



Interpretations Activities

Please note, this curriculum offers activities geared to a wide range of students. Curriculum activities can be adjusted to meet the specific needs and interests of your students. If you would like help with adjusting activities, Kidspace staff is available to brainstorm ideas.

ACTIVITY SCHEDULE

Before Your Kidspace Program

1. Discussion: Review Topic and Kidspace Semester
2. Art / Language Arts: Looking at Artworks
3. Art / Language Arts: Journal Project I
4. Science / Art: Effects of Color

During Kidspace Visit

1. Guided Discussion and Art-Making Activity

After Your Kidspace Program

1. Art / Language Arts: Journal Project II
2. Art / Language Arts: *Mona Lisa* Mania and *American Gothic* Parody

Activity Cards (can be completed before or after your Kidspace program)

1. Science: Experimenting with Lenses
2. Art: Hidden Scribble Shapes
3. Art: Optical Illusion Drawings
4. Science: Bug Eye Simulator
5. Art/ Language Arts: Familiar Symbols, Unfamiliar Views

Art Teacher Activity

1. Art: Optical Illusions

BEFORE YOUR KIDSPACE PROGRAM

PRE-VISIT ACTIVITY 1

Discussion: Introduction to Topic and Kidspace Semester

Ask your students to discuss what they saw at Kidspace last year (*Boxed Sets* comprised of assemblage and stained glass artwork). Explain to your students that this year's Kidspace program focuses on large-scale sculpture and installation art by New York-based artist Devorah Sperber. While last year they studied contemporary artworks created by three local artists, this year's program will involve looking at a variety of iconic pieces of artwork in a unique and scientific manner. Ask them if they know any famous art historical works of art and let them know they will see Devorah's interpretation of da Vinci's *Mona Lisa* and *Last Supper*, *Veermer's Girl with a Pearl Earring*, and others. For older students, you might read the introduction to the exhibition (see **Section 1** of this curriculum) to further discuss the topic.

Let your students know that the sculptures they will be viewing will at first seem quite abstract. Upon closer inspection through the use of special optical devices, familiar imagery will become apparent. In addition to viewing the artwork, students will be provided with an opportunity to learn how the brain translates the images that are captured by the eye.

Vocabulary words: You might want to go over some art vocabulary before your visit to Kidspace. The following are definitions you can review with your class.

(Many terms taken directly from or interpreted from Dictionary.com)

Complimentary Colors: Colors that are exactly opposite each other on the color wheel, such as red and green, blue and orange, and blue and yellow. When complements are mixed together they form the neutral colors of brown and grey.

Convex Lens: A lens that curves outward like the outside / outer shell of a sphere.

Concave Lens: A lens inward like the inside / inner shell of a sphere.

Illusion: something that deceives by producing a false or misleading impression of reality.

Interpretation: the act of explaining or translating an idea, image, or thought

Lens: A piece of transparent / clear substance, usually glass, having two opposite surfaces either both curved or one curved and one flat, used in an optical device in changing the convergence of light rays, as for magnification, cameras, eye glasses, etc.

Perception: the ability to understand, recognize / identify, or be aware of through the senses.

Pixel: A computer-made small colored dot that makes up an image on television, videos, and digital photographs. When combined with other pixels, the image blends together to form a complete image.

Pointillism: A method of painting developed in France in the 1880's in which tiny dots of color (like pixels) are hand-applied to the canvas. When viewed from a distance, the points of color appear to blend together to make other colors and to form shapes and outlines.

Portrait: A work of art that represents a specific person, a group of people, or an animal. Portraits usually show what a person looks like as well as revealing something about the subject's personality.

Programming information: Let your students know they will have two visits to Kidspace this year (K – 8th grade): one will be before the exhibition opens to explore how lenses work and how the human eye translates imagery in science activities with Williams College students; one will be with Kidspace staff to view the exhibition and to work on an art project. Remind your students that they will have the opportunity to meet with Devorah before their visit to Kidspace. The artist will visit your school to talk about her work and to help your students create their own interpretations of historic works of art.

PRE-VISIT ACTIVITY 2

Art / Language Arts: Looking at Artworks

(Materials: Overhead projector or computer, transparencies or CD-ROMs)

MA Learning Standards

- English Language Arts
Standard 19
- Visual Arts
Standards 1.1, 1.5, 3, 4.6, 7, 9

VT Learning Standards

- Reasoning and Problem Solving
 - Standard 2.1
- Arts, Language and Literature
 - Standard 5.1
 - Standard 5.25
 - Standard 5.29

Now that your students are aware of the Kidspace program, have a discussion on the interpretations of the iconic paintings featured in the exhibit. We have provided you with overhead projector transparencies and CD-ROMs with images (check them out at your school's main office).

Devorah bases her elaborate sculptures on famous works of art such as the *Mona Lisa*, *Last Supper*, and *Girl with a Pearl Earring*. Ask your students to view the images provided of historical paintings and compare to Devorah's interpretations. Start off your discussion by asking students to create a list of famous historic works of art of which they are aware of. You might also want to go over the background information about the historic pieces that Devorah has interpreted (**see Section 4**). (Suggestion: when comparing the historic work of art to Devorah's interpretation, you might want to have both images showing on your screen.)

For younger students, introduce the term **portraits** and let them know that the pieces in the *Interpretations* exhibition all are portraits of different adults and children. Then, view the following images together and discuss.

Transparency Images and Questions

Image 1: *Legacy*, 2006 by **Laura Christensen**. Remind your students that they saw this piece in the *Boxed Sets* exhibition last spring. Who do you think is the subject of this sculptural portrait? What other items are contained in it? Why do you think the artist chose to represent this person and these particular items in the portrait?

Image 2: *Mona Lisa* by **Leonardo da Vinci**. This is one perhaps one of the most well-known paintings in the world. Who do you think is the subject? What is she doing? What is the setting of the painting? Why is this painting so famous? How is this portrait different from Laura Christensen's *Mitosis*?

Image 3: *Mona Lisa 2* by **Devorah Sperber**. This sculpture was created with spools of thread. What image do you see in the spools? How does the image look as it is displayed on the wall as compared to how it is viewed through the lens? Why do you think this happens? How is this interpretation of the *Mona Lisa* different from the original?

Image 4: *American Gothic* by **Grant Wood**. Who are the subjects of this portrait? What can you learn about the people from the way in which they are standing? From their facial expressions? What is the meaning of the title of this painting?

Image 5: *After Grant Wood I - American Gothic* by **Devorah Sperber**- How is Devorah's interpretation of this historic work of art different from the original? Do the figures have the same stance and expressions? Is the mood of her portrait different from Wood's work?

Image 6: *Death on the Ridge Road* by **Grant Wood (WCMA)** - Do you recognize this painting from the Williams College Museum of Art? Does it look as though it was painted by the same artist? What are the similarities in this one and the *American Gothic*? What are the differences? What is happening in this painting? How might Devorah interpret this work?

Reading Extension for Younger Students

You might want to continue to familiarize your students with iconic works of art by reading *Katie and the Mona Lisa* by James Mayhew (Orchard Picture Books, 1999). This is one of a series of children's books which helps students recognize famous works of art, the subject matter and the artists the works were painted by.

PRE-VISIT ACTIVITY 3

Art / Language Arts

(Materials: journals, pencils, markers, metal spoons)

MA Learning Standards

- English Language Arts
 - Standard 2, 3, 9, 19, 20, 24
 - Standards 2.1, 2.6
- Visual Arts
 - Standards 1.1, 1.5, 3, 4.6, 5, 6, 10

VT Learning Standards

- Reasoning and Problem Solving
 - Standard 2.1
- Arts, Language and Literature
 - Standard 5.1
 - Standard 5.14
 - Standard 5.29

Explain to your students that they will each receive a journal that they can keep notes in every time they visit Kidspace or the three museums. For this activity in preparation of their visit to *Interpretations*, have them work on the following vocabulary activity in their journals.

Vocabulary word: perception

Link to Kidspace: The artist Devorah Sperber has created her sculptures based on her the way the human eye perceives images.

Step 1: Discuss with your students the meaning of **perception**. Perception means the ability to understand, recognize / identify, or be aware of through the senses. Suggested questions: What are the five senses? How can these senses be used in understanding / perceiving a painting or sculpture? Are there some senses that work better for viewing art? Are there some we wouldn't be able to use?

Step 2: For understanding Devorah's work, she uses lenses to help our eyes merge the dots of color (pixels) into images. A simple science experiment relating to perception and lenses can be demonstrated through the use of metal spoons. Give each student a metal spoon to look at. How are their faces reflected back at them on each side? Do these reflections look like the way they perceive themselves? What looks different? Have them record these thoughts in their journals.

Step 3: In their journals, continue to explore the idea of perception by having them write a short paragraph about what they perceive they will experience when at Kidspace. How large do they think the work will be? What will the work look like? (After they visit Kidspace, have them complete Post-Visit I activity to compare their perceptions.)

FOR YOUNGER STUDENTS: Perceiving Portraits

To explore perception and portraits with younger students, have them act out different body language, and record in their journals.

Step 1: Discuss with your students the meaning of **perception**. Perception means the ability to understand, recognize / identify, or be aware of through the senses. Suggested questions: What are the five senses? How can these senses be used in understanding / perceiving a painting or sculpture? Are there some senses that work better for viewing art? Are there some we wouldn't be able to use?

Step 2: Devorah's work involves portraits of people she found in historic works of art. The body language and expression of the figures in the portraits help us to better perceive the works of art. Stand in front of your class and strike a pose (i.e., pretend to be angry, sad, frustrated, gleeful, working on a specific task). Ask your students to guess what you are doing or feeling? What about your pose gives them this information? You can also ask your students to come up to the front of the class and strike their own poses while the rest of the class guesses.

Step 3: Have your students write in their journals what they perceived your poses to be about. Or you can have your students draw quick sketches to capture the feeling of the poses.

JOURNAL EXTENSION: Devorah Sperber Visit

The artist Devorah Sperber will be coming to your school to introduce herself and her work to your students. Before her visit, have your students write in their journals their pre-conceived perceptions of Devorah based on what they know about her art and what they have heard about her. After meeting her, you can have your students write another entry comparing their perceptions of Devorah before meeting her to their newly altered perception of her.

PRE-VISIT ACTIVITY 4

Art / Science: Effects of Color

(Materials: Stiff paper printout of circle template / cardboard, crayons, scissors, paper clips, pushpins)

MA Learning Standards

- Visual Arts
 - Standards 2.1, 2.4, 2.5
- Science and Technology/Engineering
 - Physical Science Standard 1

VT Learning Standards

- Visual Arts
 - Standard 5.29
- Science, Mathematics and Technology
 - Standard 7.1, 7.3

Devorah's work involves a complex understanding of color theory and how the eye translates dots of color (pixels) into an image. For this activity, have your students try out a simple experiment showing how colors complement each other and can form optical illusions.

Vocabulary (as defined by the Massachusetts Arts Curriculum Framework, October 1999)

Colors: primary, secondary, complementary

One conventional way of arranging color to show relationships is as a circle or wheel that presents the primary colors (those from which all other colors are derived: red, yellow and blue), and their combinations (the secondary colors: orange, green, violet). Colors that fall opposite one another are complementary (red/green, yellow/violet, orange/blue).

Pattern: A decorative arrangement of shapes that repeats in a predictable way.

Step 1: Review the vocabulary listed above before beginning the activity.

Step 2: Using the template on the following page, photocopy on stiff paper. Distribute to your class and ask them to color in the wedge sections of the circle, alternating green and red. If the template is printed on regular paper, have the students cut out the template and paste it onto a piece of cardboard (cut off excess cardboard).

Step 3: Cut out the circle with the scissors. Punch a hole in the center of the circle with a pushpin.

Step 4: Bend the paperclip into this shape:



Insert the paperclip through the hole in the center of the circle. The circle should be supported in the center of the bend and remain upright.

Step 5: Spin the circle really fast to see how the colors mix together! Do you see a new color? The color effect is produced by your brain trying to make sense of the two contrasting colors your eyes are seeing. Red and green have very different wavelengths and when they mix together your eyes see the average wave length, yellow. Try different color combinations like blue and orange. Why you spin the blue and orange circle, what color do you see? Try three colors: blue, green, and red. It should produce a light grayish color. If you divide the circle up into smaller wedges, it might make an even lighter gray or white. This is because when your eyes perceive all three colors mixed together your brain registers it as white.

Source: *Eye-Popping Optical Illusions* by Michael A. DiSpezio

DURING YOUR KIDSPACE VISIT

A series of questions will be used to help guide your students in their exploration of *Interpretations*. They will be asked to respond to these questions using the artwork as a source of both information and inspiration. Each question builds upon another so that students can make connections among the work on view. For instance, they might be asked the following questions when standing in front of one work of art:

- What do you think is going on in this work of art?
- What kind of materials did the artist use to create the work? Why do you think that the artist chose to use these materials?
- How does the lens help to make the image become more apparent?
- What do you think the artist was inspired by?
- How does the artist's piece relate to the last artist's work we looked at?
- Does this piece look realistic? Have you seen something similar to it in other museums?
- Does this work look different from the digital image version or the historic works you saw in your classroom?

These guided discussions serve two purposes: to build students' visual literacy skills and to increase their knowledge of portraits. Visual literacy skills include thinking critically about what one sees, forming opinions and interpretations about artwork, and expressing in words these observations and opinions.

Following the guided discussions, students will have the opportunity to reflect on Devorah's art-making process. We will talk about what the artist needed to do in order to create her works of art. Students will then have the opportunity to create their own works of art (tbd).

AFTER YOUR KIDSPACE PROGRAM

POST-VISIT ACTIVITY 1

Art / Language Arts: Review of Kidspace Visit

MA Learning Standards

- English Language Arts
Standard 2, 19, 20, 24
- Visual Arts
Standards 1.1, 1.5, 3, 4.6, 5, 6, 10

VT Learning Standards

- Reasoning and Problem Solving
 - Standard 2.1
- Arts, Language and Literature
 - Standard 5.1
 - Standard 5.14
 - Standard 5.29

After your visit to Kidspace, have a discussion with your students about their tour and about the art that they created. Suggested questions:

- What was your favorite piece? Why?
- When you saw this piece, how did it make you feel? What did you see that made you feel this way?
- What were some of the influences that have inspired the artist's work?

Return back to their journals where they wrote about what they perceive might be shown in the Kidspace exhibition. How accurate were their perceptions? Ask them to write an updated version of their perceptions of the exhibition.

If your students didn't do this pre-visit journal activity, have them write about their favorite piece in the exhibition. They should include a full description of the piece and explain why they enjoyed it. Also, they could include a drawing of the work.

FOR YOUNGER STUDENTS: Have them draw their favorite piece from memory in their journals, and then review their drawings with the entire class to see if they have accurately portrayed it. Did they leave out any parts? Teachers can write their descriptions for the students and insert into their individual journals.

POST-VISIT ACTIVITY 2

Art / Language Arts: *Mona Lisa* Mania & *American Gothic* Parody

(Materials: Markers, colored pencils, pastels, illustration board 9 x 12 or 10 x 15, journals)

MA Learning Standards

- English Language Arts
Standard 2, 19, 20, 24
- Visual Arts
Standards 1.1, 1.5, 3, 4.6, 5, 6, 10

VT Learning Standards

- Reasoning and Problem Solving
 - Standard 2.1
- Arts, Language and Literature
 - Standard 5.1
 - Standard 5.14
 - Standard 5.29

Devorah interpret historic works of art for her sculptural projects. In this activity, continue to explore the importance of historic works such as the *Mona Lisa* and *American Gothic*. Through art and writing projects, students will understand why certain images are highly reproduced.

Steps 1: Start off this activity with a discussion on reproductions and art. Suggested questions:

- Why is the original *Mona Lisa* more valuable than the reproductions?
- Why do you think the *Mona Lisa* is recreated so often?
- Where are some places in everyday life that you may see reproductions of the *Mona Lisa*?
- Why do you think that the *Mona Lisa* is used in such a way? Does it take the value away from the original piece of art when it is reproduced as much as the *Mona Lisa* is?
- What is it about *American Gothic* that makes it so accessible to reproduce?

Step2: Review the contents and themes on this website -- <http://www.monalisamania.com/artmain.htm>. This site has great images of how the *Mona Lisa* has been reproduced by various fine artists (i.e., Basquiat, Duchamp) and in popular culture (i.e. Miss Piggy as *Mona*, Monica Lewinsky on cover of New Yorker magazine as *Mona*)

The following statement is from this site: "Da Vinci's *Mona Lisa* has been reproduced (posters, greeting cards, etc.) and reinvented (advertisements, artworks, etc.) more than any other artwork in the world. Mona mania began in the 19th century when the painting was stolen from the Louvre. The painting achieved anthropomorphic status as French and Italian states sought to rescue the work as though it were a damsel in distress. The event inspired artists, playwrights and musicians to celebrate the painting by creating new works with the *Mona Lisa* in mind. They say that imitation is the highest form of flattery."

Art Component

Ask students to create a parody of Leonardo da Vinci's most famous work, the *Mona Lisa*, or Grant Wood's *American Gothic*. Instruct students; if they choose to do the *Mona Lisa*, to choose either a photo of someone they know and turn it into a *Mona Lisa* style portrait, or they can take the original version and create a parody, satire, or exaggeration of the work in their own style. If the students choose to parody *American Gothic*, they should use the same basic composition as in *American Gothic*, but replace the male and female subjects with two other subjects. They can be real people, fictional characters, or completely from each student's imagination. Remind students that their drawings should show how they were inspired by the *Mona Lisa* or *American Gothic* paintings.

Writing Component

Ask students to write critical essays addressing one of the introductory questions listed above. Have them conduct on-line research to find information on the popularity of the *Mona Lisa* or *American Gothic*. Let your students know that they are not writing a research essay but that they must take an informed stance on the topics which can be supported by factual evidence. They can write their essays in their journals.

ACTIVITY CARDS

The activity cards provided with this curriculum are meant to be used in a flexible manner. Teachers can use them to plan projects as a class or for individual students to work on in small groups or independently. These activities can be completed before or after your Kidspace visit. Below are descriptions of the activities and connections to the Massachusetts and Vermont Curriculum Frameworks.

1. Science: Experimenting with Lenses

Lenses are very important to Devorah Sperber's work. Her thread spool sculptures are interpretations of famous historical works of art. Each spool represents a pixel, so the images are distorted and sometimes difficult to discern with the naked eye. That's where the viewing lenses come in. The viewer is meant to look through the sphere or lens, which rotates the image 180 degrees as well as condensing the pixilated image into a recognizable one. This activity continues to explore lenses, and is a good follow-up to do after your students visit Kidspace for science demonstrations with Williams College students. Kits with lenses and postcards will be provided for each school.

MA Learning Standards: Physical Sciences 12

VT Learning Standards: Science 2.2

2. Art: Hidden Scribble Shapes

Devorah creates the illusion of shapes and depth in her sculptures by placing certain colors next to each other. In this activity, students try out making their own illusions by first drawing continuous lines, never picking up the pencil. After making curvy, loopy, tangled lines covering the entire paper students will look for recognizable shapes hidden in their drawings.

MA Learning Standards: Visual Arts Standards 1.3, 2.2, 2.4, 2.5, 3.2, 5.1

VT Learning Standards: 5.24, 5.29

3. Art: Optical Illusion Drawings

Devorah's work is about creating the illusion of an image. Students will create accordion-fold drawings which appear as one image from one direction, and as a completely different image from the other direction.

MA Learning Standards: Science 1.1, Math 2.4, Visual Arts 1.2, 2.1

VT Standards: Language Arts 2.1, Visual Arts 5.29, Science 7.7

4. Science: Bug Eye Simulator

Before visiting Kidspace, you may have talked about Devorah's work and how she is interested in how humans see / understand images. Wouldn't it be interesting to understand how bugs see images too? The way insects see is quite different from the way humans see. Insects have much more complex eyes than we do, called compound eyes. Compound eyes have lots of tiny lenses as opposed to our one for each eye. Here's an activity that will enable your students to see like an insect with compound eyes.

MA Learning Standards: Life Science_6

VT Learning Standards: Science 7.1

5. Art/ Language Arts: Familiar Symbols, Unfamiliar Views

Devorah Sperber uses advanced computer technology to pixilate famous works of art so that she can recreate them in order for us to see them in a different way. For this activity your students will use a Power Point presentation we have put together with familiar images. We have altered logos, symbols, and icons in some way. Students will try to recognize the altered image and consider all the symbols and logos that have become automatically recognizable to them.

MA Learning Standards: Visual Arts_1.7, 2.10, 5.5, 5.6

VT Learning Standards: Language Arts_1.13, 1.18, 1.19, Visual Arts 2.2, 2.3

ART TEACHER ACTIVITY

New this year, we are including in the curriculum guide a suggested activity specifically designed for the art teacher.

ART TEACHER ACTIVITY

Art: Optical Illusion Art

(Materials: White paper cut 9"x12", rulers, markers, pencils, erasers)

Discussion:

- What is an optical illusion?
- Does Deborah Sperber create optical illusions with her three-dimensional sculpture?
- How can we create an optical illusion?



columns across the paper.

Step 1: Using the 1-inch wide rulers and pencils, the students can trace the width of the ruler along the entire paper, creating vertical lines. Start by lining up a ruler vertically along the short edge of the paper. Trace the side of the ruler from the top to the bottom of the paper. This creates your first vertical column. Continue tracing

Step 2: Next, ask your students to draw at least 5 different geometric shapes of different sizes on the lined paper in an interesting design. They should draw over the lines, not paying attention to them for the moment. Suggested shapes: squares, diamonds, stars, rectangles, octagons, triangles, etc.

Step 3: Pass out markers, having your students choose one color to use for their entire project. Ask your students to color the first column, with all the shapes inside that column remaining white. The second column will be white, with all shapes inside that column colored inside (opposite of the first column), and so forth. Students should plan, with a pencil, which spaces will be colored and which will be white by marking them LIGHTLY with an "X".