate stories of history through life and art.

This Activity Guide was created at The Huntington by Amanda Hernandez, school partnership manager, and Kristin Brisbois, school partnership and programs assistant, at The Huntington.

The Blue Boy, (ca. 1770), Thomas Gainsborough (British, 1727–1788), oil on canvas, 70 5/8 x 48 3/4 in. The Huntington Library, Art Museum, and Botanical Gardens.

Some Background on *The Blue Boy*

Spend 1–2 minutes quietly looking at the painting.

- What do you see?
- Have students share what they see (either with the group or to a partner).
- What else do you notice? What does this tell you about the boy in the painting or about the artist?

The Costume

Thomas Gainsborough's *The Blue Boy* shows a young boy posed in a bright blue costume. What do you notice about his clothes? Would you wear them today? How do they differ from your clothes? How do you think the fabric would feel? This outfit was a prop that Gainsborough had in his studio and can be seen in other paintings by Gainsborough such as *Edward Richard Gardiner,* at Tate (https://www.tate.org.uk/art/artworks/gainsborough-edward-richard-gardiner-t00727) Interestingly, the costume was not from Gainsborough's time, but from 100 years earlier.

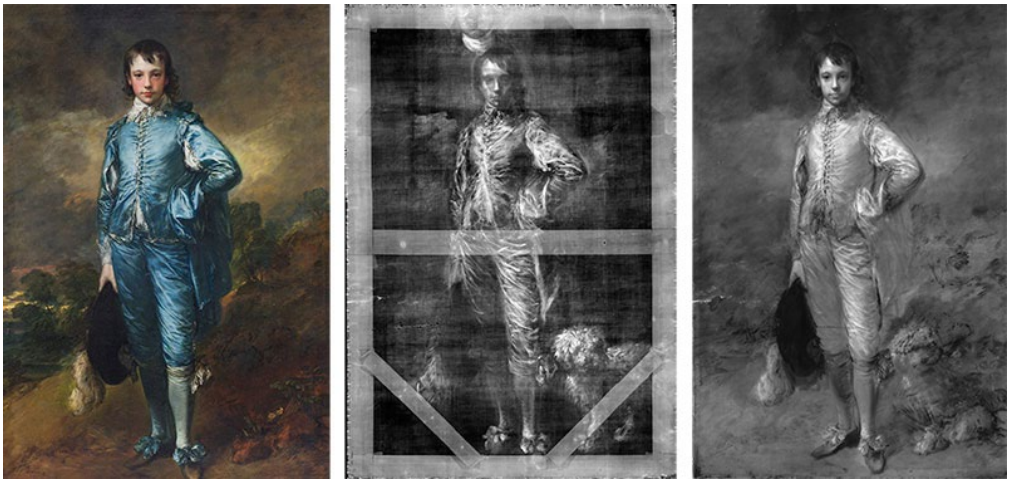
The Portrait Style

This painting is a Grand Manner portrait, a style from the 17th century pioneered by Anthony van Dyck. During the 18th century, artists such as Gainsborough adopted this style. Characteristics include a full-length painting (from head to toe), figures in costume, and an outdoor environment.

Now look at the blue costume Blue Boy is wearing. How many different blues do you think Gainsborough used in this painting? If you guessed at least four you are correct! The four identified pigments are azurite, Prussian Blue, ultramarine, and smalt. Let's take a closer look at one of the blues, ultramarine. How do you think this color was made? First, the stone it comes from had to be mined. The stone is called lapis lazuli and is found in Afghanistan. Once the rock is obtained, it is ground into a fine powder, or a pigment. To turn a pigment into a paint, a binding element such as water or oil is added.

X-Ray

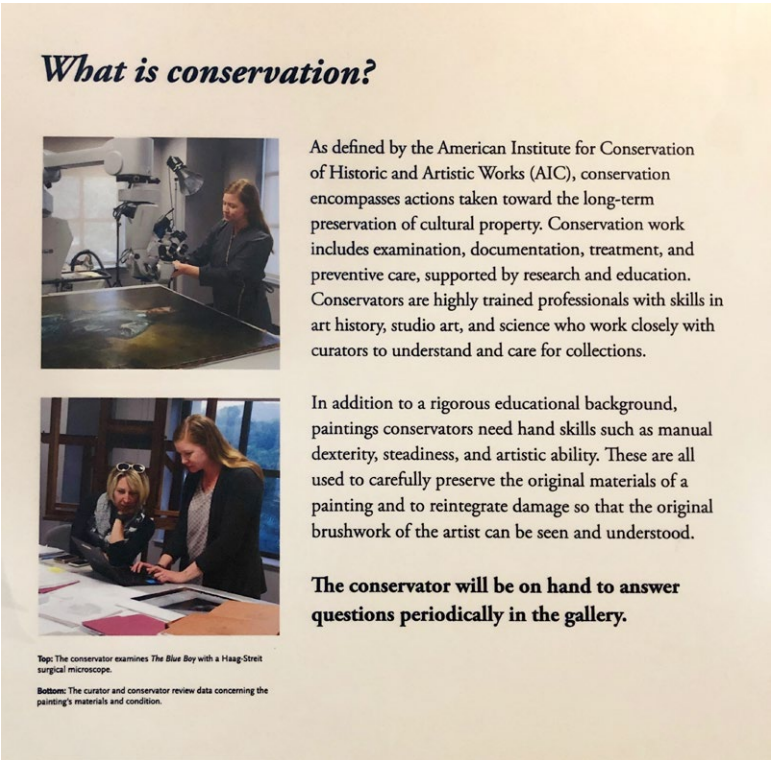
One of the jobs of a conservator is looking at paintings using X-Rays. Have you broken a bone and needed an X-ray? The doctor uses an X-ray machine to look at different bones in your body. Blue Boy didn't break a bone, but he did go under an X-Ray. Can you guess what the conservator saw with the X-Ray? She saw the top of a head (above Blue Boy's head) and a dog! The head shows that Gainsborough reused his canvas. Instead of throwing away a used canvas, he drew on top of it and saved his material. He also painted a dog, but then covered it up with rocks. Why do you think he did this?



Some Background on Conservation

Video on Project Blue Boy – https://www.youtube.com/watch?v=WHPiJqoiwCo&feature=youtu.be

Below are some wall labels from the Project Blue Boy exhibit that explain the role of a conservator and why *The Blue Boy* needs conservation treatment.



What is conservation?

As defined by the American Institute for Conservation of Historic and Artistic Works (AIC), conservation encompasses actions taken toward the long-term preservation of cultural property. Conservation work includes examination, documentation, treatment, and preventive care, supported by research and education. Conservators are highly trained professionals with skills in art history, studio art, and science who work closely with curators to understand and care for collections.

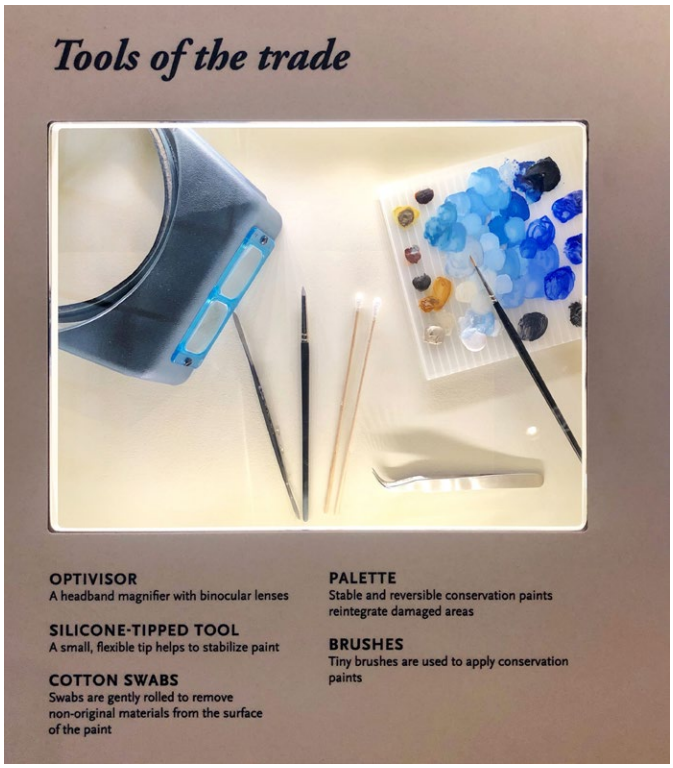
In addition to a rigorous educational background, paintings conservators need hand skills such as manual dexterity, steadiness, and artistic ability. These are all used to carefully preserve the original materials of a painting and to reintegrate damage so that the original brushwork of the artist can be seen and understood.

The conservator will be on hand to answer questions periodically in the gallery.

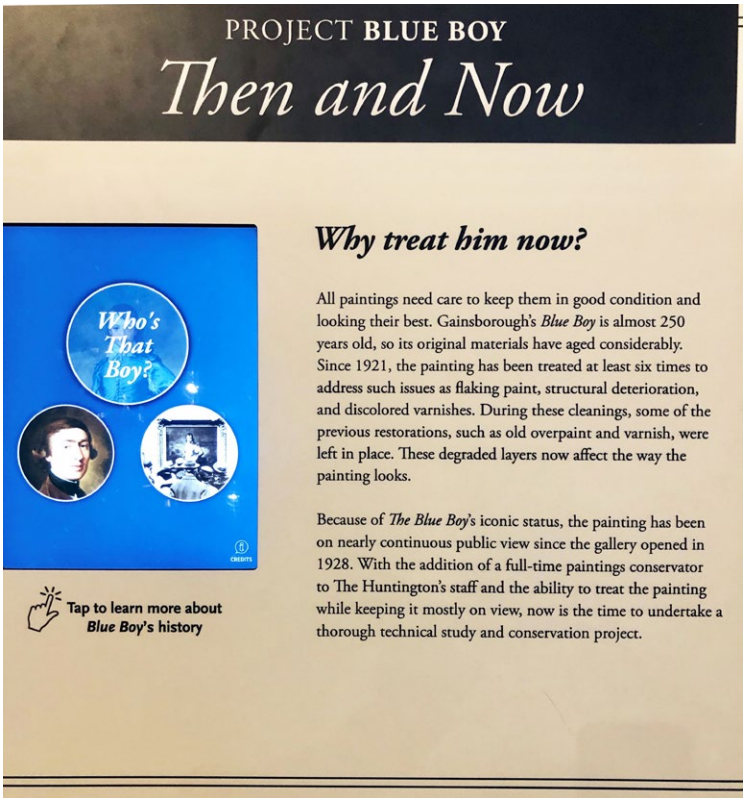
Top: The conservator examines *The Blue Boy* with a Haag-Streit surgical microscope.

Bottom: The curator and conservator review data concerning the painting's materials and condition.

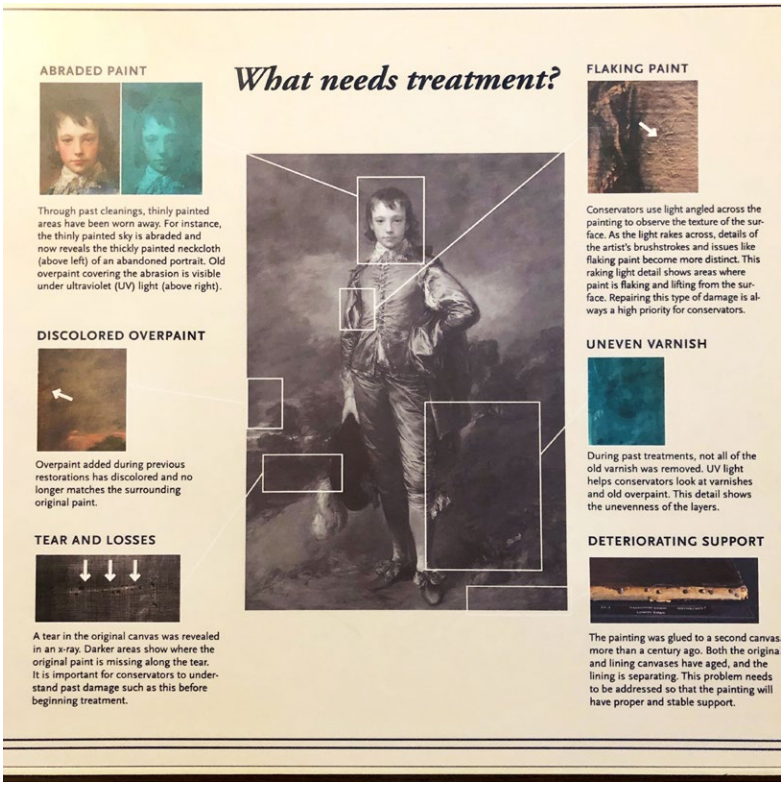
Tools of a conservator



Why treat *The Blue Boy* now?

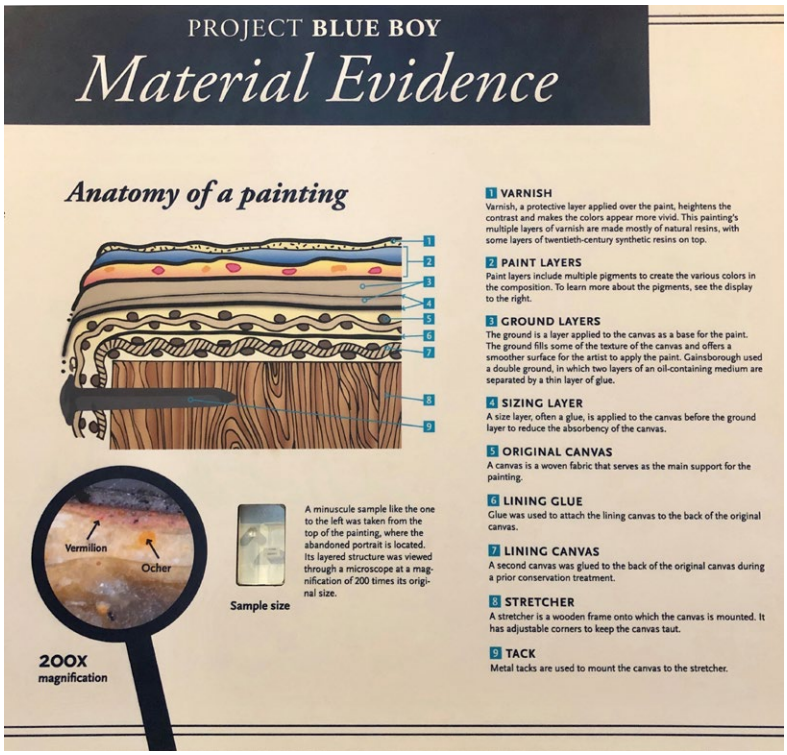


What needs to be treated?



The treatment of *The Blue Boy*

Anatomy of a painting



Wall Label

Link to Huntington E-Museum
http://emuseum.huntington.org/objects/244/the-blue-boy?ctx=6b077ae8-b00d-47ec-a7fe-3919c49c765e&idx=0

The Blue Boy

Maker: Thomas Gainsborough
Sitter: Jonathan Buttall
Date: 1770
Dimensions: 70 5/8 x 48 ¾ x 1 in., frame: 85 x 63 x 6 in.
Medium: oil on canvas
The Huntington Library, Art Museum, and Botanical Gardens

The Blue Boy was Gainsborough's first attempt at full length Van Dyck dress – knee breeches and a slashed doublet with a lace collar – which is based on the work of Anthony van Dyck, the 17th-century Flemish painter who had revolutionized British art. For Gainsborough, it was a way to show that he could match the elegance of the earlier court portraitist, who was as much a gentleman as his clients. Rather than a commission, it was painted for his own pleasure and as a demonstration of his abilities.

Though clearly indebted to Van Dyck, Gainsborough's painting technique was entirely his own. Whereas Van Dyck applied color in discrete patches composed of short consecutive strokes, Gainsborough presents a chaos of erratic color and brushstrokes. The shimmering blue satin is rendered in a spectrum of minutely calibrated tints – indigo, lapis, cobalt, slate, turquoise, charcoal, and cream – that have been applied in extremely complex layers of vigorous slashes and fine strokes. At the proper distance, the diverse pigments crystallize into an illusion of solidity. *The Blue Boy* did not seduce its first viewers with an image of a celebrity or with philosophical allusions, but with Gainsborough's command of paint and the sheer mastery of his brushwork.

Art Vocabulary

From The Huntington and New York's Museum of Modern Art
https://www.moma.org/learn/moma_learning/glossary#c

Canvas	A closely woven, sturdy cloth of hemp, cotton, linen, or a similar fiber, frequently stretched over a frame and used as a surface for painting.
Oil Paint	A paint in which pigment is suspended in oil, which dries on exposure to air.
Paint	A combination of pigment, binder, and solvent; the act of producing a picture using paint.
Pigment	A substance, usually finely powdered, that produces the color of any medium. When mixed with oil, water, or another fluid, it becomes paint.
Solvent	A substance capable of dissolving another material. In painting, the solvent is a liquid that thins the paint.
Thomas Gainsborough	British artist who painted *The Blue Boy* in the 18th century.
Varnish	A transparent (clear) top coat to protect the work of art.

Conservation Vocabulary

From the American Institute for Conservation of Historic and Artistic Works
https://www.culturalheritage.org/about-conservation/what-is-conservation/definitions

Conservation	The profession devoted to the preservation of cultural property for the future. Conservation activities include examination, documentation, treatment, and preventive care, supported by research and education.
Conservator	A professional whose primary occupation is the practice of conservation, and who, through specialized education, knowledge, training, and experience, formulates and implements all the activities of conservation.
Restoration	Treatment procedures intended to return cultural property (the work of art) to a known or assumed state, often through the addition of nonoriginal material.
Preservation	The protection of cultural property (the work of art) through activities that minimize chemical and physical deterioration and damage and that prevent loss of informational content. The primary goal of preservation is to prolong the existence of cultural property.

Chromatography

Materials

- Coffee filters
- Markers
- Clear cups
- Water
- Timers
- Handout

Steps

1. Pour about 1/4" to 1/2" of water in the cup.
2. Open one coffee filter and lay it flat on the table.
3. Using a marker, draw a thick circle about 1" from the center of the coffee filter.
4. Fold the coffee filter in half once (like a taco).
5. Fold the coffee filter in half again (like a slice of pizza).
6. Fold the coffee filter in half one more time (like Doritos).




7. Place the coffee filter in the cup (tip down, being careful not to get the ink link in the water).
8. Start the timer.
9. Watch the coffee filter absorb the water.

10 Once the color has separated, stop the timer and remove the coffee filter from the water.
11 Unfold the coffee filter and lay it flat.

12 Examine how the color changed as it moved up the filter.
13 Did any other colors emerge?
14 Try again with a variety of colors or different marker brands.
15 Use the handout to track your color times and shades.

* Have students try with a gray marker. They will be able to see colors that make up gray such as pink and green.

Questions

1 What conclusion can you draw from how quickly the colors moved? Why do you think this? Draw an arrow to the part of the chart on the next page that would be evidence for your thinking.
2 What conclusion can you draw from how the colors changed? Which color has the most movement? Which color has the most colors present after the water was introduced to the filter?
3 Do you think using different brands or types of markers would change the movement speed and color combinations? Why?
4 Why do you think this type of knowledge is important for art conservation?
5 What questions do you still have?

Chromatography is a laboratory technique for separating a mixture; It means color writing (chroma = color, graphy = writing).

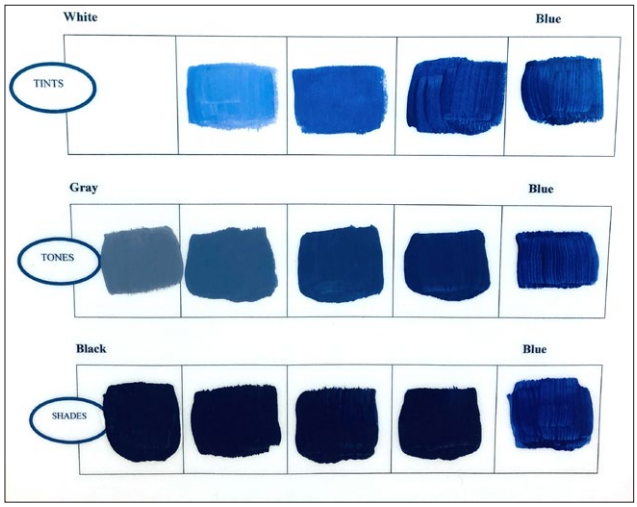
Color	Sample	Time	Description
Red		0.07	This is where you write what you see

Project Blue Boy Connections
This activity will reveal to students that different colors travel at different speeds because of the size of the molecules. Students will also notice that some colors are made up of many colors. This relates to what a conservator does because matching the over-paint to the original paint is important. Understanding the types of colors, the paint, and how they will move on the surface are imperative because the new painting needs to match the original as closely as possible.

Student Connection
What natural event demonstrates a version of chromatography?

Curriculum Connections
NGSS Standards: 3-PS2-1,2,3,4 *Patterns of change, cause and effect relationships*
This activity builds on the ideas about balanced and unbalanced forces on an object's motion. Students will be measuring the rate of molecular motion using timers. They will compare the different rates of motion for each color and may be able to assess cause and effect relationships between colors and speed of movement.

Tint, Tone, and Shade



Materials

- Paint brush
- Paper
- Black acrylic paint
- White acrylic paint
- Blue acrylic paint
- Paper towels
- Cups with water
- Handout

* Activity can be done with colored pencils, pastels, crayons, or watercolors

Steps

TINT – *A tint is any color mixed with white*

1. Paint white in the box labeled "white" (far left).
2. Paint blue in the box labeled "blue" (far right).
3. On a separate piece of paper (your artist palette), mix white with a small amount of blue and mix together.
4. Paint the box next to the white box with the newly created paint.
5. Back on your artist palette, add a little more blue to the paint and mix together.
6. Use this color to paint the third box.
7. On your artist palette, add more blue to the paint and mix together. This blue will be darker than the previous two blues made.
8. Paint the final box with this color.

TONE – A tone is any color mixed with gray

1. Make gray by mixing white and black on your artist palette and paint the box labeled "gray" (far left).
2. Paint blue in the box labeled "blue" (far right).
3. On your artist palette, add a little blue to the gray and paint the second box (next to gray) with this color.
4. Then add more blue to your gray (on your artist palette) and paint the third box with this color.
5. Finally, add more blue to the gray-blue color on your artist palette and paint the third box with this color.

SHADE – *A shade is any color mixed with black*

1. Paint black in the box labeled "black" (far left).
2. Paint blue in the box labeled "blue" (far right).
3. On your artist palette, mix a little bit of blue to the black paint and paint the second box with this color (the one next to black).
4. Add more blue to the black-blue paint on your artist palette then paint the third box with this color.
5. Finally, add more blue to the mixed color on your artist palette, and paint the last box with this color.

Questions

1. What do you notice about the blue color when you add white, gray, and black?
2. How would you describe the difference between tints, tones, and shades?
3. Based on your experience mixing tints, tones, and shades, why might this knowledge be important for the conservation of *The Blue Boy*?
4. What questions do you still have?

Project Blue Boy Connections

This activity relates to the color wheel because it builds on color blending. It also connects to chromatography in the way that conservators must understand how colors work together – not only by the color we see, but also the molecules beneath the surface.

Student Connection

When might students need to mix something together to make a different version?

NCAS

VA: Re.7.1.3a Speculate about processes an artist uses to create a work of art.

Microscopes & Optivisors

Materials

- Microscopes, optivisors, magnifying glasses
- Various materials with texture (canvas, textured paper, ribbon, fabric, paint brush, dried paint, dirt, etc.)
- Writing instrument such as colored pencils, pencils, crayons, markers, etc.
- Handout

Steps

1. Use the magnifying tool to look up close at an object or material.
2. With a writing instrument such as a colored pencil, draw what you see on your handout.
3. Repeat three more times with three different materials.

Project Blue Boy Connections

These are tools used by conservators to closely examine a work of art. Students will notice how many more details they can see when using a magnifying tool.

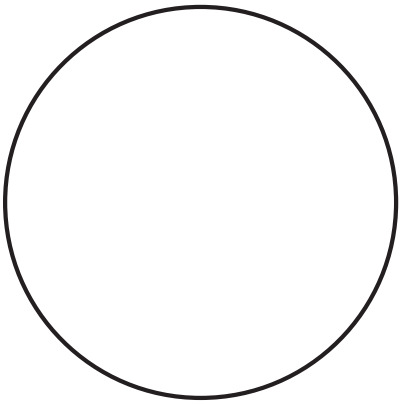
Student Connection

What do students have to look at closely to better understand?

Art Standards

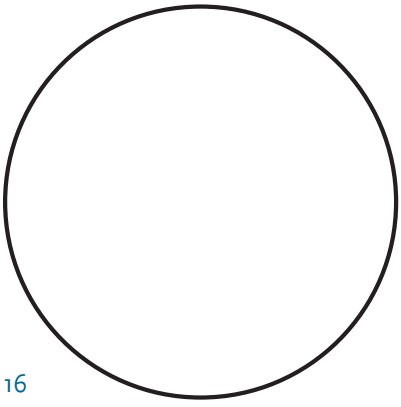
VA: Cr2.2.3a Demonstrate an understanding of the safe and proficient use of materials, tools, and equipment for a variety of artistic purposes.

What do you see with the microscope?



1 Material:

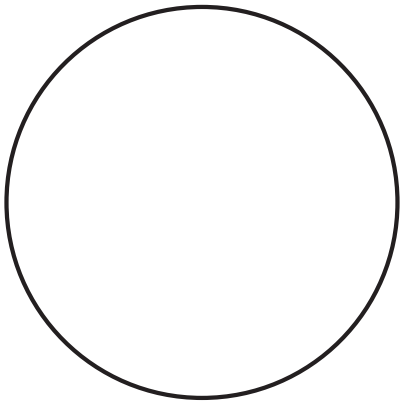
2 Description:



1 Material:

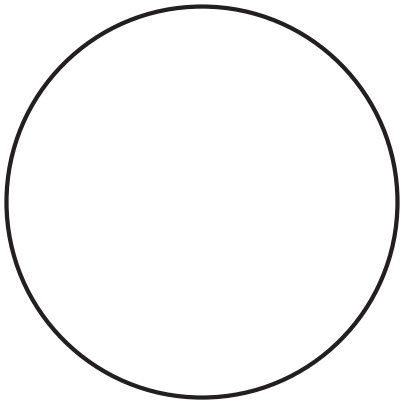
2 Description:

What do you see with the optivisor?



1 Material:

2 Description:



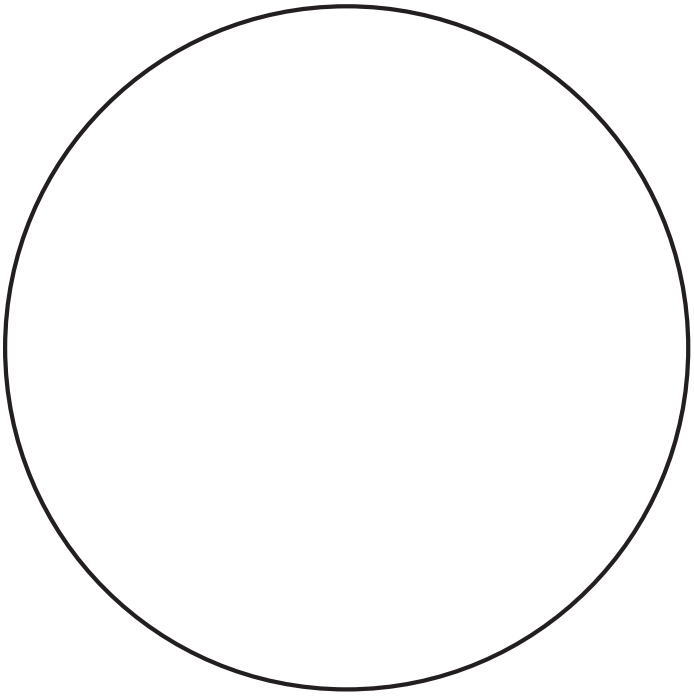
1 Material:

2 Description:

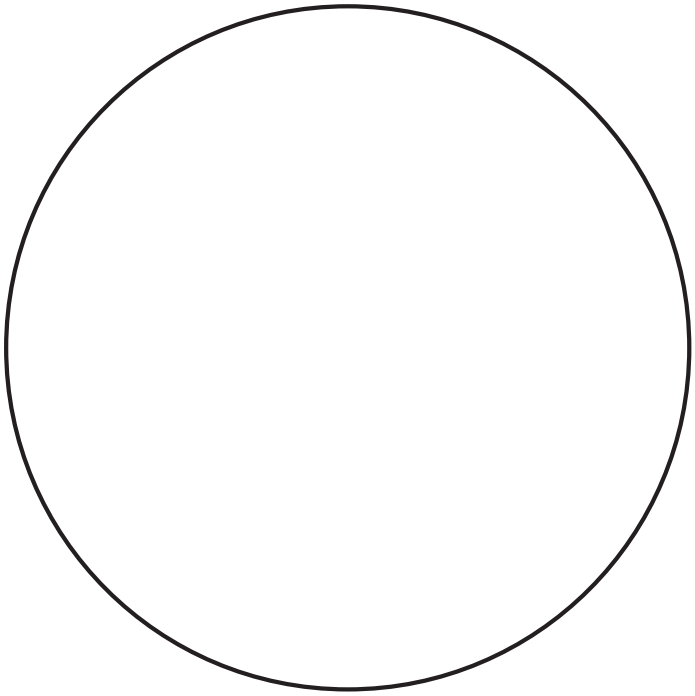
Questions

1. Look through the microscope and optivisor. Draw images of what you see.
2. If you were a conservator, why would a microscope and optivisor be important for your job?
3. What can you see with the microscope and optivisor that you cannot see with your eyes alone?
4. In the space below, choose one item from the table. Draw what you can see with your eyes in one circle. In the other circle, draw what you can see with a microscope or optivisor.
5. What questions do you still have?

What do you see with your eyes?



What do you see with the tools?



Sculpture Condition Assessment

Materials

- Handout
- Any object (sculpture, work of art, vase, cup, bowl, etc.)

Steps

1 Have students act like conservators. Choose an object for close looking and have students complete the handout.

Project Blue Boy Connections

Students will use a magnifying glass to look closely at an object. Like the conservator looking at *The Blue Boy*, students will examine, document, and determine next steps for care. This activity will show students that both paintings and sculpture need to be cared for.

Student Connection

What collections or items do students have that they must care for?

NGSS Standards

3-LS3 *Influence of the environment* – While this activity does not align with this standard directly, the activity builds on the idea of environmental impact.
3-ESS3-1 *Merit of a design solution* – At the end of the assessment, students are asked to determine what steps of conservation will be needed. This is an example of asking students to design a solution.

Sculpture Condition Assessment

Date: _____

Location: _____

Inspector: _____

Draw a detailed image of the sculpture.

Title of work:

Artist:

Sculpture age:

Sculpture height:

Sculpture material:

____ ceramic ____ concrete ____ glass

____ metal ____ plastic ____ stone ____ water

____ wood ____ other

Describe the condition of the material:

Does there appear to be a coating? ____ Yes ____ No ____ Can't determine

Describe the coating:

Does the coating appear to be in good condition? ____ Yes ____ No ____ Can't determine

Explore the base of the sculpture:

Does the base have any of the following?

____ collapsed foundation
____ leaning or structural damage
____ foundation damage
____ standing water
____ exposed armature (frame)
____ broken/missing parts
____ cracks, splits, breaks, holes
____ graffiti/vandalism

What percent of the sculpture do you estimate is damaged? _____ %

What do you recommend for conservation?

____ urgent treatment
____ temporary structural support
____ barricades as needed
____ detailed assessment
____ none

Draw a picture of the part of the sculpture that needs conservation treatment.

This form was based on the Save Outdoor Sculpture! (SOS!) form for rapid condition assessment used by the Heritage Emergency National Task Force.

Sun Prints

Materials

- Sun paper
- Water
- Small container or bin (for water)
- Materials to place on sun paper (i.e. leaves, twigs, flowers, rocks, etc.)
- Handout

Steps

* *In order to have optimal experience, make sure it is a sunny day. Gather items to place on the sun paper*

1. Gather items to place on your sun paper and on a regular piece of paper, practice where you will arrange your items. (Once the sun paper is exposed to sunlight, you will need to work quickly.)
2. Fill up a small bin of water.
3. Take out the sun paper and quickly place items on the paper.
4. Wait about 2–3 minutes and watch the paper color change.
5. Dip the paper in the water and set to dry.

Questions

1. Notice how the paper changes. What do you think is happening with the paper? Why did the sun have an impact on the color of the paper?
2. Why is the water bath an important step? What makes you think that?
3. Why do you think sun prints are related to conservation? (Hints...blue, sun, ultra-violet light, water, oxidation.)
4. What questions do you still have?

Project Blue Boy Connections

The sun art activity uses sunlight to make an imprint of an object on paper. This is an example of the way light affects paper. Students may notice that the lights are dim in the galleries and the paintings are not in front of windows with bright, direct light.

Student Connection

What types of things do students do to stay safe from sunlight?

NGSS Standards

3-ESS2 *Earth's systems* – This activity will help students explain environmental phenomena.

Varnish

Materials

- Dish soap
- Acrylic paint
- Popsicle sticks
- Handout (best if printed on thick paper and/or laminated)

Steps

1. Mix one part paint and one part dish soap together.
2. Paint over the image of *The Blue Boy* (below right).
3. Have students use a popsicle sticks to gently remove the "varnish" or paint.

Project Blue Boy Connections

The varnish activity will show students the role that varnish plays in keeping a piece of art safe from environmental impacts.

*If you talk about this before the students complete the activity, please do not reveal what is beneath the paint. The activity is designed so the students can "discover" the painting underneath.

Student Connection

What types of coverings do we use to protect ourselves from the elements?

NGSS Standards

3-LS3 *Influence of the environment* – While this activity does not align with this standard directly, the activity builds on the idea of environmental impact.

Writing Activities

Creative Writing

- Look closely at the background, the foreground, the props, and imagine what *The Blue Boy* will do next.
- Write a monologue for "The Blue Boy" or a dialogue between the artist and sitter.
- How would you pose for a Grand Manner Portrait? What props would you include? Where is the setting? Make your portrait with art materials or digitally.

Exhibit Label Writing

Have students write their own exhibit label. Page 9 has the current wall label for *The Blue Boy*. What could we add now that we have knowledge from the conservation process? Annotate the current label, then write your own. Would you write your wall label in multiple languages? Would you add quotes?

Music

Project Blue Boy Playlist on The Huntington's Spotify Page

Videos

Eye to Eye with Blue Boy
https://www.youtube.com/watch?v=60bwdlw3I4g&feature=youtu.be

How a Conservator Works
https://www.youtube.com/watch?v=AusPa8TdMpo

Project Blue Boy
https://www.youtube.com/watch?v=WHPiJq0iwCo

Bye, Bye, Blue Boy
https://www.youtube.com/watch?v=dg0q4rVPDVI

Web Links

Project Blue Boy
https://www.huntington.org/blue-boy

Huntington Frontiers – Examining Blue Boy
http://www.huntington.org/uploadedFiles/Files/PDFs/Frontiers_SS18_Examining-The-Blue-Boy.pdf

Pigments through the Ages
http://www.webexhibits.org/pigments/

"'Blue Boy' revisited: The Huntington is saving its 18th-century masterpiece – and you get to watch." by Deborah Vankin
https://www.latimes.com/entertainment/arts/la-ca-cm-project-blue-boy-20180914-story.html

"For a Painting to Survive, So Must Its Canvas." by Carly Pippin
https://www.latimes.com/entertainment/arts/la-ca-cm-project-blue-boy-20180914-story.html

What is Conservation?
www.conservation-us.org/explore

Books

War, Robert R. *Best-Loved Paintings: The Blue Boy & Pinkie.* San Marino: The Huntington Library, 1963.

Bomford, David, Dunkerton, Jill, and Wyld, Martin. *A Closer Look Conservation of Paintings.* London: National Gallery Company, Distributed by Yale University Press, 2009.

St. Clair, Kassia. *The Secret Lives of Color.* New York: Penguin Books, 2016.

Hess, Catherine and McCurdy, Melinda. *Blue Boy & Co.: European Art at The Huntington.* New York: Prestel Publishing, 2015.