



IOWA

Iowa West Public Art

DAN CORSON

RAYS

INTERACTIVE

LIGHT

ENVIRONMENT

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DAN CORSON RAYS INTERACTIVE LIGHT ENVIRONMENT TOM HANAFAN RIVER'S EDGE PARK

ABOUT THE ARTIST

Dan Corson calls himself an artist, scientist, and magician who loves to transform the viewer’s perception and experience with each art work. His first college degree was in Theatrical Design so his art work combines art, theatrical design, architecture, landscape architecture, science and sometimes even magic. Dan Corson says, “I was always an artist even as a kid, expressing things in a variety of ways. My undergrad degree was split between marine biology and theater design. My interest was always in creating worlds and immersive environments—but now I have traded out the actors for the public moving around, in and through my spaces.” Corson claims that part of his art work is the interaction of the viewer, not just looking at his art but participating in changing the environment as they move through it. He hopes that you are surprised and amazed seeing his dynamic interactive light environments and will want to return again and again to see more. He wants you to feel part of the experience. Dan Corson says, “My work is infused with drama, passion, layered meanings and often engages the public as co-creators within my environments.”



Dan Corson is known for working with light and creating environments that change completely from day to night. While theater helped him understand how to manipulate the viewer, employ effects, and understand the physics and psychology of light, his training and Master of Fine Arts in sculpture had an influence on how he sees, frames and analyzes things. Even though many of his works are large scale and employ new technologies they are often inspired by the natural world. He is particularly interested in green design, design that is concerned with creating a healthy natural environment. He is also interested in new technologies and how both of these tools can help us appreciate the natural world and our relationship to it. Although many of his installations are outside in the natural world, he also brings the natural world inside, for example when he created a cave out of electric lights, mirrors and skylights inside a gallery.

WORK OF ART

HISTORY OF THE SITE

The interactive light display *Rays* is on the great lawn of the Tom Hanafan River’s Edge Park in Council Bluffs, Iowa. In 2011, the Missouri River flooded this area and for 110 days it was under water. Because this is a natural riverfront area it is expected that it will flood again. The park sits on the river side of the levee system and 40,000 cubic yards of dirt were hauled in to build it up. Nine hundred trees have been planted in this 95 acre park. The park is located at the Council Bluff side (eastern side) of the Bob Kerrey Pedestrian Bridge over the Missouri River. It offers a sweeping view of the downtown Omaha skyline. The five-acre great lawn, the centerpiece of the park, is intended for casual activities as well as concerts and the interactive light display.

MEDIUM, DESCRIPTION, AND INTERPRETATION

Dan Corson uses unusual materials (media) to create *Rays*. The canvas for his interactive light display is the five-acre great lawn. The “paint” is the light created by robotic lighting fixtures, dynamic pattern projectors, infrared cameras, Doppler radar sensors, and custom interactive software and hardware. At night the lights turn on twice an hour for 8 and 12 minute shows. The 16 projectors and four rotating light fixtures create the light patterns that interact with the people on the lawn.

Preview the photos of *Rays* on Dan Corson’s website.

[Link available at www.iowawestpublicart.org](#)

Why do you think this work is entitled *Rays*?

There are both “show modes” and “interactive modes” during the lighting projection sequences. During the show modes, when the patterns are presented in preset sequences, the lights echo designs from the past such as European Baroque knot gardens and French formal gardens.

Look at the examples of knot gardens.

[Link available at www.iowawestpublicart.org](#)

What features of these gardens do you think inspired Dan Corson in his design of *Rays*?

One of the patterns inspired by formal gardens is a sequence of rotating white lines that breaks up the lawn into geometric patterns. Other designs are inspired by what a slowly spinning ice flow looks like as it breaks up and moves down a river like the Missouri which flows past the site. Each pattern is dynamic as it changes, slowly spinning, zooming in and out, and changing sharpness and color.

When the colors of the chasing rainbow pattern appear the audience knows that it is time for the interactive show mode and they can come out on the lawn to play with the light patterns. These interactive lights are directed by infrared and radar sensors that respond to the movement of people on the lawn. Dan Corson says, “You will see tons of people running out there and feeling and experiencing these patterns and colors.” Each interactive show has two randomly selected games.

One game is called “Stealing Dorothy Hamill’s Spotlight.”

Do you know who Dorothy Hamill is?

(Dorothy Stuart Hamill is an American figure skater. She was the 1976 Olympic champion in ladies’ singles and the 1976 World champion.)

Why would she need a spotlight? What kind of surface would she move on?

In the game, four robotic lights pick one person to follow as they move on the lawn. The game is for other people to try to trick the robot and steal the spotlight.

How is this game like ice skaters on a rink?

“Hot-Cold” - In this game a blue spotlight appears on the field. The spotlight changes color as people get closer and then turns red when someone jumps onto it. To indicate success the entire lawn flashes through a series of colors until the blue spotlight appears alone again in a different location and everyone moves toward it to start the game over.

Have you ever played the game hot-cold?

When do you get hotter in this game? (as you get closer to the chosen object)

How are these two games alike?

Which color of light is hot? Which is cold?

What do artists mean when they talk about warm and cool colors?

“Cat Laser Pointer” - A small green light dodges around the field as people attempt to catch it.

Why is this called “Cat Laser Pointer?”

“Yellow Spot Blue Spot” - Out of all the people on the lawn the computer picks two and gives each a different colored spotlight. They try to trick the computer into switching their colors as they move and weave around the field.

[Note to teacher: You might read the book *Blue Spots! Yellow Spots* by Atwood and Hall and discuss how this book relates to the game with lights.]

What would happen when the yellow and blue colored lights overlap and intersect?

“Easter Eggs”

Do you know what the name Easter Eggs refers to either when you are talking about animations, videos or software?

(The name originates from secret animations and videos incorporated into software that are only revealed if you know the secret keystroke. The name is also used for extra content at the end of movie credits.)

“People in the know” can use a series of gestures to trigger the following Easter Eggs during the interactive game sequence:

Jump - If more than 55 percent of the people on the lawn jump up and down together all the lights on the field will blink on and off, mimicking the jumping people.

Flash Mob - If more than 55 percent of the people on the lawn rush in and huddle, then break out, the lights on the lawn will “go crazy” and swirl around.

Run for the River - If more than 55 percent of the people on the lawn begin at the curving sidewalk and run toward the river at one time the whole lawn will ripple with colors of blue, white and teal.

If your class visited *Rays*, how many of you would need to interact together to trigger the Easter Eggs?

Go to Dan Corson’s website and look at:

Rays

Digital Divide

Longboat Rookery

Sonic Bloom (Works: Public Art)

[Link available at www.iowawestpublicart.org](#)

Each of these works is located in a different kind of place.

How does each reflect its particular site?

(Teacher note: for *Sonic Bloom*, be sure to consider the location at a Science Center and on Puget Sound and the importance of gardens in Seattle.)

In order to work in these environments, what kinds of problems might Dan Corson have had to solve?

VOCABULARY

Cool colors – Colors such as blue, green and light purple. Where warm colors remind us of heat and sunshine, cool colors remind us of water and sky.

Environment – The surroundings or conditions in which a person, animal, or plant lives or an activity is carried on.

Formal garden – A garden laid out on regular lines with plants arranged in symmetrical locations or in geometrical designs.

Medium (plural: media) – The material or form used by an artist.

Pattern – A repeated decorative design.

Warm colors – Colors made with orange, red, yellow and combinations of them all. As the name indicates, they tend to make you think of sunlight and heat.

CLASSROOM CONNECTIONS

EXPLORE BIG IDEAS:

Artists create art works with which humans can interact.

Connect with Other Art, Artists and Cultures

Many of Dan Corson’s works of art envelop the viewer and draw them in to experience the environment, sometimes as a co-creator.

Look at the following works on Dan Corson’s website:

Luminous Conjunction (Works: Public Art)

Emerald Aura (Works: Public Art)

Rays (Works: Public Art)

Sonic Bloom (Works: Public Art)

Smash (Works: Gallery/Installation)

Look at the videos about:

Luminous Conjunction

Emerald Aura

[Links available at www.iowawestpublicart.org](#)

Which of these works change in response to humans moving through them?

How does *Smash* require a different kind of action?

Think of the following features of the works: color, light, shape and pattern.

How do each of these features change in response to human action in each of the works?

What extra sense does *Sonic Bloom* require you to use? How can people trigger sounds?

What types of things do people have to do to cause these changes? (Teacher Note: Be sure to consider all of the components of *Rays*, such as the interactive games.)

Look at the following works:

Jaume Plensa, *Crown Fountain*, Millennium Park, Chicago

Jesús Morales, *Omaha Riverscape*, Joslyn Art Museum, Omaha

Christo and Jeanne Claude, *The Gates*, Central Park, New York City (view Michael Kimmelman’s Appraisal)

Leo Villareal, *Multiverse*, National Gallery of Art, Washington, D. C.

[Links available at www.iowawestpublicart.org](#)

How do you imagine humans interact with these art works?

Which pieces encourage people to interact with water?

Which pieces have paths that provide a direction for people to move?

Like Corson, which artists make use of unusual materials like light and video projections?

Look at the videos about:

Jaume Plensa, *Crown Fountain*, Millennium Park, Chicago

Christo and Jeanne Claude, *The Gates*, Central Park, New York City

Leo Villareal, *Multiverse*, National Gallery of Art, Washington, D. C.

[Links available at www.iowawestpublicart.org](#)

After each video discuss how you saw people interacting with the art work.

Look at the sites and videos about the following works:

Maya Lin, *Civil Rights Memorial*, Montgomery, Ala.

Patrick Dougherty, *Storytelling Hut*, Joslyn Art Museum, Omaha (temporary installation)

Richard Serra, *Vortex*, Ft. Worth Modern Art Museum

[Links available at www.iowawestpublicart.org](#)

How do you imagine humans interact with these art works?

How do you think your interaction with these three works might be different from the way you would interact with the last group of works? (Teacher note: these works seem to require a more individual type of interaction.)

Dan Corson’s *Rays*, changes as people move in different ways. Do any of these works respond to the ways people move? How?

Which of your five senses do you use to experience these works?

Based on what you have seen, which artists involved other people in the making of the art?

When Jesús Morales created his *Omaha Riverscape* at the Joslyn Art Museum he invited elementary and high school students to participate in sculpting the granite. When Patrick Dougherty created a stick sculpture called *Storytelling Hut* at the Joslyn Art Museum he involved college art students in the art making process.

Look at the images and video of the following art works:

Nam June Paik, *TV Cello*

Nick Cave, *Freeport*

James Luna, *Take a Picture with a Real Indian*

These three artists also involve interaction of people in their art works.

How are the artists involving people in these art works?

Which of the artists actually performs as part of the art work?

Which of the artists have other people perform as part of the art work?

Which of the artists have audience members take part in the art work?

Is there any way that you could become part of a performance by interacting with Dan Corson’s *Rays*?

Experiment with Art Making

After looking at these art works that involve human interaction in different ways, you are going to create performance art that makes use of pattern and movement like the games in Dan Corson’s *Rays*.

In small groups, have students decide on five different unique movements that will correspond to five different colors which can be indicated with colored construction paper. For example, one group might decide that when they see the color red they will do a jumping jack.

In the art works by Plensa, Villareal and Corson you saw computer generated reactions to people’s movements. Now, one group is going to “program” movement directions for another group.

Basic Instructions: Group 1, by holding up sheets of colored construction paper, will cause people in Group 2 to move according to their selected movement for that color.

Variations to program patterns:

Everyone in the group responds to one color.

Each person is paired up to a single person in Group 1 so that each person can be doing a different movement.

Group 1 can create patterns in the colors they hold up.

Group 1 can create a visual grid of their colors to “write a program”. Then the program is translated into movement by Group 2.

Then switch the groups so that Group 2 creates the program and Group 1 performs.

Extension: Create a sound to correspond to the color along with the movement.

EXPLORE BIG IDEAS:

Artists create art works that interact with nature.

Many of Dan Corson’s art works interact with or recreate natural environments.

Look at the following works on Dan Corson’s website:

Grotesque Arabesque (Gallery/ Installations)

Civita Residency (Environmental Site Works)

Luminous Reeds (Public Art)

Fiber Optic Reeds (Public Art)

Saguaro Soul (Public Art)

(Inner/Outer) *Space Forms* (Public Art)

Oscillating Field (Public Art) also video

Root (Public Art)

Emerald Laser Lawn (Public Art) also video

Rays (Public Art)

What different natural environments do these works suggest?

Which ones are actually in the natural environment to which they refer?

What kinds of other environments are the others placed in?

Notice that Dan Corson created a work of art in an actual archaeological cave in the *Civita Residency* but he also created an otherworldly light-filled cave in an art gallery with the *Grotesque Arabesque*. He placed *Fiber Optic Reeds* in an outdoor pond and *Luminous Reeds* inside a university housing facility.

Corson often creates natural forms using technological materials.

What kinds of natural forms do you see?

Which ones use actual natural materials and which ones use technological materials?

Which works mimic movement in nature?

Which works mimic colors in nature?

Look at the following works on Dan Corson’s website:

Rain Drums (Public Art) also video

Trace (Environmental Site Works)

Technology in Waterscape (Environmental Site Works)

Sonic Bloom (Public Art)

What kind of interaction does each of these art works have with nature?

Which of these works are affected by changes in the weather?

Which of your five senses do you use to experience these works?

Watch the video on rain drums.

[Link available at www.iowawestpublicart.org](#)

How do the rain drums continue to perform even when it is not raining?

How can humans interact with rain drums?

Compare the use of sound in *Rain Drums* and *Sonic Bloom*.

Look at the following work on Dan Corson’s website:

Waterlines (Environmental Site Works)

How do *Waterlines* and *Trace* make us think about how we should take care of the environment?

Connect with Other Art, Artists and Cultures

Some other artists whose works are intended to make us reflect upon the impact that humans have on the environment are Mark Dion, Mel Chin and Christo and Jeanne Claude.

Look at the following works and watch the short videos:

Mark Dion, *Neukom Vivarium*

Mel Chin, *Revival Field*

Christo and Jeanne Claude, *Surrounded Islands*

[Links available at www.iowawestpublicart.org](#)

What kinds of environments are each of these works dealing with?

How do each of the artists make us think about caring for the environment?

Mark Dion, by placing a dead tree in a greenhouse museum, wants us to see how the death and decay of the tree serves as a site for the growing of new life. Mel Chin also combines science and art when he uses plants to leach industrial toxins from the soil. Christo and Jeanne Claude made us look differently at the fragile Biscayne Bay environment and humans’ impact upon it. In the process of surrounding the islands with fabric they also cleaned up 40 tons of garbage that people had left on them.

Why do you think these projects are considered art?

Like Dan Corson other artists create works which interact with nature.

Look at the following works and watch the videos:

Andy Goldsworthy, video and website

Dale Chihuly, *Gardens and Glass*

Walter de Maria, *Lightening Field*

James Turrell, *Rhoden Crater*

Robert Smithson, *Spiral Jetty*

Richard Long, video and website

[Links available at www.iowawestpublicart.org](#)

In what kinds of natural environments are these works made?

Are any of these environments similar to the environments Dan Corson uses?

In order to work in these natural environments, what kinds of problems might these artists have had to solve?

What kinds of natural forms and materials do you see in these works?

Which of Dan Corson’s works could you compare to Dale Chihuly’s *Gardens and Glass*?

Which works use actual natural materials and which ones use technological materials?

What kind of interaction does each of these art works have with nature?

Which of these works are affected by changes in the weather or by cycles of nature?

If you could interview one of these artists what questions would you ask them?

Choose one of the works and imagine being there with it in the environment. Write a paragraph about what you see, hear and feel as you experience the art work in nature.

Experiment with Art Making

After looking at the artists who create art works that interact with nature, you are going to create art using the materials from a particular environment.

Richard Long particularly likes to use tidal river mud in his mud paintings. Another artist who has used actual dirt in her work is Michelle Stuart.

Look at the following work:

Michelle Stuart, *Sayreville Quarry, N.J., 1976*.

[Link available at www.iowawestpublicart.org](#)

Michelle Stuart likes to refer to a particular place by using the dirt from that spot to rub on her paper and she titles her works in reference to the place from which the dirt came.

You are going to make a work of art with dirt and other materials from a particular spot. Collect a paper cup of dirt from a location that is special to you. (school grounds, playground, Grandmother’s garden, etc.) Also collect a few leaves and flowers if they are available.

You should have two pieces of heavy paper, one to experiment and one for your final art work.

Try rubbing your paper with dirt.

Try crushing a leaf and rubbing your paper with it.

Put some dirt in an empty paper cup. Try adding different amounts of water to it and using it to paint on your paper with a brush or with your fingers.

Which effects do you like best?

What kind of design will you make using the natural materials you have experimented with?

How does your work express the nature of the site you chose?

What will you title your work?

Glue your work onto a piece of construction paper to provide a frame.

Write an artist’s statement discussing your work and the environment it reflects. Display the artist’s statement with your work.

WHAT IS IWPA?

Iowa West Public Art (IWPA) is an initiative of the Iowa West Foundation that started in 2004. IWPA is guided by a community-driven Public Art Master Plan, which selected over 50 public art sites in the City of Council Bluffs, Iowa. IWPA’s vision for the year 2015 is a community with a national and international reputation for high quality art that attracts visitors from all over the world and fuels economic development. Learn more at [www.iowawestpublicart.org](#).

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