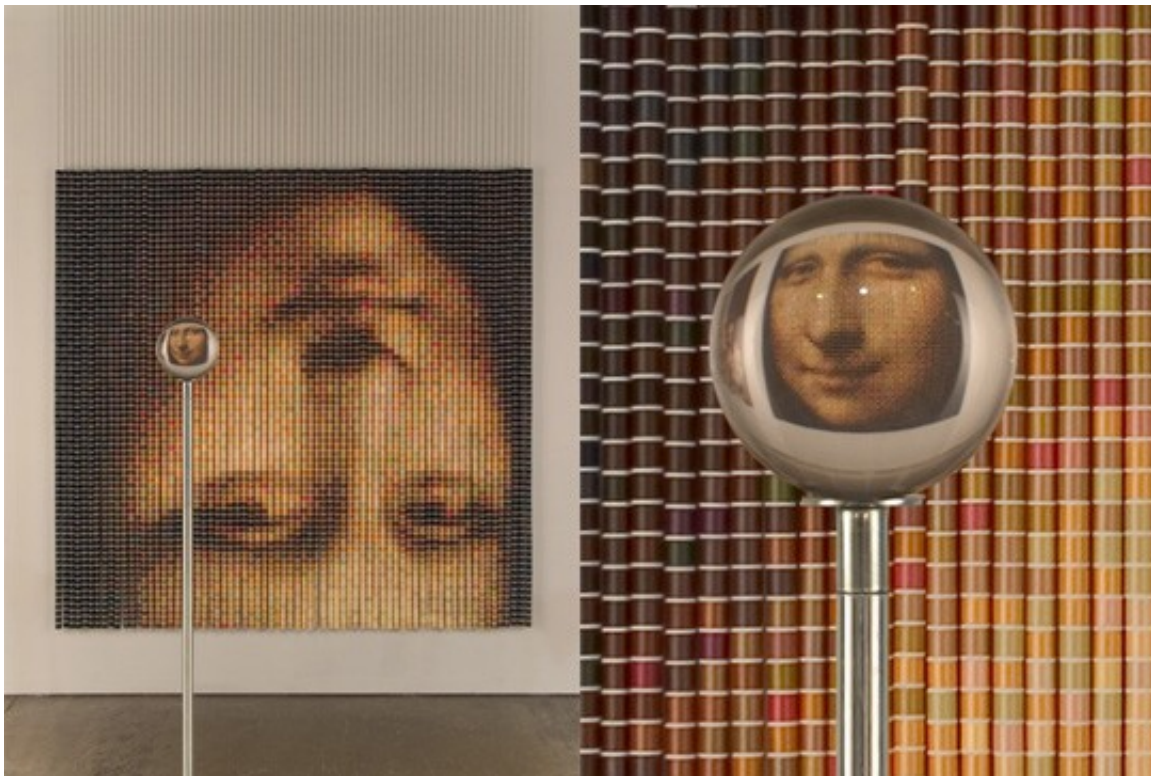




Interpretations: Devorah Sperber



After Mona Lisa 2

TEACHER CURRICULUM GUIDE North Berkshire and Stamford, Spring 2008

Interpretations

Kidspace
Spring 2008

Interpretations: Devorah Sperber

March 27 – September 1, 2008

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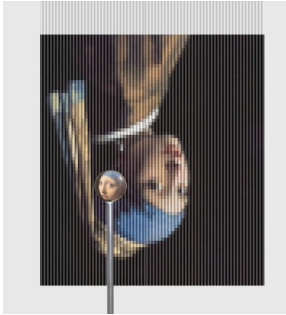
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INTRODUCTION

Interpretations: Devorah Sperber **March 27 – September 1, 2008**

After Vermeer

EXHIBITION OVERVIEW

For most, the act of seeing is an unremarkable event – few people give much thought to the mechanics behind this commonplace activity but for New York-based artist Devorah Sperber how the brain interprets visual information forms the centerpiece of a fascinating artistic practice. *Interpretations: Devorah Sperber* opening in Kidspace at MASS MoCA on March 27, 2008, will feature sculptures by Sperber which not only explore how the brain interprets visual information but also find surprising bridges between classic painting techniques and modern digital technology. Many of the pieces in the Kidspace exhibit debuted in the highly popular Brooklyn Museum exhibition *The Eye of the Artist: The Work of Devorah Sperber* in early 2007 (which due to its popularity, was held over for an additional six weeks.) Also included in the Kidspace show will be several new pieces Sperber has created to debut in North Adams.

At first glance Sperber's sculptures appear to be multi-colored abstractions composed from volumes of craft materials like spools of thread, chenille stems, map tacks, gem stones, or marker caps. For instance, Sperber's homage to Leonardo da Vinci's *The Last Supper* comprises 20,736 spools of thread which create a life-sized mural that is almost 30 feet wide. When viewed through special optical devices like a clear acrylic sphere or a convex mirror, however, recognizable images from art history surprisingly emerge.

The New York Times referred to Sperber as a "marvelously zany installation artist" in a recent review and continued, "Sperber recreates classics with a pizzazz that breathes new life into familiar, even hackneyed images. . . As much about art as about optics, they are hung upside down to account for the way the optical device, like the human eye, inverts imagery. From a few feet away, they look like fields of

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vague, pixelated color. But through the optical device, you see a perfect reproduction of the paintings. It's like magic."

Sperber meticulously crafts her works so the viewing process mimics the way the eyes and brain interprets visual stimuli. Many of her abstracted images are constructed upside-down and backwards which is the way the eyes absorb information. The optical device functions as a brain, condensing, inverting, and reversing raw color and value into something identifiable. Upside-down and backward composition alludes not only to the biological mechanics of sight, but also to the mechanics of the camera obscura, a projector-like device some art historians believe many Old Masters may have used.

The construction method most apparent in Sperber's work -- using individual bricks of color to assemble a larger image -- is her nod to modern technology. A computer program breaks her chosen image into pixels, the building block of digital imaging technology. She translates the pixels into sculpture -- her spools of thread, chenille stems or gem stones function as three-dimensional pixels. Her mirrors and lenses operate not only as human eyes and brains but as computers, 'zooming out' and pulling the colors together, reforming the picture.

In addition to Sperber's homage to da Vinci's *Mona Lisa* and *The Last Supper* and Vermeer's *Girl with a Pearl Earring*, works on view in Kidspace include her interpretations of Jan van Eyck's *Man in a Red Turban*, Pierre-Auguste Renoir's *Girl with a Watering Can* and Grant Wood's *American Gothic*. As the familiar materials combine to form easily recognizable images in an unexpected and unlikely manner, Sperber offers viewers direct visual experiences of recent scientific advancements.

ABOUT THE ARTIST

Interested in the links between art, science, and technology through the ages, New York artist, Devorah Sperber deconstructs familiar images to address the way the brain processes visual information versus the way we *think* we see. "As a visual artist," she says, "I cannot think of a topic more stimulating and yet so basic than the act of seeing—how the human brain makes sense of the visual world."

Born in 1961 in Detroit, MI, Sperber graduated from the Art Institute of Colorado in 1981 and Regis University in 1987 (summa cum laude). She moved to New York City in 1989 and currently divides her time between studios in Manhattan and Woodstock, NY.

Since 1999, Sperber has created a series of large-scale installations and multi-part works, which utilize pixilated, photo-based representation in formats that fluctuate between representation and abstraction. In 2002 she was invited to create a site-specific installation at the Montclair Art Museum. The resulting installation, based on Edward Hopper's *Coast Guard Station, 1927*, was the catalyst for a series of artwork based on other artworks. Though it initiated the new series, the realization of the Montclair commission gestated for two years during which she created works based on paintings by Jackson Pollock, Chuck Close, Jan Vermeer, Hans Holbein, Salvador Dali, and Leonardo da Vinci. In 2005, Sperber represented the Brooklyn Museum and the United States at the Ljubljana Print Biennale, for which she created new thread-spool works based on Leonardo da Vinci's *The Last Supper* and *Mona Lisa*. A solo exhibition featuring these works was on display the Brooklyn Museum from January 26 to June 17, 2007.

Ms. Sperber's recent exhibition at the Brooklyn Museum *The Eye of the Artist: The Work of Devorah Sperber* included full scale re-creations of Leonardo da Vinci's *The Last Supper* (29 feet wide) and *Mona Lisa* (30 x 21 inches). The concept was based on the technology of print making and how mechanical reproductions alter images and the scale of artworks as they exist in "the mind's eye". She selected *The Last Supper* and *Mona Lisa* because they are two of the most recognizable and reproduced images in the history of art.

Also on display were Ms. Sperber's recreations of Picasso's portrait *Gertrude Stein* and van Eyck's *Man in a Red Turban*, composed of thousands of colored crystals and thread spools. This new series is based on a recent scientific survey of 3/4 view portraits over the past two millennia which revealed that one eye of the sitter is commonly located exactly at or near to the vertical center of the composition. The study suggests that the human brain is hard-wired to respond to symmetry and that the centering of one eye is appreciated at a subconscious level in the brain. Ms. Sperber stumbled upon this survey while researching the *Mona Lisa* and *The Last Supper*, both of which happen to be perfect examples of eye-centeredness.

The works on view at the Brooklyn Museum along with new works have traveled since then to the Oda-Park Foundation, The Netherlands, and the Fleming Museum in Burlington, Vermont. In addition to Kidspace at MASS MoCA, in 2008 Sperber's work will travel to the Boise Art Museum in Boise, Idaho, and the Knoxville Museum of Art in Knoxville, Tenn. She will also be featured in the inaugural exhibition at the Museum of Art and Design, New York. Public works by Sperber can be seen in New York City's One Penn Plaza, Centro Medico Train Station, San

Juan, Puerto Rico, and the Royal Caribbean cruise ship "Independence of the Seas," (maiden voyage, May 2008). Group exhibitions have included Sperber's work, most recently at the Albany Airport Gallery, Albany, New York, and the University of Rochester Memorial Art Gallery, Rochester, New York.

REPRINT OF INTERVIEW WITH DEVORAH SPERBER
"The Art of Seeing," Ana Finel Honigman, *Sculpture Magazine*, May 2006

Art is primarily a visual medium, yet most artists take the experience of sight for granted. Devorah Sperber does not. The New York-based artist probes the optical, social and historical reasons for why we see what we see. Sperber takes well-known images that are widely reproduced and represents them in an original sculpture which must be appreciated visually in order to be understood. In this way, she undermines the process Walter Benjamin claimed corrupts art's authenticity and kills its 'aura' in the age of mechanical reproduction.

In practice, Sperber's work functions on three interrelated levels simultaneously. From a distance, her works are attractive abstractions. Up close, her unexpected materials (pen caps, brightly coloured pipe cleaners and spools of thread) are endearing and playful. But only when her images are seen through the optical devices she includes in their presentation does the provocative final layer emerge and the image it represents become clear. Through this evolution, a process that can not be summed up through mundane reproduction, Sperber successfully disrupts and then refocuses our perception of familiar images; forcing us to reconsider how we interpret visual information and how we look at art. In a 2004 solo exhibition at the McKenzie Fine Art gallery, Sperber recreated Hans Holbein's iconic 1533 painting, *The Ambassadors*, by using thousands of chenille stems stitched into a circular rug. The sculpture seems like a drab piece of modernist decoration until Holbein's image, known for its own anamorphic trick, becomes visible in the cylindrical mirror cutting through the rug's centre. This combination of references and affects challenges our expectations of both the neutral sculptural form and the famous painting itself, enlivening and refreshingly connecting them.

Similarly, in a 2001 group show at the James Graham and Sons gallery curated by Valerie McKenzie, Sperber presented *Lie Like a Rug* (2000-2001), 18,000 pen caps pushed into a curving flexible canvas, whose Persian rug pattern emerged when the sculpture was seen through a nearby convex mirror. Like the Holbein piece, this sculpture initially disassembles and then convincingly restores the complicated heritage that summons commonplace images into view.

"The Eye of the Artist: The Work of Devorah Sperber," an exhibition featuring full-scale re-creations of Leonardo's Last Supper and Mona Lisa, will be shown at the Brooklyn Museum of Art in 2007.

Ana Finel Honigman: How does the process of visually dissecting and reconstructing historical works of art affect your relationship to them as a viewer?

Devorah Sperber: My artistic process is highly compartmentalized. It includes countless hours of research, planning and preparation, which affect my relationship to both the historical work and the resulting new work. Once assembly begins, I'm already finished in a sense, with most of the decisions and problem solving behind me. At this point I have such a clear vision of the completed work in my mind, that when I first see the finished work, I have a strange sense of Déjà vu." This was particularly poignant when I recently installed "Reflections," a large-scale commissioned work constructed from 60,000 spools of thread, in a train station in Puerto Rico. After working on the project for 15 months, I could not see it with "fresh eyes" and had to assess the work by gauging other people's responses to it.

AFH: How do you think this experience would differ if you were appropriating these works in paintings or collages instead of translating them from two-dimensional images into sculpture?

DS: I don't think of my series based on historical works as appropriation. The catalyst was a site-specific installation, "Quartered, Flipped, & Rotated" (2004), which I developed for the Montclair Art Museum two years earlier. Curated by Patterson Sims, the installation was based on the museum's iconic Edward Hopper Painting Coast Guard Station (1929) and connected the museum's collection of American and Native American holdings. My decision to use other historical works as subject matters evolved from my interest in the link between art and technology through the ages, and my own working processes, which utilize technologies of our era--the computer, optical devices, and mass-produced objects. The selected historical works have significant links to science or technology (some well known, others obscure). I focus on those aspects when translating images into new sculptural works.

AFH: How are you defining appropriation and how does your use of pre-existing imagery differ?

DS: In the context of visual art, I define appropriation as "art about art." My work focuses on the intersection of art, science, and technology and their influence on "the

art of seeing." AFH: What is the "art of seeing?" Do you mean the way viewer interpretation affects the meaning of a work?

DS: I am interested in how the human brain makes sense of the visual world and "reality" as a subjective experience. As a visual artist, I cannot think of a topic more interesting and yet so basic than the "art of seeing."

AFH: Your series *After Dali, After Harmon 1, 2003-2004* was inspired by a known experiment on optics and memory. Can you describe the particulars?

DS: This series was based on a Salvador Dali painting from 1976, which was based on an early pixilated image created by Leon Harmon of Bell Labs. The original black and white image was included in an article in a 1973 issue of *Scientific American*, titled "The Recognition of Faces." The image and the experiment was a demonstration of the minimum conditions needed to recognize a face. Through the use of incremental cropping and changing scale, the series "After Dali, After Harmon" takes it one step further. When seen in its entirety, the series functions as a neurological primer, literally priming the brain to make sense of visual imagery, which is only recognizable when seen in the context of the greater whole.

AFH: How does your work relate to the experience of seeing in contrast to say, a painting dealing with similar issues, such as a Chuck Close's grid portrait?

DS: Chuck Close's grid portraits are installed in a traditional way, first offering viewers an overview of the portraits from a distance, with the image gradually dissolving into abstract cells as they move closer. My large-scale works reverse this traditional process of viewing art, bypassing the overview or macro-perspective and offering in its place an incomprehensible micro-perspective of individual units (such as spools of thread) devoid of recognizable imagery. Viewers experience a dramatic moment of surprise when they become aware of the macro-view, visible only with the aid of small optical devices. This element of surprise, best described as the "WOW" experience, is the result of temporal lobe activation, which occurs when the external world does not jive with the brain's inner expectation.

AFH: What issues arise from offering the experience of seeing the same thing in two separate and distinct ways through the use of sculptural elements?

DS: Offering two distinct versions of reality illustrates the limitations of visual perception and presents reality as a subjective experience vs. an absolute truth. It demonstrates that the visual world, as perceived by the human eye and brain,

consists of a miniscule layer of scale-based perception existing within infinite layers of imperceptible realities.

AFH: What do you think of how your sculptures appear in photographs?

DS: It is difficult to accurately portray my work with a single photographic image. I generally prefer a combination of images: a close-up view, a full installation view, and/or a view of the work as seen reflected in an optical device. Sometimes, a mid-range view is necessary to link the micro and macro views, especially when people have not seen my work in person. The size of the photograph is also important as it affects whether the focus is on the full recognizable image or on the individual units.

AFH: How do you select the images you reference?

DS: My initial interest in any subject matter is intuitive. I then conduct research to access whether the subject matter has enough interesting layers to justify producing a work based on it.

AFH: When you say "layers" are you referring to content, like the potential socio-political content in a mass-produced oriental carpet or the historical content of a famous painting or are you describing visual variety?

DS: Selecting my subject matter is a complicated process. After I find a group of images that appeal to me on an intuitive level, each image undergoes a rigorous justification process. I am looking for a reason to pursue one idea over others.

AFH: Does the familiarity viewers might have with a work affect the way you conceptualize and contextualize it?

DS: Most of my work is accessible to both the art-going and general public. However, in some cases, if viewers are familiar with the subject matter, they will likely appreciate additional layers of meaning. For example, viewers familiar with Jackson Pollock's work will appreciate the humor intended in recreating a drip painting using 165,000 pipe cleaners. What they may not know is that in each successive drip painting, Pollock created higher and higher ratios of fractals, before fractals were recognized as existing in the natural world. This was a deciding factor in using Pollock's Autumn Rhythm as a subject matter.

AFH: How do you feel the meaning or significance of an image changes when it is frequently reproduced?

DS: Reproductions of historical works can become inaccurately fixed in the mind's eye. Take the *Mona Lisa* for example, perhaps the most famous painting in the world. Most people have seen a reproduction or a "reproduction of a reproduction," but only a small percentage of those people has actually seen the painting in person. I suspect most people are surprised when they see the original painting and experience the relatively small scale (30 x 20 7/8") and the subtle effects of *Mona Lisa*'s elusive smile. I am currently working on a life-sized rendering of the *Mona Lisa*. Constructed from only 425 spools of thread, the image resolution will be extremely low. Yet when seen with an optical device, the thread spools will condense into a blurred yet recognizable image, conveying how little information the brain needs to make sense of visually imagery, like Harmon's pixilated image of Lincoln. Another larger thread-spool work will reintroduce an aspect of the original painting which is absent in most reproductions-the effects of spatial frequencies on vision as it relates to *Mona Lisa*'s elusive smile. These works will debut in Ljubljana, Slovenia, in June 2005 in an exhibition curated by Marilyn Kushner of the Brooklyn Museum of Art, who is interested in the intersection of digital technology and printmaking.

AFH: What are the differences for you between creating a work from the image of a factory-made carpet versus reconfiguring Holbein's *The Ambassadors*?

DS: I don't see a significant difference. Both works have links to technology. "Lie Like a Rug" was inspired by a rug which has been in my family since the 1950s. My research uncovered an interesting technological fact about the origin of that particular rug pattern. Although it looks like a hand-made Persian rug, the pattern is modeled after the world's first power-loomed rug manufactured by Karastan in the USA continuously since 1928.

AFH: And the Holbein?

DS: Two works titled "After Holbein" were based on Hans Holbein's painting *The Ambassadors* (1533). In order to create the elongated skull, Holbein either utilized anamorphic perspective, a mathematical technology invented by Leonardo da Vinci, or an optical device as suggested by David Hockney in his book "Secret Knowledge: Rediscovering the Lost Techniques of the Old Masters." These works debuted at McKenzie Fine Art, NYC in 2004 in an exhibition that included a thread-spool work based on Vermeer's presumed use of the camera obscura and the series "After Dali, After Harmon". All of these works have a significant link to technology.

AFH: How has your process changed since when you began using technology in your work?

DS: At the beginning, I spent weeks translating images into individual units of color. I now have a custom software program that reduces the time I spend at the computer and allows me to spend more time in the studio.

AFH: As your work demonstrates, science and art are closely linked, and always have been, yet there is a general assumption that science is not creative and art is not as "serious". Why do you think there is still a division perceived between science and art?

DS: The modern division of art and science may be the result of technological advancements and resulting job specialization. Intuition/creativity and awareness of the world play important roles in both art and science. If there is a perception that art isn't as serious as science, it may be due to science's more tangible value to society.

AFH: So, you are focusing on seeing as it functions biologically instead of intellectually, since one could argue that the subjective experience of seeing is determined more by experience, information and assumptions than optics?

DS: I like the holographic model of reality in which raw perceptual data is input, filtered, and organized by the brain to create a holographic illusion of a solid, predictable universe. Our understanding of what we see is based on the holographic model we have built to date. Using this model, brain biology and function are interconnected.

AFH: Would you say that you approach the actual act of making your sculptures scientifically?

DS: My approach to research and development can be seen as scientific but the actual assembly process is totally meditative. Assembly is my delayed gratification for the countless hours spent thinking, researching, planning, and problem solving. Life doesn't get more simple then declaring "I will complete X number of rows today" and having the wherewithal to do it.

AFH: Why do you often select mediums that are often banal or playful in their origins, like thread or brightly colored pipe-cleaners?

DS: The contrast between subject matter and medium adds another element of surprise to the work. In general I select materials based on their aesthetic qualities, intrinsic characteristics, availability, and the range of colors. I place equal emphasis on the "whole" recognizable image and how the individual parts function as abstract elements.

AFH: Yet, sometimes your materials conceptually compliment your subject matter like when you crafted a life-size replica of a 1967 VW bus using over laser-cut 60,000 flower-power stickers, hand-applied onto clear vinyl shower curtains. At other times, your choice of material and scale is highly incongruous. What determines whether you want your medium to contrast or reinforce your subject's symbolism?

DS: "VW Bus: Shower Power," a life size, 3D rendering of a 1967 VW Bus, was inspired by my long-standing love of VW buses and my own retro VW Bus. My choice of medium, 60,000 flower-power stickers applied onto clear vinyl shower curtains, was inspired by the common description of a VW Bus as a "box on wheels." When viewed up-close, the translucent flowers in the foreground fade in and out of recognition as the eyes shift focus from the front panels through to the rear panels on the opposite side of the bus. The end result is an image of a VW Bus that is there yet not there, solid yet transparent, present yet fleeting, not unlike the ideals of the 60s in the minds of many Baby Boomers today.

AFH: What was it about the myth of the 1960s that inspired that exhibition?

DS: "Bikinis, Bandanas and a VW Bus" debuted at Graham Gallery in NYC in March 2002. The concept was based on the continuing presence of cultural icons from the 1960s and 70s. As David Brooks has noted in his book, *Bobos in Paradise*, these icons continue to have a strong presence in contemporary culture due to the influence of "Counter-Culture Capitalist" baby boomers now in positions of power as CEOs, advertising executives, and designers.

AFH: How did you try to represent the tensions between 1960's ideology and the current aestheticization or commercialization of those beliefs?

DS: The bikinis and bandanas were constructed from thousands of maptacks inserted in clear vinyl, and have an undulating, cloth-like appearance from a distance and a surprisingly menacing quality up close. At first glance, all of the works appear to be 3D but on closer inspection, some are actually 3D while others are entirely flat. The bikini patterned as the American flag first emerged in popular culture during the 1970s. Seen today, it can be read as either patriotic or subversive

depending on the direction of the maptacks which face inward on some bikinis and outward on others and also, of course, on the perspective of the viewer .

Ana Honigman is a critic and PhD candidate in art history at Oxford University

INTERPRETATIONS PROGRAMS

The sequence of programming for North Berkshire and Stamford schools is as follows:

October	Teacher Workshop, Three Museum Semester
October – February	Three Museum Semester
January	Teacher Workshop, Kidspace
January – May	Kidspace Curriculum Activities in Classroom
February	Science Demos with Williams College students
March	Artist Residency with Devorah Sperber
	Opening
April	Lecture with Devorah Sperber
April – May	Visits to Kidspace
May	Teacher Workshop, Evaluation

TEACHER WORKSHOPS

North Berkshire and Stamford teachers will be provided with three teacher workshops in your schools. The first workshop in September / October will focus on the Three Museum Semester and will include time for you to sign up for fall visits to the Clark, WCMA, and MASS MoCA. The second workshop will be held in January and will involve preparing you for the Kidspace program through a hands-on opportunity to review curriculum activities. And the final teacher workshop will be an evaluation discussion about the entire year, both the three museum and Kidspace semesters. Devorah Sperber will also talk about her work and artistic process on April 2nd and we strongly encourage all teachers to attend this fascinating discussion. Please mark the workshop dates on your calendar (you can find the dates in Section 2 of this curriculum).

KIDSPACE PROGRAMS

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Curriculum activities and activity cards

This curriculum provides you with classroom activities that you can do with your students before and after visits to Kidspace. The curriculum has two parts to it this year. The first part offers activities that we recommend all classes do before and after their visits to Kidspace. The second part involves activity cards that are meant to be used in a flexible manner. You can use them to plan projects as a class or to have individual students work on as small groups or independently. The activities have been written for teachers of Pre-K – 8th grade, and can easily be adjusted to suit the needs and interests of your particular grade level.

New this year: Journals

Kidspace will provide each student with a journal. This journal should follow the student from year to year so that when they “graduate” from Kidspace (in 5th or 8th grade), they should have a good resource of their past museum experiences. There is space in the journal to list exhibitions seen at Kidspace, MASS MoCA, the Clark, and WCMA. We also encourage you to use the journal to have your students write about their experiences at the museums, and during residency programs and other art-related activities. Within this curriculum, we suggest specific journal writing activities that you might involve your class in.

The Curriculum Frameworks and Classroom Tie-Ins

We purposefully choose exhibition themes that easily relate to topics you are working on in school or that are included in the Learning Frameworks. The goal of this curriculum is to demonstrate easy ways in which you can connect on-going classroom activities to themes addressed in Kidspace exhibitions and programs. You might already have in your curriculum classroom projects that can easily tie into Kidspace and the three museums, and we encourage you to plan this before the beginning of the semester. We will have time to discuss this further at our teacher workshops.

Science Demos with Williams College Students

Since Devorah’s work is deeply connected to the science of seeing, Kidspace will collaborate with Williams College to conduct science demos at Kidspace for all K – 8th grade students. Prior to their visits to Kidspace and to the residency with Devorah, students will visit Kidspace to explore image formation and how the human eye works and perception. They will have the opportunity to experiment with different lenses, and workshops will be conducted by Williams College students. This special program component was organized with the assistance of Avi

Wilder, Science Education Consultant, Williams College and was funded through Williams College's Howard Hughes Medical Institution grant.

Artist Residency

We are pleased to provide your school with an artist residency program with Devorah Sperber. The artist will visit your school to conduct a 1 ½ hour session with each class K – 8th grade (some classes have been combined). Students will have the opportunity to hear first-hand how the artist created her work before they visit Kidspace. They will also create their own interpretations of historic works of art using pixilated images and chenille stems (pipe cleaners).

KIDSPACE GOALS

- Art experiences can be used to sharpen student visual literacy skills which can be applied in many subject areas, including art, English language arts, science, math, and social studies.
- Interpreting and creating art can enhance students' critical thinking and problem solving skills.
- Art experiences can build students' self confidence in forming opinions and sharing ideas, and are significant means of expression.
- Interactions with professional artists help students to more fully understand the artistic problem-solving processes.
- Curriculum materials and teacher workshops can motivate classroom educators to make multiple curriculum connections via the arts.

LEARNER OUTCOMES

The *Interpretations* exhibition can be used to focus on a wide range of topics, including: sculpture, portraits, science of seeing and perception, art history, and interpretation and illusion. Through multiple activities at Kidspace and in the classroom, students will:

- discuss how artists use different materials and art-making techniques;
- recognize how individuals may be portrayed in historic portraits;
- describe how different objects like spools of thread can be used to make up a sculptural interpretation of a historic painting;
- experiment with lenses and other sources to understand how the eye works when perceiving an image, particularly one made up of dots of color (pixilated);

- explain the difference between the historic work and the sculptural interpretation;
- illustrate their understanding of the pixilation process in their own artwork;
- define famous historic works of art and why they are still relevant today (like the *Mona Lisa* and *American Gothic* paintings);
- demonstrate their understanding of sculpture, and compare to Kidspace and three museum exhibitions featuring art of different mediums (installation art, painting, photography).

YOUR FEEDBACK AND SHARING WITH OTHERS

A SHORT evaluation form can be found at the end of this curriculum. You will notice that we merged the Three Museum Semester evaluation into the one for Kidspace. Please fill this out as the year progresses and we will collect the form at our workshop in your school in May. **Your comments do make a difference.**

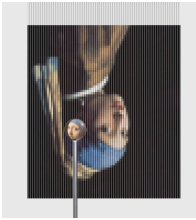
We look forward to another successful collaboration!

Laura Thompson, Ed.D.

Director of Exhibitions and Education, Kidspace

Shannon Toye

Education Coordinator, Kidspace



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

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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

- Standard 2.1

- Visual Arts

- Standards 1.1, 1.5, 3, 4.6, 5, 6, 10

VT Learning Standards

- Reasoning and Problem Solving
- 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

Standards 1.1, 1.5, 3, 4.6, 5, 6, 10

- English Language Arts
Standard 2, 19, 20, 24
- Visual Arts

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

Standards 1.1, 1.5, 3, 4.6, 5, 6, 10

- English Language Arts
Standard 2, 19, 20, 24
- Visual Arts

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 rein^{3.12} 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

3.14

Before visiting Kidspage, 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 Devorah Sperber create optical illusions with her three-dimensional sculpture?
- How can we create an optical illusion?



vertical column. Continue tracing 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

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".



Activity Card #2 Hidden Scribble Shapes

Devorah Sperber creates the illusion of shapes and depth in her sculptures by placing certain colors next to each other. Try this activity to further explore how artists might create the illusion of shapes using scribbles and colors.

Materials:

- White paper
- Colored pencils, crayons, or markers

Directions:

1. Using a pencil, start drawing a continuous line on your paper, never picking up the pencil. Try making it curvy and straight and loopy until you have a big tangled drawing covering the entire piece of paper.
2. Now put down your pencil and take a look at your drawing. Do you see any recognizable shapes that you drew by accident? Maybe you won't see anything at first, but like with Devorah's work, it might take a second or third look for an image to pop out at you. And the image probably won't be very realistic, but perhaps it will give the impression of some thing from reality, like an animal, figure, or object.
3. When you do see a shape or series of lines that look like something, trace around the shape and coloring it in with colored pencils, crayons, or markers to bring out the object from the rest of the scribble drawing. Experiment with different color combinations to see how you might best draw attention to the hidden scribble shapes.



Activity Card #3 Optical Illusion Drawings

Devorah Sperber's work is about creating the illusion of an image. Try creating your own optical illusion drawings.

Materials:

- Crayons or markers, scissors, glue, ruler
- 1 large piece of paper (12 x 18) and 2 smaller pieces of paper ($8 \frac{1}{2} \times 11$)

Directions:

1. Hold the two pieces of $8 \frac{1}{2} \times 11$ paper horizontally and draw two pictures of opposite scenes, like night and day, winter and summer, night and day, etc. Be sure to fill in the entire sheet of paper.
2. Hold the two papers horizontally and at the top measure in 1" inch across until you have 11 marks on the top of your drawing. (Make sure to make marks dark enough so you can see them.) Fold each drawing into an accordion book at each of these marks by folding in and out (looks like a "z") until the entire paper is folded up like a fan (**see A**).



A



B

3. Unfold the drawings and on the back, number the pieces 1 - 11. Then cut the drawings into 1" strips.
4. Hold the 12 x 18 piece of paper horizontally and also fold into an accordion book with 1" strips. Lay out your drawings on the 1" strips, starting with #1 strip from your first drawing and alternating with #1 strip from your second drawing. Alternate images until all 1" strips have been filled. Glue to 12 x 18 paper once you have the correct alternating images laid out (**see B**).
5. When dry, re-fold the paper into its accordion folds. When you view the drawing from one side it appears as one image and from the other side it appears to be another! Why do you think this happens?



Activity Card #1 Experimenting with Lenses

Devorah Sperber's work relies on lenses for the viewer's eye to make sense of the image in front of them. The lenses help the eye to put the pixilated colors together to form an image from art history. Now that you have worked with the Williams College students at KIDSPACE, continue to experiment with lenses. This time you'll use some of the techniques you've learned to experiment with the effect different lenses have on viewing a famous work of art.

Materials: (see supplies from Williams and postcards from the Clark and WCMA)

- Concave lenses
- Convex lenses
- Art postcards
- Journals

1. Keep track of your findings in your journal. First, look at the image on your postcard through the concave lens. Now look at it through the convex lens. Write a description of what you see.
2. Try gently bending the top and bottom of the postcard to turn it into a concave shape. Have a partner hold the image for you while you look at it through a concave lens, then through a convex lens. Now reverse the process: turn the picture into a convex shape, look at it through each of the lenses. Again, write down what you see. How are your findings different from the first way you viewed the images?
3. Try different combinations: what happens if you look at the image through 2 lenses? How about 3?
4. Do you think that you would be able to recognize these famous works of art if you only saw the distorted versions of them?

Activity Card #4

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 you to see like an insect with compound eyes.

The bug eye simulator gives you a view of images similar to Devorah's interpretations of famous paintings. Devorah creates images that are pixelated, which means breaking down an image into tiny colored dots that combine to make a whole image. While Devorah breaks up images by making "pixels" out of spools of colored thread, your bug eye simulator breaks up your vision by showing you many small views (of the same larger view) through each straw.

Materials

- Drinking straws
- Scissors
- Rubber bands
- Postcard, poster, magazine image

1. Cut drinking straws into pieces about two inches long. You will probably need around 25 pieces.
2. Bundle your pieces together and wrap a rubber band around one end to secure them.
3. Hold the straw bundle up to your eye (not too close or it won't work; it should be about an inch away from your eye) and look through. Look around the room, then at an image (i.e., postcard, poster, drawing). Try rotating the bundle. The straws break up your vision, so it's almost like having lots of little lenses instead of just one.



Activity Card # 5

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. Explore how familiar images (i.e., symbols, icons, logos) can be understood in different ways.

Materials: Power Point presentation (on CD-ROM in main office), computer, journals

1. Think about images that you are very familiar with such as logos, cartoon characters, commercial characters, and other images from popular culture. List them in your journal. How could you alter some of these images so that it might be harder for you to understand? For instance, could you recognize a symbol when most of the image is taken away?
2. Look at the altered images on the Power Point presentation. Try to guess what well-known symbol each picture might be. These images have been pixilated, cropped, or blurred to make it trickier to understand what you are seeing. Write your guesses in your journal.
3. At the end of the Power Point presentation, you will find the actual images. Were you correct in your guesses? These images have become such a huge part of our everyday lives that we may not be conscious of how often we see them, even though our brains are processing the information.

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