Weave

A Guide for Understanding the Exhibition

tempecenterforthearts.com/Gallery
Dear New Reader:

We hope this guide will provide you with some easy-to-use tools to enhance your experiences with visual art. Over the years, we’ve noticed that people can be both attracted to and intimidated by art at the same time. We’ve found that asking questions that start “informal conversations” is one of the best ways to put people at ease.

Sure, some art is beautiful and easy to approach, while other art can be challenging and not so easy to digest. Just like a book, visual art can be appealing, serious and yes, even ugly. Some art confirms, celebrates and expands how we understand ourselves. Other art opens pathways through which we can explore other viewpoints. You as a viewer (reader) also bring a variety of thoughts and personal preferences into the experience. With practice and some new tools on your belt, you’ll find that those seemingly complicated layers of meaning and context can be peeled back and explored. It’s just knowing where to look and why.

We would also like to thank the artists for letting us utilize some of their artworks for this guide.

Sincerely,

Mary Erickson, Ph.D. (TCA Docent) & Michelle Nichols Dock (Visual Arts Curator)

WEAVE features artists that intertwine materials, processes and ideas. Each artist’s style and vision are different, yet they share a common thread, they weave together the worlds of art and technology.

This exhibition is also part of a series of programs called CURIOcity. Throughout the 2020 exhibition cycle, the Gallery at Tempe Center for the Arts and Tempe Galleries satellite spaces celebrate arts, technology and the curious minds that thrive on connecting ideas across the disciplines.

Special thanks to the artists on display: Velma Kee Craig, Sam Fresquez, Daniel Nez, Mary Bates Neubauer, Carol Shinn, Devorah Sperber and Denise Yaghmourian. The Gallery at Tempe Center for the Arts also thanks Bentley Gallery of Phoenix and the Friends of TCA.

WEAVE/CURIOcity exhibitions at satellite spaces:
Tempe Public Library Connections Café
Material Importance
through April 15, 2020
Artists: Annie Alexander, Jo Andersen, Tamaki Matsumoto
Tempe Post Office on Mill Avenue
Construct
Jan 24 – June 6
Artists: Sam Fresquez, Julia Garina, Emery Hall and Mary Bates Neubauer
Tempe Public Library Youth Library
Code & Create
Feb 21 – June 17
Artists: David R. Burns and Brandon Montgomery
Inquiry Strategy with Tactical Questions
The following 4-question strategy is an easy to use tool for investigating
the layers of context and meaning in visual art.

What Can I See? Facts about the artwork.
• Subject Matter
• Design Elements & Principles
• Technical Features
• Function
• Reproduction versus Original
• Care/Condition

What Else Can I Learn?
Contextual facts.
• Artists’ Lives
• Physical Environments
• Cultural Context
• Artworlds (Art Experience)

What Does It Mean?
Conclusions about meanings.
• Personal & Cultural Viewpoints
• Artists’ Intentions
• Art Specialists’ Understandings

How Does It Compare?
Conclusions about connections among artworks.
• Style
• Art Influence (From Other Art)
• Themes

The Inquiry Strategy with Tactical Questions was developed for the Gallery at Tempe Center for the Arts
in 2007. It is a revision of prior research by Mary Erickson, Ph.D.
Hints for Asking Good Questions
Hints for a well-rounded conversation: You’ll often learn more from open-ended questions than close-ended questions.

A **closed-ended question** is answered with a one-word response such as yes or no or another single word. *Example: Is this an oil or acrylic painting?*

*Closed-ended questions* start with verbs like “Is? Do? and Can?”

An **open-ended question** requires more explanation. *Example: How is painting in oil different from painting with acrylics?*

*Open-ended questions* start with “Why? and How?”

Some words can be used for **both types of questions** such as:

- What?
- Who?
- Where?
- When?

Both open and close-ended questions are valuable. The construction and phrasing of a question shapes the kind of information you can expect to receive.

**For Practice:** Write down 3 open-ended questions. Pretend you are meeting someone for the first time. You need to ask questions to get to know that person better.

a

b

c

Many of the activities are based on processes outlined by D. Rothstein and L. Santana in *Make Just One Change: Teach Students to Ask their Own Questions* (2014) published in Cambridge, MA by Harvard University Press.
What Can I See?
Tips for looking carefully at an Artwork

Subject Matter: Some artworks have subject matter and others do not. Subject matter refers to anything real or imaginary that is shown in an artwork (such as people, places and things).

Elements of Design: Traditional elements in Western art include: (“D” represents “dimensional.”)

<table>
<thead>
<tr>
<th>2D Elements</th>
<th>3D Elements</th>
<th>4D Elements/Time</th>
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</thead>
<tbody>
<tr>
<td>line</td>
<td>form or mass</td>
<td>sequence</td>
</tr>
<tr>
<td>shape</td>
<td>space</td>
<td>duration</td>
</tr>
<tr>
<td>value (light and dark)</td>
<td>texture</td>
<td></td>
</tr>
<tr>
<td>color</td>
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</table>

Design Principles: Ways artists organize elements of design to create interesting and unified compositions. Some Traditional Principles include:

Balance       Variation       Focal Point       Pattern
Harmony        Repetition       Movement         Transition
Emphasis/Focal Point Rhythm       Direction         Proportion

Contrast

Technical Features: Careful viewing of an artwork usually reveals evidence of how it was made. (Indicators might include art making tools, materials and processes.)

Function: Artists make artworks that serve a great many functions such as:

Capturing the beauty of nature       Memorializing an important event
Celebrating or criticizing a person, event or group Exploring visual possibilities
Sharing a vision Promoting a belief or cause
Celebrating the artist's heritage Making the ordinary extraordinary
Stimulating action Many more
What Can I See?
Practice looking carefully at an Artwork

Reproduction Vs Original: Some reproductions can look pretty different from the originals. Common differences between originals and reproductions are:

<table>
<thead>
<tr>
<th>Size</th>
<th>Colors</th>
<th>Surface Texture</th>
<th>Luminosity</th>
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<tbody>
<tr>
<td>Angle of View</td>
<td>Lighting</td>
<td>Other</td>
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</table>

Care/Condition: The condition of artworks can deteriorate over time for many reasons, among them:

- Perishable or fragile materials
- Matting, mounting, or framing
- Accidents
- Damage in storage
- Temperature and humidity
- Vandalism

Sample Questions: See below how an easy conversation about an art piece can begin just by asking and answering questions about “what you see.”

1. What animals can you find in the circular image? [SUBJECT MATTER]

2. Based just on photos in this guide, where do you think the viewer must stand to see the circular image? Now, if you can, check your guess by looking at the original. [REPRODUCTION VS ORIGINAL]

3. How did Nez make the separate pieces of this image seem to float among the four large wood looms? [TECHNIQUE]

4. What color did Nez use to contrast with the many shades of warm brown and yellow? [DESIGN]
Look at this next piece by Nez. List 3 quick descriptions about what you see: (Example: “large sculpture, depicts a woman and is made of bronze.”)

a

b

c

Now, based on your observations, write 3 questions you could ask a friend about this artwork.

a

b

c
What Can I Learn?  
Tips for investigating an Artist’s Background

**Artist's Life:** The personal lives of artists can affect their work, including such factors as:

<table>
<thead>
<tr>
<th>Family</th>
<th>Work</th>
<th>Education</th>
<th>Travel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal life experiences</td>
<td></td>
<td>Other</td>
<td></td>
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</table>

**Physical Environment:** The physical world, both natural and human made, can inspire their work:

- Natural environment (plants, animals, climate, landforms, etc.)
- Constructed environment (buildings, roads, bridges, vehicles, furniture, consumer goods, etc.)

**Culture:** Artists can draw ideas for their work from their cultures:

<table>
<thead>
<tr>
<th>Values and beliefs</th>
<th>Hobbies and entertainment</th>
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</thead>
<tbody>
<tr>
<td>Politics</td>
<td>Economic situation</td>
</tr>
<tr>
<td>Language</td>
<td>Heritage and/or ethnicity</td>
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<tr>
<td>Other</td>
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**Art Experience (Artworld):** Artists get ideas and support from other people involved in art, through:

- Art education/Apprenticeships
- Insights from specialists in the art form (ceramics, painting, etc.)
- Representation by art galleries
- Contact with art patrons and collectors
- Acknowledgement through art awards, prizes, grants, commissions
- Art included in museum collections
What Can I Learn?
Practice investigating an Artist’s Background

Shinn earned a Bachelor of Fine Arts degree from the University of Colorado at Boulder and a Master of Fine Arts degree from Arizona State University. Over time she’s mastered a process described as photo-based machine stitched images. From a distance Shinn’s work resembles a photograph. But up close, the work reveals layers of surface texture and tiny color variations created by thread. Like an Impressionist painting, the image makes more sense when viewed from a few steps away.

Shinn says that she has always been a close observer and that as a child she felt “like a set of eyes outside my human self... Whether playing in the native grasses and sunflowers, walking alone to school across a horse pasture, getting up alone early in the morning when camping, watching clouds from the car window, or hiking in the quiet forest in winter. I don’t think I understood the importance of those moments, but they gradually became part of my core.”

Shinn’s art is widely collected by contemporary art and craft collectors and museums and her works have appeared in numerous publications such as American Craft, Embroidery, Fiberarts, Georgia Review and Surface Design. She is also the author of the book Freestyle Machine Embroidery, 2009. Today, she lives and works in Fort Collins, Colorado close to the Rocky Mountains. She also teaches workshops across the country and writes for art publications.

carolshinn.com

Sample Questions: See below how an easy conversation about an art piece can begin just by asking and answering questions about “what I can learn.”

1. Shinn lives in Fort Collins, CO. How might her life there be different from peoples’ lives in other parts of the country? (For example, compare it with life in a midwestern farm country, the wetlands of Florida and/or downtown New York City. [PHYSICAL AND CULTURAL ENVIRONMENT]

2. What childhood experiences taught Shinn to value the importance of her environment? [ARTIST’S LIFE]

3. Based on the biographical text, how can you tell if different kinds of art experts appreciate Shinn’s work? [ART EXPERIENCE]
Now You Try! What Else I Can Learn?

Brainstorm and list 5 interesting facts about Carol Shinn’s background.
*You may want to consult pg. 9 and/or a media article and/or Internet references about the artist.)

a

b

c

d

e

Now, based on your research, write 3 questions you could ask a friend about these artworks/artist.

a

b

c
What Does It Mean?  
Tips for interpreting an Artwork

**Artist's Intention:** Artists decide how they want their artworks to look. Their intentions may be:

<table>
<thead>
<tr>
<th>Personal or private</th>
<th>Traditional</th>
<th>Practical</th>
<th>Boundary breaking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unconventional</td>
<td>Evolving</td>
<td>Emotional</td>
<td>Spontaneous</td>
</tr>
<tr>
<td>Experimental</td>
<td>Deliberate</td>
<td></td>
<td>Other</td>
</tr>
<tr>
<td>Focused on collector, patron, funder or other viewer</td>
<td>Other</td>
<td></td>
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</tbody>
</table>

**Art Specialists' Understandings:** The considered opinions of art specialists (experts) direct viewers' attention to aspects of artworks that they judge to be worthy of that attention. Art specialists may include:

<table>
<thead>
<tr>
<th>Artists</th>
<th>Art Teachers</th>
<th>Museum Curators</th>
<th>Art Critics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art Historians</td>
<td>Master Craftspeople</td>
<td>Ceremonial Leaders</td>
<td>Guild Members</td>
</tr>
<tr>
<td>Tribal elders</td>
<td>Others</td>
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**Cultural Understandings:** A viewer's cultural understanding draws upon a set of ideas, beliefs and standards shared broadly within a culture. These are learned, not by special effort and instruction, but simply through growing up as a member of a culture. Unexamined expectations might include:

<table>
<thead>
<tr>
<th>High price</th>
<th>Obvious meaning</th>
<th>Difficult to make</th>
<th>Easily recognizable</th>
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<tr>
<td>Familiar</td>
<td>Other</td>
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**Your Own Viewpoint:** Your responses to artworks are affected by:

- conscious thoughts
- unconscious reactions
- personal preferences
- careful viewing
- thoughtful reflection
- relevant information
- free association
- previous art experience
- and more
What Does It Mean?
Practice interpreting an Artwork

Mary Bates Neubauer, *Svalbard Series: Iceberg 4*, digital print, 24“x16”

Sample Questions: See below how an easy conversation about an art piece can begin just by asking and answering questions about “what it means.”

1. What do you see in the art image above that suggests “systems” and/or “rhythms”? [ARTIST’S INTENTION]

2. Do you think this artwork could raise questions for viewers about science and the environment? Please explain. [ART SPECIALIST’S UNDERSTANDING]

3. How might people living in Alaska understand this artwork differently from people living on the Gulf Coast of Florida? [CULTURAL UNDERSTANDING]

Neubauer’s sculptures and digital prints are in many public and private collections and featured internationally in places such as New York, Paris, and Singapore. Much of her work is an intersection of art and science. She has been a visiting artist at the American Academy in Rome, a Fulbright Fellow in Cambridge, UK and a Ford Fellow at Indiana University. Today, she is a President’s Professor at Arizona State University.

Neubauer works in a variety of media including stone carving, bronze-casting, digital art, 3D printing and more. Much of her work focuses on translating large amounts of data numbers into visual images which she calls data visualization projects. The data sources she tends to focus on are about the environment. Her work reveals stories about the patterns present in global phenomena such as weather and the cycles present in nature. The resulting imagery often echo forms and patterns found in nature.

Neubauer says, “My intention is to evoke an expanded awareness of systems, cities, timelines, and the rhythms of the larger world, providing a visual interpretation of the behavior of data through time, while remaining true to the underlying input.”

She goes on to say, “The work in this exhibition is developed from images of the Arctic and polar data sets. The digital prints were woven from photographic images taken during an expeditionary residency to the Svalbard Archipelago, above the Arctic Circle. I was one of a group of artists, writers and composers who traveled on a small Barquentine sailing ship during the incipient arctic winter of 2016, exploring the glaciers and inlets of this remote arctic location.

The prints in the exhibit weave together the nuanced color palettes and feeling-tones of this frigid environment. At the same time, we witnessed some of the more dramatic effects of climate change and glacial melting, which has intensively affected the Polar Regions.”

marybatesneubauer.com
Now You Try! What Does It Mean?

Look at this work by Mary Bates Neubauer. Brainstorm and list 5 ideas about what the artwork is about.

a
b
c
d
e

Now, based on your interpretation, write 3 questions you could ask a friend about this artwork.

a
b
c
How Do They Compare?
Tips for gathering insights by comparing Artworks

**Style:** Style is a set of distinctive qualities ("family resemblance") that are shared by more than one artwork. Artists develop their own style and incorporate aspects of the styles of artists from their own or other times and cultures.

<table>
<thead>
<tr>
<th>Artist's style</th>
<th>Style of art movement or period</th>
<th>Cultural style</th>
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**Art Influence:** Most artists are influenced by artists who worked before them, though some self-taught artists, called “outsider artists,” work in isolation, largely unaware of the work of other artists. Art influences can include:

- Technical and aesthetic achievements by other artists
- Other artists' ideas, innovations, commitments
- Traditional or historical art ideas to follow, extend or break away from

**Theme:** Some broad, cross-cultural themes have been the focus of many artists throughout history and across the globe:

- People and nature
- Cultural pride
- Conquest
- Overcoming obstacles
- Strength of family
- Love
- Fantasy
- Social order
- Harmony
- Chaos
- Revisiting history
- Heroic adventure
- Religious devotion
- Status
- Many more
How Do They Compare?
Practice gathering insights by comparing pieces by Devorah Sperber

Sperber is best recognized for creating art that turns ordinary materials such as thread spools and chenille stems (pipe cleaners) into optical illusions. Her works play with iconic works from famous artists like Andy Warhol and Leonardo da Vinci and popular culture images like Star Trek characters and Marilyn Monroe. She digitally manipulates the images by deconstructing a JPEG file into a pixelated version that she can translate with materials from the same color palette, like thread spools. Over time, she’s customized computer software that helps her create color “maps” as a guide for building the actual artworks by hand.

The work in this exhibition includes optical tools like glass spheres and reflective surfaces that recreate how the human eye takes in information (the retina inverts an image) and how the brain re-assembles the raw data (turns image right side up) into recognizable information. The way that the brain sorts and quickly makes sense of the information, neurologists call “neural priming.” By selecting well-known images, Sperber’s viewers most likely have an existing “data file” or memory in their heads. So, when they see the image upside down, even without the optical viewer, they can usually recognize that artwork.

devorahsperber.com

Sample Questions: See below how an easy conversation about an art piece can begin just by asking and answering questions about “how they compare.”

1. How are *After Mona Lisa 2* and *After Holbein* similar in appearance? [STYLE]
2. Where can you see that Sperber is influenced by art history as well as contemporary art’s interest in “truth to materials”? [ART INFLUENCE]
3. How do Sperber’s works weave together the worlds of art and technology? [THEME]
Now You Try! How Do They Compare?

1. What similarities can you find between these artworks?
2. What differences do you see among these artworks?

Now, based on your comparisons, write three questions you could ask a friend about these artworks.

a

b

c
Artist Text Panels
Velma Kee Craig, Mesa

Craig is a writer, filmmaker and weaver. She grew up on the Diné (Navajo) reservation near Tuba City and Window Rock, AZ. She first became a writer after being inspired in her youth by the process of writing, storytelling and creating new worlds with her words. She went on to earn a Bachelor of Arts degree in English literature and a minor in American Indian Studies from Arizona State University. Over time she has written poetry, blogs and screen plays for indie films. She and her husband founded White Springs Creative, LLC and have made several short films together.

Craig came to textiles as an adult, even though weaving is in her blood. She remembers watching her paternal grandmother weave on a loom and her maternal grandmother cleaning, shearing, dyeing, carding and spinning wool. Both were accomplished weavers and Craig says watching the whole process, beginning to end, was “hypnotic.” She approaches the weaving process as a multi-media story-telling opportunity which blends traditional methods with contemporary ideas. Interestingly, her very first weaving was purchased by the Heard Museum in 2012 and she’s been making artwork ever since. Some of Craig’s weavings at first glance seem to include traditional symbols and designs, yet with a closer look, they reveal some modern references too. She’s depicted things like DNA strands, QR tags, bar codes, video games, animated movies characters and heartbeat lines.

Most recently, Craig received professional acclaim as the co-curator of an immensely popular exhibition called Color Riot! How Color Changed Navajo Weaving at the Heard Museum in 2019. The exhibition celebrated the innovative spirit of historical weavers who broke boundaries with innovative designs that are still influencing artists today. Craig is the recipient of the Andrew W. Mellon Fellowship at the Heard Museum two years in a row. She continues to write, make films, weave and teach new generations of creatives.

warpedcanvas.blogspot.com
Fresquez is an Interdisciplinary artist and Valley native. She graduated with a Bachelor of Fine Arts degree from Arizona State University in 2019. Over the past three years, she has been the recipient of artist residencies at Xico, Inc. in Phoenix, the Haystack Mountain School in Deer Isle, ME, The New York Arts Practicum in Manhattan, the Vermont Studio Center in Johnson and Massachusetts Museum of Contemporary Art in North Adams. She was also included in the Arizona Biennial at Tucson Museum of Art in 2018.

Fresquez’ art which ranges from sculpture to performance art, documents experiences of authority, gender and group dynamics. She has used a variety of objects that historically tend to denote gender such as hair, jewelry and clothing. She has also investigated issues that touch on social norms people encounter in public and/or in cultural and commercial environments such as the Catholic Church, the LGBTQ community, NASCAR and Home Depot. In these projects, she is often asking audiences to think about how and why certain information and attitudes get passed from one generation to the next. Described as fearless by friends, Fresquez hopes to raise awareness and encourage people to look deeper before following traditions blindly.

Fresquez says, “This piece is made using buttons from the sides of mariachi pants. I’m interested in how we choose to present ourselves as people of color within white institutions. In making this I thought a lot about the silent conversations that are had in how we choose to dress ourselves, and about the peers and mentors who have taught me to wear who I am with pride and intention.”

samfresquez.com

Images of Fresquez wearing the buttons.
Neubauer received a Bachelor of Fine Arts degree in sculpture from Colorado State University and Master of Fine Arts degree from Indiana University. Her sculptures and digital prints are in many public and private collections and featured internationally in places such as New York, Paris, Beijing, New Delhi, Florence and Singapore. Much of her work is an intersection of art and science and her research often includes collaborations across disciplines. Neubauer has been a visiting artist at the American Academy in Rome, a Fulbright Fellow in Cambridge, UK and a Ford Fellow at Indiana University. In recent years, she has participated in artist residencies including the Digital Stone Project in Italy, the Anderson Ranch Center for the Arts in Colorado, the Tyrone Guthrie Center in Ireland, the John Michael Kohler Arts and Industry Residency in Wisconsin and the Arctic Circle Expedition. Today, she is a President’s Professor of Sculpture at the Herberger Institute for Design and the Arts at Arizona State University.

Neubauer works in a variety of media including stone carving, bronze-casting, digital art, 3D printing and more. Much of her work focuses on translating large amounts of data numbers into visual images which she calls data visualization projects. The data sources she tends to focus on are about the environment. She’s had the opportunity to work with municipalities, corporations and environmental agencies to reveal stories about the patterns present in global phenomena such as weather and the cycles present in nature. The resulting imagery often echo forms and patterns found in nature.

Neubauer says, “My intention is to evoke an expanded awareness of systems, cities, timelines, and the rhythms of the larger world, providing a visual interpretation of the behavior of data through time, while remaining true to the underlying input.”

marybatesneubauer.com

Examples of the data sources used in Neubauer’s work. done in collaboration with ASU’s Arts, Media and Engineering graduate students Jennifer Weiler and Daisy Nolz.
About Neubauer’s work:

Neubauer says, “The work in this exhibition is developed from images of the Arctic and polar data sets. The digital prints were woven from photographic images taken during an expeditionary residency to the Svalbard Archipelago, above the Arctic Circle. I was one of a group of artists, writers and composers who traveled on a small Barquentine sailing ship during the incipient arctic winter of 2016, exploring the glaciers and inlets of this remote arctic location.

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The six-small data-driven sculptures were developed from an extensive data set available from the National Center for Atmospheric Research in Boulder, CO. The project was extensive, and was done in collaboration with ASU’s Arts, Media and Engineering graduate students Jennifer Weiler and Daisy Nolz.

The MASIE Sea Ice Extent data set follows the daily sea ice coverage of the sixteen polar seas in the northern hemisphere, from 2008 to the present. Sea ice extent is one of the most important indicators of global warming. In the six selected data visualizations, one can track the seasonal ebb and flow of sea ice and notice the nuanced changes over the years. The higher elevations on these landscape-like sculptures indicate ice coverage, while the lower elevations show the summer melt.

Finally, the large digital print graphs the MASIE Sea Ice Extent and the many number underlying the images. Weaving this data together into pictorial images helps us to understand the look of our moment in time during this period of climactic change.”

Learn more: thearcticcircle.org

Example of the data sources.
Nez grew up in a small town called Lukachukai within the Diné (Navajo) reservation in Arizona. Over the past few years he has been working and going to school away from home. As more time and distance passed, he felt separated from his culture and traditions and began to make visual art about the oral stories he grew up hearing. Today, his goal is to preserve, celebrate and explore his Diné heritage for himself and others.

This work is part of a larger series that was the focus of Nez’s Master of Fine Arts thesis exhibition last fall at Arizona State University. His exhibition was called “Alk’idą́ą́” which translates to “Long ago” and is the common way elders begin a story. The installation included four sculptural works depicting the four worlds of the Diné origins story. For the **WEAVE** exhibition, Nez will show one world (one sculpture) at a time and change out the display every few weeks.

Each of Nez’s loom-like sculptures includes dozens of hand-printed relief prints on paper suspended from wooden looms. From different vantage points the imagery on each loom appears broken apart into abstracted geometric shapes (that reference traditional weaving symbols). However, when viewed from a specific height and distance, the puzzle pieces come together to create one cohesive image. Nez purposely creates an optical illusion of sorts that invites viewers to abandon linear thinking and experience a different way of storytelling.

Nez says, “**Stories are told for many reasons. They are told for teaching, for healing and can act as prayers. The words of a medicine man will always be carried with me, ‘Prayers can only do so much. Yes, they are powerful, but they can only take you halfway. The other half is up to you. You have to act upon the prayers, striving for your best and condoning yourself in a beautiful way, only then will the prayers be fulfilled.’ These stories are my prayers. They are being told. That is my half. It is up to the viewer to have reverence and respect, and to situate themselves accordingly.”**

About Nez’s work: The Diné teach that their people passed through three different worlds before coming to this world known as the fourth world or “glittering world.” Each of the sculptures Nez presents in this exhibition represents elements and characters from The Four Worlds.
"The First World is where everything started" says Nez. In the First World, or Black World, Nez depicts a small scene with insects such as a grasshopper, red ant, beetle and dragon fly. At this point in time, there were no people as we know them today, but rather, there were Air-Spirited People. Insects filled this world, but arguments and fighting led to the First World’s demise and they had to flee upward to the Second World, or Blue World.

Nez goes on to say, “The Second World was larger than their own and filled with other creatures. They were greeted by Blue Feather Beings, which we now know as birds” [such as the blue jays, hawks, falcons and swallows]. They lived peacefully for a while, but again, the arguments and fighting led to this world crumbling too. They had to flee upward until reaching the Third World, or Yellow World.

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“The Third World, now larger than the two first worlds, contained even larger beings. It was inhabited by two-legged creatures and four-legged creatures such as, coyote, turkeys, mountain lions and deer. These lands were different than the first two, not only larger, but also contained sacred mountains in each of the cardinal directions. But unlike the first two worlds, it was not fighting that would destroy this world, but a great flood. It was Coyote who caused this flood. He had stolen Water Monster’s babies. Enraged, Water Monster floods the land. Everyone escapes this world once again to the next,” says Nez.

Nez explains that, “The Fourth World [The White World or Glittering World] is the world we now live in. It is populated not only by insects, birds, and four legged creatures, but also humanity. It is here that the creation of the different clans came to be.” Other stories of the Diné also unfold in this world also make an appearance in Nez’s depiction, including the Twin Warriors and their journey to the sun.

Nez uses subtle hints to reveal important aspects of Diné culture, such as his repetitive use of the number four. Four is an important number for the Diné as it represents the four directions, the four sacred mountains and colors: Mt. Blanca to the east (white shell), Mt. Taylor to the south (turquoise), San Francisco Peaks to the west (yellow abalone) and Mt. Hesperus to the north (jet black).
Carol Shinn, Fort Collins, CO

Shinn earned a Bachelor of Fine Arts degree from the University of Colorado at Boulder and a Master of Fine Arts degree from Arizona State University. She originally started out as a tapestry artist weaving on looms. Her curiosity led her to experiment with embroidery and over time she’s mastered a process described as photo-based machine stitched images.

From a distance Shinn’s work resembles a photograph. But up close, the work takes on a different character and reveals layers of surface texture and tiny color variations created by thread. Like an Impressionist painting, the image only makes sense when viewed from a few steps away.

Shinn says, “My process begins with my own photographs. I take these quickly, with purposeful spontaneity, so the images will retain some of the fleeting immediacy of moving through a space. I hope to contrast the implied movement with a specific captured moment and place. A photograph captures that specific moment, but I always change the image to remake that moment in my imagination. The relatively slow process of embroidery adds the element of time, contemplation, and attention to detail. I try to be true to the quality of a place while also using personal choices to influence the final image. My recent works depict places and details that I hope invite thoughts about the transitory nature of our natural environment during the turbulence of climate change.

Shinn’s art is widely collected by contemporary art and craft collectors and museums and her works has appeared in numerous publications such as American Craft, Embroidery, Fiberarts, Georgia Review and Surface Design. She is also the author of the book Freestyle Machine Embroidery, 2009. Today, she continues to make work, teach workshops across the country and write for art publications.

carolshinn.com

About Shinn’s work:

Shinn says, “I see my work as a marriage of photography and embroidery. I alter my photographs on a computer and transfer them to fabric. No part of the stitching process is computerized. I stitch the piece with a basic sewing machine. I lower its feed dogs so I can move the fabric freely as I sew, allowing me to control the length and density of stitches as needed.

The stitches are like pencil hatching. Different colors of thread are layered throughout each piece to enrich the colors. These layers become so dense that none of the original image or fabric shows. I find the fine scale of thread to be an extraordinary tool for describing details, and this discovery has allowed my work to continually evolve.”
Sperber was born in Detroit but grew up in Denver after the age of ten. She went on to study at the Colorado Institute of Art and earned a Bachelor of Arts degree from Regis University in Denver. Since the early 1990s, she has been actively showing her work in prominent art and science museums across the country and abroad like the Brooklyn Museum of Art in New York, the Peabody Essex Museum in Salem, MA and the Museo Civico di Storia Naturale in Milan, Italy.

Sperber is best recognized for creating perceptual art that turns ordinary materials such as thread spools and chenille stems (pipe cleaners) into optical illusions. Her works play with iconic works from famous artists like Andy Warhol, Pablo Picasso and Leonardo da Vinci and popular culture images like classic Star Trek characters, Marilyn Monroe and Jimi Hendrix. She digitally manipulates the images by deconstructing a JPEG file into a pixelated version that she can translate with materials from the same color palette, like thread spools. Over time, she’s customized computer software that allows her to input thousands of individual pixel colors into a program that helps her create color “maps” as a guide for building the actual artworks by hand.

Another important element to Sperber’s work is optical and neurological phenomena. The work in this exhibition includes optical tools like glass spheres and reflective surfaces that recreate how the human eye takes in information (the retina inverts an image) and how the brain re-assembles the raw data (turns image right side up) into recognizable information. The way the brain sorts and quickly makes sense of the information, neurologists call “neural priming.” By selecting well-known images like the Mona Lisa, Sperber’s viewers most likely have an existing “data file” or memory in their heads about what da Vinci’s painting looks like. So, when they see the image upside down, even without the optical viewer, they can usually recognize that famous smile.

Sperber says, “I am interested in the link between art, science, and technology, how the eyes and brain prioritize, and reality as a subjective experience vs. an absolute truth. As a visual artist, 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.”

Sperber’s work is on loan courtesy of Bentley Gallery, Phoenix.

bentleygallery.com
A comparison of a camera and an eye. In both structures, light enters through the lens and affects a structure at the back (film in the camera, the retina in the eye).

The image made by your eye or a camera is flipped.

This picture of a flower is made up of a lot of colored boxes. In the flower on the left, they are so small you cannot see them.

Information about the similarities between the Human Eye and a Camera

Information From: Ask a Biologist Website / ASU
Written by: Page Baluch and Ashleigh Gonzales
Illustrated by: Gustavo Castaneda

https://askabiologist.asu.edu/explore/how-do-we-see

“For your camera to work, light must come in through the lens and reach the back of the camera. When you point the camera at a flower, the sunlight that bounces off the flower enters through the lens. The lens directs the light so that it shines onto the back of the camera.

Light cannot bend and must travel in a straight line. Because the area in the lens where light goes in is very small compared to the size of the object, the light that contains the image will create an upside down and flipped picture. The images that are captured on your retina are also upside down but your brain converts the information so you perceive the world correctly.

So, light enters the camera and the image is flipped. What happens next? Digital cameras have an area with little sensors that are sensitive to light. Sensors will collect the bits of light that come through the camera and organize them to create a picture of the flower.

A picture is actually made from a lot of small squares called pixels. However, because they are so small, you don’t see the individual pixels. When the pixel squares are put together, they will create a picture or photograph you can see.”
About Hans Holbein the Younger’s painting, *The Ambassadors*:

Holbein was a German artist that lived during the 16th century (1497-1543). He is best known for his portrait paintings of Tudor period royals in the English court of King Henry VIII. But he was also an accomplished printmaker and designer of jewelry and metalwork. In his lifetime he worked in countries across Europe like France, Italy and Switzerland. After the Reformation in northern Europe Holbein was especially sought after for his portrait commissions. At the height of his career, he painted portraits of famous people of the time like Erasmus, Sir Thomas More, Henry VIII and Princess Elizabeth (who later became Queen Elizabeth I).

*The Ambassadors* (1533) is a large oil painting on wood panel that measures nearly seven feet wide. The work was completed in England and portrays French ambassadors to England, Jean de Dinteville on the left and Georges de Selve, Bishop of Lavaur on the right. It was painted at a time of religious and political upheaval across Europe. Tensions between Protestants and Catholics and between countries like France and England were especially high. These two French ambassadors personally witnessed the drama created by Henry VIII as he divorced his first wife Catherine of Aragon, married Anne Boleyn and broke with the Catholic Church.

Portraits during this period often include objects that symbolize the person’s attributes such as faith, hobbies, marital status, intellect and wealth. While the objects on the table between the men are thought to symbolize the turmoil of the time, it is the addition of a strange elongated skull that most grabs people’s attention. In the original painting, the optical illusion is best viewed from the bottom right corner and refers to the fragility of life.

About Leonardo da Vinci’s *Mona Lisa*:
Arguably, da Vinci’s painting, *Mona Lisa*, may be the most famous work of art in the world. This small oil painting on wood panel has garnered attention from art enthusiasts, museum goers and art historians for generations and has become a world-famous icon. She has appeared on anything from coffee mugs and calendars to movies and songs.

The da Vinci painting resides in the permanent collection of the Louvre Museum in Paris, France. Its celebrity is partially because of da Vinci’s mastery of portraying nature, anatomy and perspective. But the painting’s fame is also due to the attention and intrigue that’s surrounded it since it was painted. Scholars believe the mysterious woman depicted may be Lisa Gherardini, the wife of a Florentine cloth merchant who commissioned a portrait from the artist in 1503. However, the work never reached its intended owner and remained in da Vinci’s possession until his death in France in 1519. Over the centuries, the painting has been in the possession of famous French rulers such as Francois I and Napoleon Bonapart. It did not end up in the Louvre Museum until 1804. It gained international attention when it was stolen in 1911 and not returned for two years.

Over the last century, the painting was sent on brief tours to museums in Italy, the United States, Japan and Russia. The Louvre reports that on a daily basis, an estimated 30,000 people pass through the gallery that houses the Mona Lisa behind bullet proof glass.

*Leonardo da Vinci*  
*Portrait of Lisa Gherardini,*  
wife of Francesco del Giocondo  
(1503-1519)

Photograph: © RMN-Grand Palais (musée du Louvre) / Michel Urtado

The Louvre Museum
About Pablo Picasso’s portrait of Gertrude Stein:
Spanish artist Pablo Picasso’s name and style is recognizable across the world. He is best known for his contributions to the Cubism movement in the early 20th century. In his lifetime he worked in a variety of media including painting, sculpture, printmaking, ceramics and stage design. Today, his original works are among the most expensive and sought after in the world.

This seemingly quiet but strong portrait which was produced around 1905-6 portrays famous American writer and eccentric Gertrude Stein. Stein’s apartment in Paris served as salon and gathering place for many avantgarde artists between World War I and II. The Picasso painting was gifted to the Metropolitan Museum of Art (The MET) in New York at her bequest in 1946.

While not painted in the abstract cubist style Picasso is best known for, this earlier work does contain some visual elements that reveal Picasso’s unique approach to painting. Stein’s face is the most prominent feature and appears to be floating on top of the painting, like a mask. Stein’s eyes are also exaggerated, and the left appears much bigger than the other indicating its closer proximity to the viewer. Later in his career, Picasso used tricks like this in cubist painting to represent the illusion of multiple perspectives.

Pablo Picasso
Portrait of Gertrude Stein
(1905-06)
Collection of the Metropolitan Museum of Art, NY

The MET
Yaghmourian is a painter, sculptor and installation and performance artist. She was born in Bethpage, NY, but moved to Phoenix when she was eight years old. She received a Bachelor of Fine Arts degree in painting and art education from Arizona State University in 1991. Yaghmourian has participated in numerous exhibitions at museums and galleries throughout the United States and abroad including Tucson Museum of Art, Phoenix Art Museum, Bogen Galerie in Saint Paul de Vence, France and Ceres Gallery and SOHO20 Chelsea Gallery in New York. Over the years, she has worked with a variety of media and has a reputation for manipulating ordinary materials like paint, thread, vinyl, paper, fabric and found objects into fine art. Often times, she deconstructs the materials and puts them back together. Her artmaking process involves labor intensive handwork that recalls traditional craft practices like sewing, weaving, beading, ceramics and more. For this exhibition, Yaghmourian displays new works from an ongoing fiber series that are deceptively minimalistic. The straightforward shapes are wrapped and woven with materials like nylon hook and eye tape (normally used for bra and corset closures) fabric and thread. She spends hundreds of hours creating grid-like patterns and intricate textured surfaces. In particular, the threadwork Yaghmourian does is repetitive and reveals a push and pull process that is both time consuming and meditative for the artist and the viewer.

Yaghmourian says, “My work explores connections. I am interested in the collaborations that occur between forces, be they intentional or unintentional, conscious or unconscious, known or unknown... I find inspiration in every aspect of life but seem to be drawn to the universal occurrence of pattern. Patterns in nature, patterns in math and science, patterns of the brain and patterns in life and relationships.”

Yaghmourian's work is on loan courtesy of Bentley Gallery, Phoenix. bentleygallery.com
Follow Up Activity: Ecological Weaving

OBJECTIVES (Sixth-grade performance objectives. The activity can be adapted for any age.)

1. Students will be able to generate ideas for their art from science.

   **VA.CR.1.6b:** Formulate an artistic investigation of personally relevant content for creating art.

   **6th Grade Life Science Background Information:** “Organisms and populations of organisms are dependent on their environmental interactions both with other living things and with nonliving factors.”

2. Students will be able to explore various materials before selecting those to use in a mixed media artwork.

   **VA.CR.2.6a:** Demonstrate openness in trying new ideas, materials, methods, and approaches in making works of art and design.

ACTIVITIES

Introduce ecology as the biological study of relationships between living things and their surroundings.

Lead brainstorming about such relationships, for example, parrots in tropical forests, fish in rivers, polar bears and seals on ice sheets, roadrunners in the desert, giant squid in the oceans, cranes in wetlands, etc.

Divide students into groups and assign each group an ecosystem.

Ask students to consult online or textbook references both to learn about their ecosystem and the animals that live there, and also to locate images they can consult when making their artwork. Explain that students will each be making a paper weaving that express the interdependence of an animal and its surroundings.

ASSIGNMENT:

Experiment with several media before choosing two different media you can weave together.

Cut out animal and decide where to place it on background surroundings.

Cut strips where needed and weave animal over and under the strips into its surroundings.