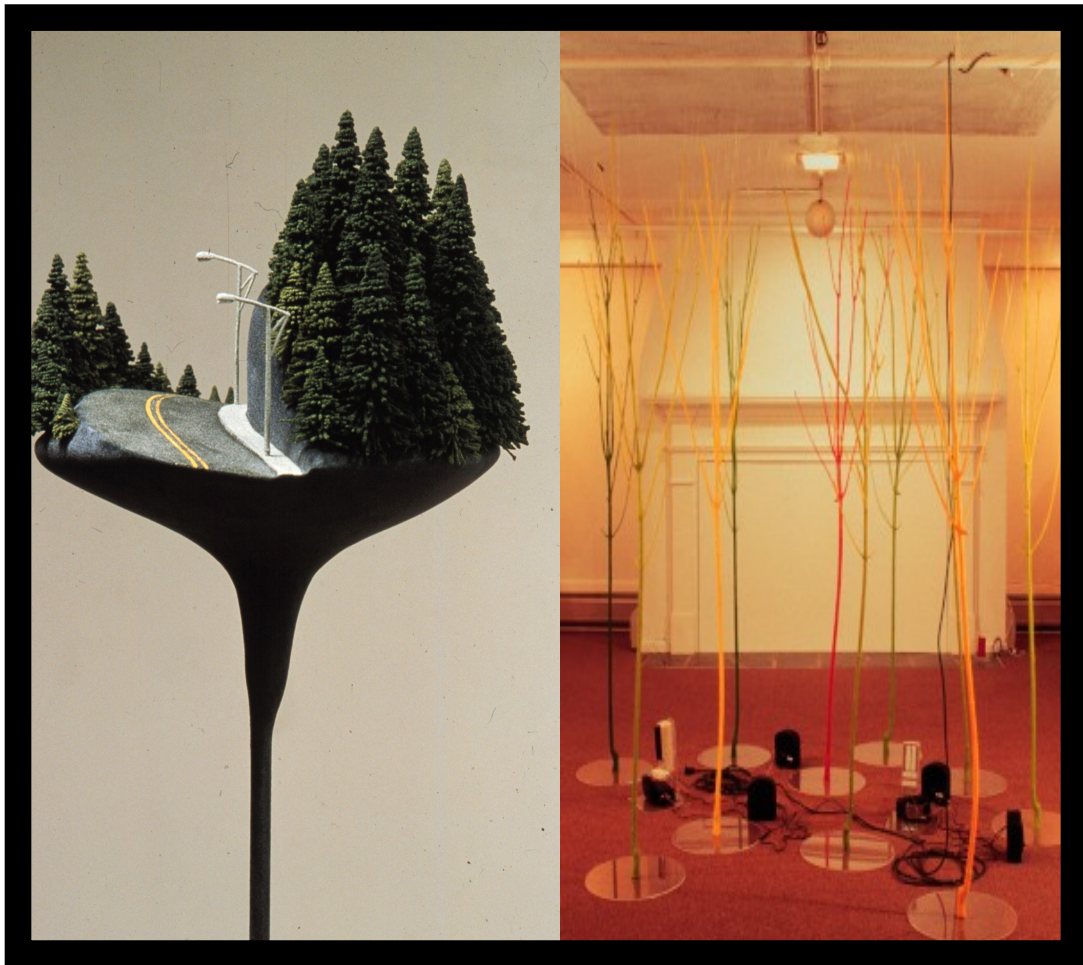


Earth, Wind, and Desire: Nature Park

Featuring Rob de Mar and Victoria Palermo
October 2, 2003 – February 1, 2004

TEACHER CURRICULUM GUIDE
FALL 2003



(L) *Street Lamp II*, Rob de Mar, 2001. (R) *Virgin Timber*, Victoria Palermo, 2003.

Earth, Wind, and Desire: Nature Park

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Introduction to *Earth, Wind, and Desire: Nature Park*

Exhibition Overview

Earth, Wind, and Desire: Nature Park has transformed the Kidspace gallery into an indoor “nature park” An Astroturf path winds through the gallery, gently leading you through an exhibit of sculpture by Victoria Palermo and Rob de Mar. Both artists use nature as the inspiration for their art making, and are especially interested in how the natural environment is effected by human intervention.

Victoria Palermo surprises us in her choice of medium. She transforms natural materials such as grass and moss into whimsical chairs and abstract sculpture. At the same time, she also makes use of a manufactured material—rubber—to create forests of colorful birch trees. The contrast in Palermo’s choice of materials and subject matter encourages viewers to think about dualities that exist in natural and human-made surroundings. The exhibition includes three grass chairs, seventeen colorful rubber birch trees and twelve abstract moss sculptures.

Rob de Mar presents us with two types of fanciful environments. In some of his 3-D landscapes, he seamlessly integrates roads and cell phone towers with rolling hills and lush forests. In others, he creates natural ecosystems that have not yet been intruded upon by humans. We might encounter a green hilly mountainside pierced by a stark, seemingly endless black top road. Or we might find futuristic lush green landscapes with bulbous hills and fluffy white clouds that grow strangely from metal poles. The exhibition features two wall landscapes and four standing pieces.

About the Artist – Victoria Palermo

Victoria Palermo, a sculptor residing in Queensbury, New York, holds a Bachelor of Science degree in Art from Skidmore College, Saratoga Springs, New York and a Master of Fine Arts degree from Bennington College, Bennington, Vermont. She is a Visiting Assistant Professor of Art at Skidmore College and previously was a scenic painter and art department director for Adirondack Scenic, Inc., in Glens Falls, New York. Victoria has been awarded artist fellowship grants from the New York Foundation for the Arts and the New York State Council on the Arts, and was an artist-in-residence at YADDO in Saratoga Springs, New York. Her work has been in solo and group shows in such galleries and museums as: The Arts Center at Troy, New York; Pierogi 2000,

Williamsburg, Brooklyn; ART/OMI Sculpture Park, Ghent, New York; Galerie Du Tableau, Marseilles, France; One Mellon Bank Center, Pittsburgh, Pennsylvania; Schenectady Museum, Schenectady, New York; Rice Gallery, Albany, New York; White Columns, New York City; and Art In General, New York City.



Artist Statement – Victoria Palermo

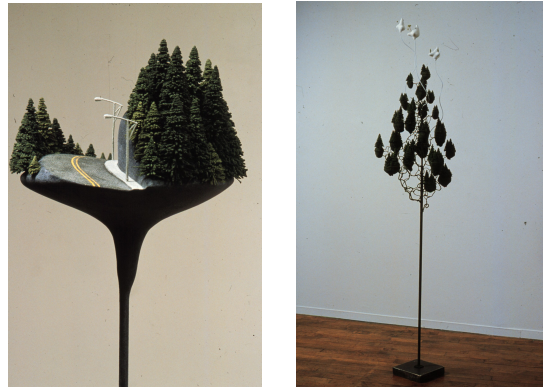
Nature has the power to seduce and terrify us--sometimes both at once. It has always been a source of fascination for human beings. Earlier civilizations explained it through myths and stories. Artists have celebrated it on canvas, writers through poetry. People attempt to tame it, reproduce it, bend it to their will in gardens, farms, lawns, and parks.

Much of my work looks at this relationship with nature. Sometimes I like to use landscape gardening materials and techniques to make surprising objects. Other times, I use very artificial materials to produce something botanical-looking. In this exhibit, I've used both approaches--to make a kind of "nature theme park."

About the Artist – Rob de Mar

Brooklyn-based sculptor Rob de Mar holds a BFA from New York's School of Visual Arts, and has been an artist-in-residence at the Skowhegan School of Painting and Sculpture as well as the Vermont Studio Center. In addition to his work as a professional artist, he is a set dresser for movies and television commercials. He has created furniture, gates, and various settings for such movies as the *Royal Tenenbaums* starring Ben Stiller and Gene Hackman, and *Birth*, starring Nicole Kidman. He is currently represented by the Clementine Gallery, New York City. Rob's work has been in solo and group exhibitions in such galleries and museums as: White Columns, New York City; PS 1

Contemporary Art Center, Long Island City, New York; Whitney Museum of American Art at Philip Morris, New York City; Portland Museum of Art, Portland, Maine; Wave Hill Glyndor Gallery, Bronx, New York; Nylon Gallery, London, England; Inman Gallery, Houston, Texas; Aldrich Museum of Contemporary Art, Ridgefield, Connecticut; and the Pittsburgh Center for the Arts, Pittsburgh, Pennsylvania.



Artist Statement – Rob de Mar

My work is about simplifying the elements that are between humanity and nature. I attempt to address man's complicated relationship with nature, combining pastoral elements alongside structures of urban development. My sculptures are microcosms of our world: waterfalls, grassy hills, stone dwellings, forests, ponds, mountaintops, tree lines, autumn days mixed with cell towers, winding roads, stone walls, parking lots, and street lamps. These imprints of humanity on nature create an unlikely beauty.

* * * * *

When at Kidspace

Some key points that we will address when your students visit Kidspace are:

- Artists and scientists analyze the world around them in surprisingly similar ways.
- There are strong relationships between artists' choice of material and the content of their work.
- Through artistic endeavors, one can express interests in the natural environment.

- Artists have many different approaches to creating images of nature in 3-dimensions.

Your students will role-play as scientists, observing and analyzing art and nature. They will be asked a series of questions about the art on view, however, the questions will be phrased using scientific terminology (found in the science MA Learning Frameworks). For instance, *describe* how it feels to be standing among these colorful trees. *Observe* the patterns you can find repeated in “Waterfall” *Formulate a hypothesis or theory about* why the artist made these chairs out of grass. *Predict* what will happen when you get to the end of the road in “Street Lamp II”.

At the conclusion of the gallery tour, your students will work on a grade-appropriate art project. Students will try their hand at making their own sculptures depicting scenes in nature. These projects will enable your students to practice making 3-dimensional objects. When the artist visits your class, your students will also have the opportunity to create more complex sculptural works.

Additional Programs

In addition to classroom and Kidspace activities, specialists in the arts and sciences have been invited to extend programs in your school. North Adams 4th-graders will visit Williams College’s Hopkins Forest with Williams staff to gather information for their projects and the Kidspace experience. They will explore how the forest has changed over time as a result of weather, growth patterns, and land usage by humans and animals. Prior to their visit to the forest, students will work with Williams College students in their classrooms. Using primary source materials documenting the forest’s growth over the past 60 years, they will learn what they need to look for while at the forest that provides evidence of change.

The artist residency component of the Kidspace program has been expanded in FY04 with Massachusetts Cultural Council funding. **Each school will have six days with the artists.** For the North Adams schools, the plan is as follows: Victoria Palermo will work in Greylock (13 classes) and Sullivan (19 classes), and Rob de Mar will work in Brayton (25 classes). Each class will have one visit from the artist. Each session will be 45-minutes. In addition, the 4th-graders will work on more extensive projects and will have two additional visits with the artist, one of which will take place at Kidspace.

Program Goals

- Contemporary art can be used to sharpen student visual literacy skills, which can be applied in many subject areas, in particular in art-making, English language arts and science.
- Interactions with artists and their artwork and scientists and their primary source materials are a means for students to more fully understand the relationship between the scientific and artistic problem-solving processes.
- Curriculum materials and teacher workshops can motivate classroom educators to make connections among multiple ways in which to explore the natural environment.

Learner Outcomes

Through multiple activities focusing on contemporary art and the natural environment, students will:

- discuss their understanding of how an artist's selection of material influences meaning in works of art;
- recognize natural materials as viable sources for art works;
- express key points connecting the artistic and scientific problem-solving processes;
- describe their concerns and/or admiration for the natural environment;
- illustrate their interpretations of nature in sculpture and drawings, and in written and oral stories.

Your Feedback and Sharing with Others

In February, we have scheduled an evaluation workshop with all the teachers in your school. We would like to know your thoughts on the curriculum and programs. We also ask that you share your comments on the exhibition. We will provide you with an evaluation form to complete at the workshop. Meanwhile, we would appreciate hearing your thoughts along the way. Drop us a note at lthompson@massmoca.org, or phone us at 413-664-4481 ext. 8131. Your comments do make a difference. For instance, you will notice that based on teacher comments made last year, we have broken down this curriculum by grade levels: Pre-K – 2nd grade, 4th grade, and 3 and 5th grade.

We hope that you will share your class projects with others in your school. Since each class in your school is involved with Kidspace, it would be interesting to see the different interpretations of the activities and the Kidspace experience. You

might display your work throughout the school and meet with other classes to discuss the artists' work and Kidspace.

We would like to visit your school to document your students' work and to hear about the other projects that you develop on your own in conjunction with the *Nature Park* exhibit. You may also send digital photographs, scanned work, or project ideas to the email address above.

We look forward to a successful collaboration!

Laura Thompson, Ed.D.
Associate Curator of Exhibitions and Education

Megan Hack
Kidspace Assistant

Learning Standards Addressed Through Kidspace

The *Earth, Wind, and Desire* project addresses multiple learning standards as the project is interdisciplinary including activities in the arts, science/technology, history/social sciences, and English language arts. The following selected standards will be addressed:

Arts

Students will demonstrate knowledge of the media, materials, and techniques unique to the visual arts (MA Standard 1).

Students will demonstrate their powers of observation, abstraction, invention, and expression in a variety of media, materials, and techniques (MA Standard 3).

Students will use imaginative and reflective thinking during all phases of creating (derived from MA Standard 4).

Students will use analytical and critical thinking to respond to and interpret works of art (derived from MA Standards 5 & 6).

Students will apply their knowledge of the arts to the study of the English language arts, mathematics, and science and technology (MA Standard 10).

History/Social Science

Students will describe the location and features of places in the immediate neighborhood of the student's home or school (MA Standard - Pre-K – K.5).

Students will describe the major natural resources in their community (derived from MA Standard – 4.17).

Science/Technology

Students will examine evidence that where people live reflects technological changes (derived from MA Learning Standards Pre-K – 4).

Students will give examples of the decisions we make as individuals, groups, and communities that can affect society and the natural environment, and will

explain that these changes are not always easy to reverse (MA Learning Standard Pre-K – 8).

Students will apply multiple lines of inquiry to address and analyze a question (MA Learning Standard 5 -8).

Give examples of how organisms can cause changes in their environment to ensure survival. How do these changes affect the ecosystem? (MA Learning Standard 3-5).

Give examples of how inherited characteristics may change over time as adaptations to changes in the environment that enable organisms to survive. (MA Learning Standard 3-5).

How do organisms respond to stimuli (not just instinctive)? (MA Learning Standard 3-5).

English Language Arts

Students will pose questions [about works of art], listen to the ideas of others, and contribute their own information or ideas in group discussions and interviews in order to acquire new knowledge (derived from MA Standard 2) .

Students will understand and acquire new vocabulary and use it correctly in reading and writing (MA Standard 4).

Students will identify the basic facts and essential ideas in what they have read, heard, or viewed (MA Standard 9).

Students will identify, analyze, and apply knowledge of a theme in art and literary works and provide evidence to support their understanding (derived from MA Standard 11).

ECOSYSTEMS

Pre-K – 2nd Grade Activities

Overview

In the classroom and at Kidspace, Pre-K – 2nd grade students will examine ecosystems from both scientific and artistic points of view. Students will be introduced to the concept of ecosystems such as deserts, tundras, and rainforests, and will learn about the elements that encompass them. Using the sculptures in Kidspace, they will explore human relationships to ecosystems and discover similarities among how animals and humans design certain aspects of the world around them. Classroom activities that you will do after your visit will encourage students to make connections between animals and humans and the natural environment: to realize that we are all dependent on nature for our survival.

Activity Schedule

Pre-Visit: What is an Ecosystem? (October)

1. Reading and Discussion: Ecosystems
2. Matching Game: Where Do You Live?
3. Preview Kidspace Exhibition
4. Free Exploration

During Visit (October – December)

1. Guided Discussion
2. Art-Making Activity

Post-Visit: Appreciating Ecosystems (November – January)

1. Role-Play Activity: If a Tree Falls in the Forest, Does a Bird Cry?
2. Reading and Drawing Activity: The Giving Tree

Extensions (November – January)

1. Drawing Activity: Natural Living Room
2. Drawing Activity: Classroom Forest
3. Group Activity: Classroom Terrarium
4. Reading and Discussion: Endangered Species

Artist Residency (January)*

1. Preparing for Artist Residency

2. Project with Artist

* NOTE: Please keep all Kidspace-related art projects created at school and at Kidspace in the classroom until after the artist residency. The artist will want to view your students' work and will connect the residency project to the work your students have already completed.

PRE-VISIT ACTIVITIES

What is an Ecosystem?

Pre-K – 2nd Grade

Objectives

- Through reading and match-game activities and discussions, students will discover what comprises ecosystems.
- In reviewing images of the sculpture on view in Kidspace, students will be better prepared to talk about art during their field trips.
- In free explorations of Model-Magic clay, students will become comfortable using a material that will be used at Kidspace.

How do these activities relate to Kidspace?

Both Victoria Palermo's and Rob de Mar's artwork reflects an interest in ecosystems. Victoria's moss box experiments and grass chairs can be looked at as mini-ecosystems. They are self-sustained worlds that do not require interaction from additional natural elements other than sunlight. Rob's work also presents us with mini-ecosystems as he includes many different natural and human-made elements in his sculpture.

Time needed

2 hours

Materials

- Books on ecosystems (see below for recommendations)
- Three overhead projector images from Kidspace exhibit
- Crayola Model-Magic clay
- Drawing paper and markers

Key Terms

- Habitats
- Ecosystems
- Environment
- Landscapes

1. Reading and Discussion: Ecosystems

To begin your discussion on ecosystems, read as a group a book on an ecosystem. We recommend One Small Square books—entitled *Pond*, *Cactus Desert*, or *Seashore*—by Donald M. Silver (Mc Graw-Hill, 1997). Or *Eye Wonder: Rain Forest* by Elinor Greenwood (Dorling Kindersley Pub., 2001) or *Life in the Tundra (Ecosystems in Action)* by Cherie Winner (Lerner Pub., Co., 2003). Discuss the different elements that make-up an ecosystem.

2. Matching Game: Where Do You Live?

Ask your students to play a matching game to discover what ecosystem different animals live in. On your chalkboard make two columns. In one column, list 5 -6 animals. On the other side, list 5 –6 different places they might live. Ask your students to match where the animals live and to talk about why they made those decisions. For younger (pre-reading) students, instead of having them match using words, you might scramble up pictures of animals and natural environments that you photocopy from library books or print from the Internet.

3. Preview Kidspace Exhibition

Now that your students are aware of ecosystems and the different places in which animals live within them, begin a discussion on human relationships to their ecosystems. Talk about how both animals and humans use materials in the nature environment for their homes. Also discuss that humans use manufactured materials in their homes such as plastics and metals. Explain that when they are visiting Kidspace, they are going to look at how two artists make sculptures using natural and manufacture materials. Also discuss that these artists represent ecosystems in their work in unique ways. Show them two images of Rob de Mar’s work (“Waterfall III” and “Forest”) and one image of Victoria Palermo’s work (“See Creatures”). Ask your students to talk about what they imagine these pieces are made of and how they might be ecosystems.

Suggested questions:

- Do these environments look real? How are they similar to and different from things found in nature?
- What are the different parts that make up the sculpture? What would happen if you removed one part of it (like the armature (stem) from Rob’s work)?
- What kind of animal would you imagine might live in these sculptures?
- If you were standing in these pieces, how do you imagine you might walk around them? (i.e., in “Waterfall”, you might have to hop from tree to tree.)

Time permitting, have your students sketch animals that they imagine live in Rob’s and Victoria’s landscapes.

4. Free Exploration

Your students will work with Model-Magic clay (by Crayola) at Kidspace. For many students, this may be the first time they will have worked three-dimensionally and with this material. To help them to feel comfortable with the clay, please allow for some time before their visit to play with the clay in your classroom or with your art teacher. Give each student a handful of the clay and

have them try different ways to model it such as rolling, pinching, pulling, and flattening. They don't have to make anything specific; rather, this is an opportunity for the students to familiarize themselves with the material and to have fun.

DURING YOUR VISIT

Pre-K – 2nd Grade

When your students visit Kidspace, they will be asked to talk about the art on view in guided discussions. A series of questions will be used to help guide the students in their exploration of the artwork: they will be asked to respond to these questions using the artwork as a source of information and inspiration. Each question builds upon another so that students might create stories about nature based on the artwork. 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 sculpture?
- Who do you imagine would live in this place?
- Have you ever seen something similar to this piece in real life?
- How do you think the artist made it? Why do you think he/she chose to use that material?
- What are the different parts of this sculpture?
- How does this piece relate to the last piece we looked at?

These guided discussions serve two purposes: to build students' visual literacy skills and to increase their knowledge of the various ways in which artists represent the natural environment. In terms of visual literacy skills, students will be asked to think critically and to form opinions and interpretations of the artwork. Students will be encouraged to talk about the meaning of the art and to make comparisons between an artistic composition and an ecosystem.

Following the guided discussions, students will have the opportunity to reflect on the artists' art-making processes. We will talk about what the artists needed to do in order to create their works of art. Then students will create their own sculptures depicting an ecosystem--a forest. Having been prepared in the classroom to use Model-Magic clay, students will design their own forest at Kidspace using this material. We will review with them how to model the clay to form trees, rocks, and animals.

POST-VISIT ACTIVITIES

Appreciating Ecosystems

Pre-K – 2nd Grade

Objectives

- Through role-play activities, students will become aware that all the different parts of an ecosystem work together.
- Through reading activities, students will explore their own relationship to the environment.
- In drawing and writing activities, students will express their appreciation for nature.

How do these activities relate to Kidspace?

Victoria Palermo and Rob de Mar want viewers to become more aware of the natural world. Both artists present us with the opportunity to talk about the beauty of natural ecosystems and how humans interact with them. Rob has singled out some natural elements for us to appreciate including trees, clouds, and waterfalls. In Victoria's work, we find beautiful natural environments in her moss box experiments and in the display of rubber trees and grass chairs.

Time needed

2 ½ hours

Materials

- *The Giving Tree* by Shel Silverstein
- Drawing paper and markers
- Unlined index cards

Key Term

- Appreciation

Introduction

Remind students about what they saw at Kidspace. Ask them to discuss what they learned about nature through Rob's and Victoria's sculpture. Ask if anyone can define "ecosystem" and if they saw a sculpture at Kidspace that might be an example of an ecosystem. Move on to the activities below.

1. Role-Play Activity: If a Tree Falls in the Forest, Does a Bird Cry?

Ask your students to brainstorm as a group to create a list of things that might be found in a forest. The list should include trees, rocks, moss, pond, fish, birds, squirrels, leaves, and ferns etc.

Assign each student to play a role as one of the natural elements from the list you created. Have the different elements talk to each other about their life in the forest and how they need each other. For instance, a bird might talk to a tree

letting them know that they are thankful that the tree allows them to have their nest in the tree's limb. Or a fish might say to the pond that he/she likes the cold water. Encourage your students to be imaginative. To inspire them, you might want your students to first act out what they imagine the natural elements look and sound like before they begin making up stories. For example, a student might pretend to be a tree swaying in the wind or a bird flying into his/her nest.

2. Reading and Drawing Activity: The Giving Tree

Read *The Giving Tree* by Shel Silverstein at the beginning of this activity. This story is about a tree that gives a boy different parts of itself including its apples to sell, limbs for a house, and trunk for a boat. Discuss the different things that we take from nature. Ask your students to think about how the tree in the book gives everything to the boy, yet the boy doesn't give anything back to nature. How do they feel about this? How should humans be more giving to nature (and the ecosystem of which they are a part) by taking care of it in certain ways?

Have them talk about the different things in nature that they need such as water, vegetables, and trees. Ask them to choose one natural element for which they would like to show appreciation and do a drawing of themselves thanking that thing.

For 1st – 2nd grade students you might extend this project by having your students complete the following writing activity:

Have your students write postcards (on unlined index cards) to nature. They should choose one natural element that they would like to thank for being supportive to them as humans. For instance, a student might write to the rain to thank it for providing him/her with water. Or he/she might write to a tree and thank it for providing it with wood and shade. On the front of their index cards, have your students draw a picture showing them within nature. Display the postcards in your classroom by hanging them from the ceiling using yarn or string so that your students can review both sides of the card. Or you can have your students mail the postcards to someone in their families.

EXTENSIONS

Pre-K – 2nd Grade

The following lists additional activities you might choose to complete with your students. They relate to the Kidspace exhibition and further explore the connection between art and science, in particular the design of ecosystems.

1. Drawing Activity: Natural Living Room

Take a look as a group at “Cushion Me Soft” (grass chairs) by Victoria Palermo (use overhead transparency). Suggested questions:

- Why did the artist use grass for the chairs?
- Where do you think she intended the chairs to be placed?
- How well do you think the chairs function as chairs?
- Who do you imagine might use the chairs?
- What other kinds of furniture might you put around the chairs? What kinds of material would they be made of?

Now, ask your students to complete a drawing of the grass chairs in a particular setting or ecosystem. You may want to explain the connection between a human-made setting such as a living room and a natural ecosystem such as a forest. Talk about the many different elements that make up a living room (e.g. sofa, table, lamp, TV) and that together create a whole setting or environment. Similarly, an ecosystem--like a forest--has many different elements such as trees, ferns, leaves, and rocks. Have your students think about where they might place the grass chairs in a house and to design in their drawings additional furniture and fixtures out of nature materials. For instance, they might choose to place a TV made out of rocks or a lamp made out of leaves and a tree trunk near the grass chairs!

2. Drawing Activity: Classroom Forest

Put on small pieces of paper the name of different elements in a forest. Make sure you have one slip of paper for each student. Put the papers in a bag and have each student pick one out. Ask students to create a drawing of whatever is noted on their chosen piece of paper. And instead of trying to make their drawings look realistic, have them try to use a technique similar to something Rob or Victoria might use. For a Rob-styled drawing, have your students only use two or three bright colors. Or for a Victoria-inspired drawing, have your students imagine their element is made out of grass. For instance, they might draw a picture of a rock or leaf with green crayons and grassy / choppy edges. Put all the pictures together on display in your classroom.

3. Group Activity: Classroom Terrarium

Create a classroom terrarium to demonstrate an ecosystem at work. Remind your students of Victoria Palermo's "See Creatures" (moss box experiments), and talk about how those are examples of terrariums. Try to make the plants in your terrarium look just as wacky. Use the instructions, from the web-site listed below, on how to build a terrarium from the Association of Science-Technology Centers Incorporated (<http://www.astc.org/exhibitions/rotten/terrarium.htm>).

4. Reading and Discussion: Endangered Species

Endangered species is another interesting topic to discuss with your students when exploring habitats and ecosystems. Read a book with your class on endangered species and discuss where these animals live and why they are considered endangered. Ask your students to talk about what parts of the ecosystem are failing to cause the animals to become endangered (i.e., too many buildings taking over nature, water becoming polluted). We recommend for younger students read *Panda Bear, Panda Bear, What do You See* by Bill Martin (illustrations by Eric Carle) or *Panther: Shadow of the Swamp* by Jonathan London. For older students read *Thunder on the Plains: The Story of the American Buffalo* by Ken Robbins or *Endangered Forest Animals* by J. David Taylor.

Time

4th Grade Activities

Overview

This semester 4th grade students will participate in a number of new Kidspace program activities, as part of the Kidspace program. Kidspace has teamed up with the Williams College Science Department to provide additional teacher training, special classroom visits by Williams College students, and a trip to the Hopkins Memorial Forest. These three activities are in addition to a regular visit to the Kidspace gallery to view our current exhibition *Earth, Wind, and Desire: Nature Park*.

New funding from the Massachusetts Cultural Council to the North Adams School District has also enabled us to "beef-up" the Artist-in-Residence Program. This semester, all students will have a chance to meet an artist in their own classroom, and every fourth grade class from each elementary school will spend over two hours with either Victoria Palermo or Rob deMar. This time will be spent both in Kidspace and in the classroom.

Themes addressed in these activities

Fourth grade classrooms will be busy, with many field trips and special classroom visitors. Because of all of this activity, the classroom projects described in this curriculum have been designed to be the "glue" that holds everything together. All of the activities involve observing, evaluating, and documenting from both a scientific and artistic points of view. The overriding theme for the activities is how we as humans have interacted with nature, and how the effects of time are found in the natural world. The timeline below illustrates how the pieces fit together and briefly explains the Williams College visit, the field trip to the Hopkins Memorial Forest, and the Kidspace field trip.

Timeline

Pre-Visit Activity 1: *Looking as a Scientist and an Artist*

In the classroom, students will look at transparencies of artwork on display in Kidspace from both artistic and scientific viewpoints.

Williams College students visit: *Hopkins Memorial Forest Discovery*

During a visit to your classroom, Williams College science students will use historical photographs of the Hopkins Memorial Forest over the past 80 years and primary sources to illustrate several concepts. This activity will build upon Pre-Visit Activity 1. It will provide your students with a vocabulary that will be useful in the forest, and Kidspace,

and during the artist residency and for the post-visit activities. A few things discussed will be documentation, primary source, and documentation.

Visit to the Hopkins Forest

When visiting Hopkins Forest, Williams College guides will show your students areas of the forest where human interaction over the course of time is apparent. They will lead an activity that teaches your student how to put to use some of the terminology they have learned in the classroom. Specifically, the guides will teach the students how to measure qualities and quantities of plant and animal life. Students will see how this field work is quantified and translated into the primary source documentation they saw in the classroom. The Williams guides will also explain **why** they want to collect certain sets of data and **how** the data is eventually interpreted and put to use. Terms that may be introduced to your students are preservation, manipulative sampling, interpretation, field study, and usage zones.

✧ **Field trips to the Hopkins Memorial Forest will NOT be postponed unless the weather is truly frightful (i.e. hail, hurricane, blizzard). Please ask your students to be prepared with warm clothing, boots, hats/scarves/mittens, and rain gear.** ✧

Post-Hopkins Forest Activity: *Documenting Change*

Students will track and document changes in a small plot of land on the school grounds or at home for one week.

Visit to Kidspace:

Students will look at the artwork and discuss how it functions, why it was made, what the artists are trying to say, and how it relates to the Hopkins Forest and the scientific inquiry process. Students will also make an art project that relates to the concept of time.

Post-Visit Activity 1: Humans in Nature

Students will explore how others have interacted with natural resources by reading a short excerpt from Henry David Thoreau's Walden. They will then relate how they have interacted with nature by keeping a journal, writing a short story, or making a comic strip.

Post-Visit Activity 2: *The Moon Lot*

View the short film "Moon Lot" by Hank Art, Biology Professor at Williams College. (Supplied by Kidspace)

Artist Residency

Both Rob de Mar and Victoria Palermo will work with fourth grade classes on projects on the theme of Time. Your class will have an additional visit to Kidspace with one of the artists (1.5 hours). Later, that same artist will visit your classroom (45 min).

Kidspace will provide you with more information on the residency as it draws near and will discuss it at our January workshop.

Pre-Visit Activity 1:

✧Looking as a Scientist and an Artist✧

Grade 4

Objectives

Students begin to discuss subjects that will be addressed both in Kidspace and on their Hopkins Forest visit. They will practice looking, questioning, hypothesizing, interpreting, and evaluating; skills which are used in both science and art.

How does this activity relate to Kidspace and the Hopkins Memorial Forest?

Students will explore the similarities between the scientific and artistic inquiry process by discussing images of Victoria Palermo's *moss experiments* and *grass chairs*. By examining the images closely, using their prior scientific knowledge, and learning specific facts about the pieces of artwork, students will develop theories on the artworks' construction and how the pieces function. They will also formulate guesses as to **why** Palermo created these pieces.

Activity

1. Project the overhead transparencies of Victoria Palermo's *Cushion Me Soft* and *See Creatures* and discuss these pieces of artwork as a class (see the **Teacher Information Sheet for discussion of artwork by Victoria Palermo (TIS)**).
2. As illustrated in the Information sheet, approach the discussion from a scientific and an artistic viewpoint. On one hand, use specific terminology used in scientific inquiry. On the other hand, discuss the artwork in terms of its aesthetic value, sociological meaning, relevance to contemporary art making issues (see the TIS), etc.
3. After the discussion, ask your students to compare and contrast the two approaches. How were they similar / different? Did the two paths ever cross? Did the two approaches ever lead them to similar conclusions?

Extension

Time needed

30 minutes

Materials

overhead projector
packet of overhead
transparencies

Teacher preparation

read the Teacher Information
Sheet for the discussion of
Victoria Palermo's artwork (TIS)

Key terms

ecosystem
prediction
hypothesis
data
documentation
time

Apply the two discussion approaches to images of Rob de Mar's artwork. Try discussing the human imprint illustrated in his artwork.

Teacher Information Sheet for discussion of artwork by Victoria Palermo

The following is a series of questions to aid in the discussion of Victoria Palermo's artwork. All questions are marked by the bold "?". Key information is also in bold. This factual information can be worked into the discussion as is outlined below or as seems natural within the discussion framework.



Cushion Me Soft, 2003

materials: soil, sod, steel infrastructure, hoses, pump, water tank, cart



See Creatures, 2003

materials: soil, moss, plastic jars

Investigation

? What are the pieces entitled *See Creature* made of? Are they alive?

The *See Creatures* are completely self-sufficient ecosystem. The canisters are sealed. They were made by forming soil into the abstract shape seen in the image, collecting moss samples from local woods, creating a moss slurry by combining the moss and water in a kitchen blender, and then applying the slurry to the soil form (like a "chia pet"). This form is then placed in the plexi canister with a specific amount of water and then the canister is sealed. Under the correct temperature conditions, the ratio of water to air to moss type and rate of moss growth is such that the moss keeps itself alive.

? What are the pieces entitled *Cushion Me Soft* made of and how are they constructed? Why don't they fall apart? Do you think you could sit on them?

The pieces entitled *Cushion Me Soft* are made of living grass and have an internal watering system. Palermo constructs the grass chairs by initially creating an internal armature of steel. This armature (a sturdy support system like the bones in our body) is shaped like the body of the chair but is hollow. Its cavity is filled with vermiculite, a light-weight low-moisture soil. On the outside of the armature, Palermo builds a layer of nutrient rich soil. Finally, she covers the entire surface with sod.

The watering system is made of a network of small rubber tubes that converge into a large tube which is connected to an external water tank with a pump. These tubes have small holes along their length and are interwoven with the armature and thus evenly water the roots from the bottom up. The chairs sit on a special platform that allows them to drain.

? How do the moss and grass continue to thrive indoors?

When the chairs are on exhibit outdoors, they have the sun and the rain. Here in Kidspace we have the watering system and two special grow-lights that mimic the sun's rays.

? Are these pieces part of an animal's habitat or could they be?

Interpretation

? Do the chairs or moss experiments remind you of anything you've seen indoors or outdoors?

? Why did Palermo make chairs out of living grass?

? What is Palermo trying to tell us about nature or about ourselves through her artwork?

Prediction

? Do you think the pieces of artwork will continue to grow? Why?

? Do you think their growth will be affected by anything (stimuli) in Kidspace?
What if they were placed in the woods?

? Do you think the grass chairs will manage to change their environment over time?

? What do you think the chairs would look like if left in Kidspace for the next 20 years?
What if they were left outdoors?

Documentation

? How and why might we document the chairs and moss experiments?

Possible suggestions might be: photographs, drawings, written descriptions, actual measurements, etc.

? Is there anything about these chairs or moss experiments that could be measured quantitatively?

Post Hopkins Forest Activity

✧ Documenting Change ✧

Grade 4

Objectives

This activity will encourage your students to investigate their immediate environment using the terminology and practices learned in class discussions, the classroom visit by Williams students, and the trip to Hopkins Forest.

How does this activity relate to Kidspace and Hopkins Forest?

Both Victoria Palermo and Rob de Mar comment on the environment in their artwork. Palermo takes a more scientific approach in that she must study the growth of the grass and moss in order for her artwork to thrive. De Mar is more interested in the aesthetic changes that humans inflict on the natural environment. This activity allows your students to study their own environment from both of these view points.

time needed

30 minutes everyday
for one week

materials

flags, colored tape,
stakes

terms

plot

Activity: Part A

1. Designate one week in which you can commit 30 minutes everyday at the same time to the project.
2. Divide your class into groups of three students each.
3. On the first day have each group choose a 1'x 1' plot of land on the school grounds. Ask the groups to mark their plot with stones, flags, yarn, or anything that will withstand a week of weather. Remind your students that the plots could be on a horizontal or vertical plane (i.e. the side of a tree).
4. Each day at the same time take your class out to their plot and allow them 30 minutes to observe and document. Ask your students to use the skills they learned in the woods to observe and record all that they see, smell, hear, and feel in their plot. This data can be recorded in a chart, through drawings, in paragraph form, etc. **Ask the groups to choose the method of documentation that they think is most appropriate for their plot.**

Activity: Part B

1. After one week (or more if you wish!), ask each group to analyze their data, looking for patterns and change.
2. Ask them to think about how and why their plot changed, taking into consideration local plant, animal, and human life.
3. Allow the groups 40 minutes to develop a short paragraph describing their plot and all that happened over the course of the week.
4. In addition, ask your student to predict what will happen to their plots in the

following weeks, months, and years.

Extension

Interview with a place (or your plot)

Have your students explore and "interview" a place in their local environment.

First have your students visit this website:

http://www.williams.edu/CES/hmf/interview_landscape.html

And click on *click images to see interviews*

There you will find an interview between Henry Art, a biology professor at Williams who has studied Hopkins Forest for over 20 years, and the Taconic Crest. Over the years, Art has researched the long-term changes in the various plant communities and how human disturbances have played a role in shaping the present ecosystems.

In this interview, Art asks the forest questions like:

- ✦ "Why are there pockets of clay inter-bedded with pockets of silt and chunks of limestone in your soil?"
- ✦ "Where did all of these big trees come from? Why are they still here?"

The forest then replies by outlining the history of the forest growth and the people that lived and worked there.

Ask your students to imitate the format of this interview. They may choose to interview a part of the school grounds, the school interior, or their own home.

Post-Visit Activity 1

✧Humans in Nature✧

grade 4

Objective

Building on the concept of documentation discussed in the pre-visit activities, students will explore how other people have interacted with, shaped, and documented the natural world. By reading an excerpt from Walden by Henry David Thoreau, students will explore Thoreau's interpretation of nature and use it as inspiration for their own writing.

time needed

1 hour

materials

excerpt from Walden
found at the end of
this activity

Key terms

journal

How does this activity relate to Kidspace and the Hopkins Forest?

In Kidspace students observed and discussed the artwork of Victoria Palermo and Rob de Mar. Both artists explore the elasticity of nature; Victoria by forming a natural substance into a utilitarian object and Rob by depicting the changes that humans inflict on the natural world. Both of these concepts are present in the writing of Thoreau.

Activity: Reading and Writing *Walden*

1. Ask your students to read aloud the excerpt from Henry David Thoreau's Walden provided by Kidspace. This excerpt is from the Pond chapter and gives, in great detail, a description of the pond and how Thoreau interacted with it. Considering the difficulty of the writing style and vocabulary of Walden, we have chosen two excerpts that are clear, very descriptive, and closer to your students reading level.
2. Discuss what they have read and how it relates to their experiences in Kidspace and the Hopkins Forest. Focus your discussion on how Thoreau investigates the pond in terms of his five senses, the date and time, how the other natural elements influence it, and his own interactions with it.
3. One of Thoreau's pet peeves was writers who do not relate their own personal experiences in their writing (he wonders what "distant land" they live on). Ask your students to compare and contrast Thoreau's experiences with the pond with their own. Have they ever been camping? Have they ever explored something in nature to the depth that Thoreau explored the pond? What are the differences between life at home and life in the woods? Could they imagine living in the woods for over two years?
4. There are several possible writing and drawing activities that could connect Thoreau's writing with the rest of the Kidspace activities and your students personal experiences:
 - ✦ Ask your students to keep a journal about their daily life for one week. The entries could later be re-examined and composed in essay or poem form.
 - ✦ Write an essay or ode to an element in nature they feel particularly close to.
 - ✦ Write a short essay or poem about a personal experience they had in nature.
 - ✦ Create a short comic strip that includes writing and illustrations about an experience in nature.
 - ✦ Write an essay or comic strip about their experience in the Hopkins Forest.

Extension 1

An extension project is for students to research modern attitudes about nature found in magazines, retail stores, newspapers, and on the Internet.

Extension 2

Students may also explore how other visual artists have represented nature. For instance, Monet's haystacks and cathedrals show the passage of time through light and season. Other artists work reflect the human interaction with nature and how that has changed over time such as Andy Goldsworthy, the Hudson River School artists, and Robert Smithson (the Spiral Jetty).

Excerpt from Walden by Henry David Thoreau

Chapter: Pond

These excerpts were taken from <http://eserver.org/thoreau/walden9a.html#notes> where you can find the writings in their entirety.

[6] The water is so transparent that the bottom can easily be discerned at the depth of twenty-five or thirty feet. Paddling over it, you may see, many feet beneath the surface, the schools of perch and shiners, perhaps only an inch long, yet the former easily distinguished by their transverse bars, and you think that they must be ascetic fish that find a subsistence there. Once, in the winter, many years ago, when I had been cutting holes through the ice in order to catch pickerel, as I stepped ashore I tossed my axe back on to the ice, but, as if some evil genius had directed it, it slid four or five rods directly into one of the holes, where the water was twenty-five feet deep. Out of curiosity, I lay down on the ice and looked through the hole, until I saw the axe a little on one side, standing on its head, with its helve erect and gently swaying to and fro with the pulse of the pond; and there it might have stood erect and swaying till in the course of time the handle rotted off, if I had not disturbed it. Making another hole directly over it with an ice chisel which I had, and cutting down the longest birch which I could find in the neighborhood with my knife, I made a slip-noose, which I attached to its end, and, letting it down carefully, passed it over the knob of the handle, and drew it by a line along the birch, and so pulled the axe out again.

[13] The pond was my well ready dug. For four months in the year its water is as cold as it is pure at all times; and I think that it is then as good as any, if not the best, in the town. In the winter, all water which is exposed to the air is colder than springs and wells which are protected from it. The temperature of the pond water which had stood in the room where I sat from five o'clock in the afternoon till noon the next day, the sixth of March, 1846, the thermometer having been up to 65 degrees or 70 degrees some of the time, owing partly to the sun on the roof, was 42 degrees, or one degree colder than the water of one of the coldest wells in the village just drawn. The temperature of the Boiling Spring the same day was 45 degrees, or the warmest of any water tried, though it is the coldest that I know of in summer, when, beside, shallow and stagnant surface water is not mingled with it. Moreover, in summer, Walden never becomes so warm as most water which is exposed to the sun, on account of its depth. In the warmest weather

I usually placed a pailful in my cellar, where it became cool in the night, and remained so during the day; though I also resorted to a spring in the neighborhood. It was as good when a week old as the day it was dipped, and had no taste of the pump. Whoever camps for a week in summer by the shore of a pond, needs only bury a pail of water a few feet deep in the shade of his camp to be independent of the luxury of ice.

Time

4th Grade Activities

Documenting Change Activity: Part A

5. Designate one week in which you can commit 30 minutes everyday at the same time to the project.
6. Divide your class into groups of three students each.
7. On the first day have each group choose a 1'x 1' plot of land on the school grounds. Ask the groups to mark their plot with stones, flags, yarn, or anything that will withstand a week of weather. Remind your students that the plots could be on a horizontal or vertical plane (i.e. the side of a tree).
8. Each day at the same time take your class out to their plot and allow them 30 minutes to observe and document. Ask your students to use the skills they learned in the woods to observe and record all that they see, smell, hear, and feel in their plot. This data can be recorded in a chart, through drawings, in paragraph form, etc. **Ask the groups to choose the method of documentation that they think is most appropriate for their plot.**

Documenting Change Activity: Part B

5. After one week (or more if you wish!), ask each group to analyze their data, looking for patterns and change.
6. Ask them to think about how and why their plot changed, taking into consideration local plant, animal, and human life.
7. Allow the groups 40 minutes to develop a short paragraph describing their plot and all that happened over the course of the week.
8. In addition, ask your student to predict what will happen to their plots in the following weeks, months, and years.

Extension

Interview with a place (or your plot)

Have your students explore and "interview" a place in their local environment.

First have your students visit this website:

http://www.williams.edu/CES/hmf/interview_landscape.html

And click on *click images to see interviews*

There you will find an interview between Henry Art, a biology professor at Williams who has studied Hopkins Forest for over 20 years, and the Taconic Crest. Over the years, Art has researched the long-term changes in the various plant communities and how human disturbances have played a role in shaping the present ecosystems. In this interview, Art asks the forest questions like:

- ✦ "Why are there pockets of clay inter-bedded with pockets of silt and chunks of limestone in your soil?"
- ✦ "Where did all of these big trees come from? Why are they still here?"

The forest then replies by outlining the history of the forest growth and the people that lived and worked there.

Ask your students to imitate the format of this interview. They may choose to interview a part of the school grounds, the school interior, or their own home.

Adaptation

3rd and 5th Grade Activities

Overview

The curriculum for grades 3 and 5 will address the concepts of habitat, adaptation, and how the adaptation of both animals and humans plays a role in the formation and change of an ecosystem. The activities relate to the artwork on display in Kidspace and will prepare your students for the artist residency.

Timeline

Pre-Visit Activity 1: Artistic Ecosystems

Students will learn about habitats and ecosystems by looking at the artwork of Victoria Palermo and Rob de Mar.

Pre-Visit Activity 2: Adaptation

Beginning a discussion on adaptation, students will explore different behavioral patterns of several animals as well as humans. After this exploration they will make imaginative drawings of how humans might adapt to an underwater or woodland habitat.

Visit to Kidspace

Your students will explore how Victoria and Rob address issues of human impact on and usage of the natural world. They will experiment with natural and man-made materials to recreate an everyday object that that they find necessary to their own way of life.

Post-Visit Activity 1: Tools!

Students will explore how people have adapted natural resources to meet their specific needs by looking at illustrations of early American tools by Eric Sloane. They will then imagine how they might use natural resources to survive in a new habitat.

Pre-Visit Activity 1

◇ Artistic Ecosystems ◇

Grades 3 and 5

Objective

Students begin to discuss subjects that will be addressed in Kidspace. They will practice looking, questioning, hypothesizing, interpreting, and evaluating: skills which are used in both science and art.

How does this activity relate to Kidspace?

Students will explore the similarities between the scientific and artistic inquiry process by discussing images of Victoria Palermo's *See Creatures* and *Cushion Me Soft* and Rob de Mar's *Waterfall III*. By examining the images closely, using their prior scientific knowledge, and learning specific facts about the pieces of artwork, students will develop theories about the artworks' construction and how the pieces function. They will also formulate guesses as to **why** Palermo and de Mar created these pieces.

Activity

4. Project the overhead transparencies of Victoria Palermo's *Cushion Me Soft* and *See Creatures* and Rob de Mar's *Waterfall III* and discuss these pieces of artwork as a class (see the **Teacher Information Sheet for discussion of artwork by Victoria Palermo and Rob de Mar (TIS)**).
5. As illustrated in the Information sheet Sheet, approach the discussion from a scientific and an artistic viewpoint. On the one hand, use specific terminology used in scientific inquiry. On the other hand, discuss the artwork in terms of its aesthetic value, sociological meaning, relevance to contemporary art making issues (see the TIS), etc.
6. After the discussion, ask your students to compare and contrast the two approaches. How were they similar / different? Did the two paths ever cross? Did the two approaches ever lead them to similar conclusions?

Time needed

30 minutes

Materials

overhead projector
packet of overhead
transparencies

Teacher preparation

read the Teacher Information
Sheet for the discussion of
Victoria Palermo's and Rob de
Mar's artwork (TIS)

Key terms

ecosystem
prediction
hypothesis
data
documentation

Teacher Information Sheet for discussion of artwork by Victoria Palermo and Rob de Mar

The following is a series of questions to aid in the discussion of Victoria Palermo's and Rob de Mar's artwork. All questions are marked by the bold "?". Key information is also in bold. This factual information can be worked into the discussion as is outlined below or as seems natural within the discussion framework.



Cushion Me Soft, 2003

materials: soil, sod, steel infrastructure, hoses, pump, water tank, cart



See Creatures, 2003

materials: soil, moss, plastic jars



Waterfall III, 2003

materials: steel, flocking

Investigation

? What are the pieces entitled *See Creature* made of? Are they alive? Is there a term we might use to describe these "experiments"?

The *See Creatures* are completely self-sufficient ecosystem. The canisters are sealed. They were made by forming soil into the abstract shape seen in the image, collecting moss samples from local woods, creating a moss slurry by combining the moss and water in a kitchen blender, and then applying the slurry to the soil form (like a "chia pet"). This form is then placed in the plexi canister with a specific amount of water and then it is sealed. Under the correct temperature conditions, the ratio of water to air to moss type and rate of moss growth is such that the moss keeps itself alive.

? What are the pieces entitled *Cushion Me Soft* made of and how are they constructed?

Why don't they fall apart? Do you think you could sit on them?

The pieces entitled *Cushion Me Soft* are made of living grass and have an internal watering system. Palermo constructs the grass chairs by initially creating an internal armature of steel. This armature (a sturdy support system like the bones in our body) is shaped like the body of the chair but is hollow. Its cavity is filled with vermiculite, a light-weight low-moisture soil. On the outside of the armature, Palermo builds a layer of nutrient rich soil. Finally, she covers the entire surface with sod.

The watering system is made of a network of small rubber tubes that converge into a large tube which is connected to an external water tank with a pump. These tubes have small holes along their length and are interwoven with the armature and thus evenly water the roots from the bottom up. The chairs sit on a special platform that allows them to drain.

? How do the moss and grass continue to thrive indoors?

When the chairs are on exhibit outdoors, they have the sun and the rain. Here in Kidspace we have the watering system and two special grow-lights that mimic the sun's rays.

? Now that you are familiar with the term **ecosystem**, would you consider Rob de Mar's *Waterfall III* to be an ecosystem? If so, what are the different elements that compose this ecosystem?

***Waterfall III* depicts the relationships between the elements of water, air, land, and vegetation. De Mar shows how they are connected and dependent by tying them to one another with steel wire.**

? Could Palermo's pieces exist in an animal's habitat?

? Does de Mar depict a specific habitat?

Interpretation

? Do the chairs or moss experiments remind you of anything you have seen indoors or outdoors?

? Why did Palermo make chairs out of living grass?

? What are de Mar and Palermo trying to tell us about nature and about ourselves in their artwork?

Prediction

- ? Do you think Palermo's artwork will continue to grow? Why?
- ? How do you think their growth will be affected by anything (stimuli) in Kidspace?
What if they were to be placed in the woods?
- ? Do you think the grass chairs will manage to change their environment over time?
- ? Are there any parts of de Mar's sculpture that will change over time?
- ? Imagine de Mar's sculptures are real landscapes. How might they change or stay the same?
- ? What do you think the grass chairs would look like if left in Kidspace for the next 20 years? What if they were left outdoors?

Documentation

- ? How and why might we document the grass chairs, moss experiments, or steel sculpture?
Possible suggestions might be: photographs, drawings, written descriptions, actual measurements, etc.
- ? Is there anything about these grass chairs or moss experiments that could be measured quantitatively?

Pre-Visit Activity 2
✧ Adaptation ✧

Grades 3 and 5

Objectives

Students will explore and research animal habitats, how animals have adapted to their habitats, and how they relate to an entire ecosystem. The activity will expand students' knowledge of animal physical features and behaviors that can help or hinder their survival in a particular habitat and remind them that humans are animals too!

time needed
Part A: 30 minutes
Part B: 30 minutes

materials
blackboard, or flip pad
drawing paper
drawing utensils

key terms
adaptation
organisms
survival

How does this activity relate to Kidspace?

Victoria Palermo molds living grass into functioning chairs and creates living moss terrariums. In terms of adaptation, Palermo has adapted the natural material grass to fulfill her need for a place to sit. Rob de Mar shows how humans can utilize natural resources. For instance, in "Well" he illustrates the depth of a rock lined well and the water that exists within it.

Recommended books on habitats and adaptation

All by Mymi Doinet:

The Laziest

The Meanest

The Loudest

The Ugliest

Recommended websites

www.bbc.co.uk/nature/

www.mbgnet.mobot.org

How do Animals Adapt? by Bobbie Kalman

Claws, Coats, and Camouflage by Susan E. Goodman and Michael J. Doolittle (Illustrator)

Who Lives Here? by Maggie Silver

Animal Architects by National Geographic

Activity: Part A

1. Begin this activity by asking your students to draw a four-column chart on a piece of paper (like the one at the end of this activity). Explain to your students that each vertical column will represent an animal, and each row will contain a question (listed below).
2. As a class choose two animals. Ask them the questions below and discuss how they might fill in the chart.
 - ✦ What is the climate like in this animal's habitat?
 - ✦ How does this animal find shelter?
 - ✦ How does this animal find food?
 - ✦ Does this animal have any predators?
 - ✦ What behaviors show this animal has "adapted" to its environment?
 - ✦ How has this animal changed its environment?
 - ✦ Has this animal adapted well or poorly to its natural habitat?
3. For the third column, announce the discovery of a fascinating new animal—the human! Ask the class to think about themselves and try to answer

the same questions about habitat. Have some fun! Ask your students to rename themselves based on something they enjoy or where they live. For example, a boy named Dylan who likes to skateboard could be called “Dylan Skateboardicus.”

A portion of this activity was found at www.bbc.co.uk/nature/ .

Activity: Part B

1. Next ask your students to imagine how that they might adapt if they were forced to live in the habitat of one of the other animals explored.
2. Have them make a humorous drawing of what they might look like after adapting to their new environment.

Extension

Have your students further research the habitat and adaptations of one animal in groups or individually.

	animal #1	animal #2	human
What is the climate like in this animal's habitat?			
How does this animal find shelter?			
How does this animal find food?			
Does this animal have any predators?			

What behaviors show this animal has "adapted" to its environment?			
How has this animal changed its environment?			
Has this animal adapted well or poorly to its natural habitat?			

Post-Visit Activity Tools!

"A tool is but the extension of a man's hand" Henry Ward Beecher

Grades 3 and 5

Objective

By looking at illustrations of early American tools by Eric Sloane, students will explore how humans have adapted natural resources to meet their own specific needs.

How does this activity relate to Kidspac?

In molding grass and soil to create a functioning chair, Victoria Palermo illustrates how a modern day human can create utilitarian objects from natural resources. In her case, the chair is displayed as a work of art. Eric Sloane was a renowned painter, historian, and tool appreciator. In his books, he discusses how American pioneers created tools that were beautiful and reflected a great deal about the maker's life. Palermo seems to get back to this tradition by creating a chair that reflects her hand, her thoughts, and her personality.

Time needed

30-60 minutes

Materials

illustration montage found at the end of this activity
drawing paper and utensils

Key terms

tool
museum

Activity: Part A Thinking about tools

As a class, make a list of objects you can find in your classroom that are made from a natural material but have been changed to fit a human need. (A few examples are: books, pencils, lined paper, stone ground to make bricks, etc.)

Activity: Part B Old Tools- Discussion

1. Make a copy of the montage of Eric Sloane's illustrations of tools found at the end of this activity and give one to each of your students.
2. Discuss with your class the different tools and make comparisons between the different versions of similar tools. Sloane was fascinated by the individuality found in the American tools made up until the Civil War (when people started to mass produce tools).
3. Ask your students to compare the tools they see in the illustrations with the tools they have used or seen at home.
4. For several of the images, have your students try to figure out for what purpose the tools were used for.

Activity: Part C Surviving in an Underwater world

1. Next, ask your students to imagine that they have been transported to an underwater world (or Mars, or any other habitat that you might be studying). As they are new to this world, they must figure out how to survive. Using their knowledge of underwater habitats, ask your students to devise several tools, out of the natural resources available to them, that will help them to survive.
2. Reminding them to think of the Eric Sloane illustrations, explain that in designing their tools, they should take into consideration:
 - ✦ what **exactly** they will be using the tool for
 - ✦ what materials they will make it out of
 - ✦ if they need it to work for several uses
 - ✦ their height and weight (for example, a girl with small hands would need a small handle for her hammer)
 - ✦ their strength
 - ✦ how long they will need to use the tool
 - ✦ any aesthetic preferences

3. Ask your students to make drawings of their tools and write a short paragraph that explains what the tool is used for, what it is made out of, and any other information about the tool.
4. Display the drawings.

Illustrations were found in *A Museum of Early American Tools* by Eric Sloan Wilfred Funk, Inc.: New York 1964

Adaptation 3rd and 5th Grade Activities

Adaptation Activity: Part A

4. Begin this activity by asking your students to draw a four-column chart on a piece of paper (like the one at the end of this activity). Explain to your students that each vertical column will represent an animal, and each row will contain a question (listed below).
5. As a class choose two animals. Ask them the questions below and discuss how they might fill in the chart.
 - ✦ What is the climate like in this animal's habitat?
 - ✦ How does this animal find shelter?
 - ✦ How does this animal find food?
 - ✦ Does this animal have any predators?
 - ✦ What behaviors show this animal has "adapted" to its environment?
 - ✦ How has this animal changed its environment?
 - ✦ Has this animal adapted well or poorly to its natural habitat?
6. For the third column, announce the discovery of a fascinating new animal –the human! Ask the class to think about themselves and try to answer the same questions about habitat. Have some fun! Ask your students to rename themselves based on something they enjoy or where they live. For example, a boy named Dylan who likes to skateboard could be called "Dylan Skateboardicus."

A portion of this activity was found at www.bbc.co.uk/nature/ .

Adaptation Activity: Part B

3. Next ask your students to imagine how that they might adapt if they were forced to live in the habitat of one of the other animals explored.
4. Have them make a humorous drawing of what they might look like after adapting to their new environment.

Extension

Have your students further research the habitat and adaptations of one animal in groups or individually.

	animal #1	animal #2	human
What is the climate like in this animal's habitat?			
How does this animal find shelter?			
How does this animal find food?			
Does this animal have any predators?			
What behaviors show this animal has "adapted" to its environment?			
How has this animal changed its environment?			

Has this animal adapted well or poorly to its natural habitat?			
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Glossary of Key Terms

Adaptation

An alteration or adjustment in structure or habits, often hereditary, by which a species or individual improves its condition in relationship to its environment. Change in behavior of a person or group in response to new or modified surroundings.

Appreciation

Recognition of the quality, value, significance, or magnitude of people and things.

Data

Factual information, especially information organized for analysis or used to reason or make decisions.

Documentation

Something, such as a recording, photograph, printed or written paper, that can be used to furnish decisive evidence or information.

Ecosystem

A system formed by the interaction of a community of organisms with their physical environment

Environment

The totality of circumstances surrounding an organism or group of organisms, especially:

- a. The combination of external physical conditions that affect and influence the growth, development, and survival of organisms: "We shall never

understand the natural environment until we see it as a living organism”
(Paul Brooks).

- b. The complex of social and cultural conditions affecting the nature of an individual or community.

Habitat - the normal environment in which an organism lives

Hypothesis

A tentative explanation for an observation, phenomenon, or scientific problem that can be tested by further investigation.

Journal

A personal or official record of occurrences, experiences, and reflections kept on a regular basis.

Landscape

An expanse of scenery that can be seen in a single view or the aspect of the land characteristic of a particular region

Museum

A depository for collecting and displaying objects having scientific or historical or artistic value

Organisms

An individual form of life, such as a plant, animal, bacterium, protist, or fungus; a body made up of organs, organelles, or other parts that work together to carry on the various processes of life.

Prediction

A statement about the future

Plot

A small piece of ground, generally used for a specific purpose.

Survival

A living or continuing longer than, or beyond the existence of, another person, thing, or event; an outliving.

Tool

Something used in the performance of an operation

Definitions found at www.dictionary.com.

Acknowledgements

Kidspace is a collaborative project of the Sterling & Francine Clark Art Institute, the Williams College Museum of Art, and MASS MoCA. Additional funding has been provided in part by grants from the National Endowment for the Arts (a federal agency), Massachusetts Cultural Council (a state agency), Brownrigg Charitable Trust in memory of Lynn Laitman, and the Howard Hughes Medical Institute grant to Williams College.

Earth, Wind, and Desire: Nature Park was organized by Laura Thompson, Megan Hack, and Barbara Robertson with Victoria Palermo and Rob de Mar. Special thanks to Williams College staff including Henry Art, Drew Jones, Jennifer Swoap, and Steve Zottoli; Elizabeth Burke and Clementine Gallery, New York City; and the MASS MoCA staff.

