

CURRICULUM PACKET

**The Center for Art and Visual Culture, UMBC
SPRING 2004 EXHIBITION**

**Paradise Now: Picturing the Genetic Revolution
Curated by Marvin Heiferman & Carole Kismaric**

**CENTER FOR ART AND VISUAL CULTURE
UNIVERSITY OF MARYLAND, BALTIMORE COUNTY**

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Directions

From I-95 Take exit 47B and follow Route 166 towards Catonsville. Signs will direct you to UMBC traffic circle. Follow * below.

From 695 Take exit 12C to Wilkens Avenue and continue for 1/2 mile to the entrance of UMBC on the left, which is Hilltop Road. Follow this road until it ends. The Fine Arts Building is a large brick building at the end of this road within the UMBC circle. Follow from ** below.

*At Hilltop Circle, turn left, and drive through stop sign to top of hill at Hilltop Road (traffic light). Turn Right at traffic light and drive until road ends. The Fine Arts Building is a large brick building with few windows at the end of this road within the UMBC circle. **Take gravel road (left) down hillside to main entrance at the side of the Fine Arts Building. Driver can park on the outer circle during gallery visit.

CAVC GALLERY HOURS
10:00am - 5:00pm Tuesdays through Saturdays

USING THE CURRICULUM PACKET

This packet is designed to help you connect the Center for Art and Visual Culture's (CAVC) Spring 2004 exhibition with your classroom curricula and the **State of Maryland Fine Arts Essential Learner Outcomes**. CAVC visits and related activities developed for this packet address numerous subject areas that are often cross-disciplinary and therefore can combine two or more frameworks. CAVC is committed to visual literacy.

CAVC is glad to assist you in matching exhibition content with the **ESSENTIAL LEARNER OUTCOMES** listed below or others you may wish to match.

OUTCOME I: Perceiving and Responding – Aesthetic Education

-the ability to perceive, interpret, and respond to ideas & experiences in the environment.

OUTCOME II: Historical, Cultural, and Social Contexts

-an understanding of the visual arts in historical, cultural, and social contexts.

OUTCOME III: Creative Expression and Production

-skills and attitudes to organize knowledge and ideas for creative expression and performance in the fine arts.

OUTCOME IV: Aesthetic Criticism

-the ability to apply criteria to aesthetic decision making.

HOW TO ARRANGE A CLASS VISIT

1. Decide whether this exhibition is relevant for your class or group to see based on this packet, viewing the exhibition, and/or talking with Education Coordinator for CAVC.
2. Select several possible dates and times to bring your class to CAVC, UMBC. (Tuesdays through Fridays from 9AM – 5PM). Visits, ranging from 45-90 minutes, may be accompanied by a creative writing and/or drawing activity. Up to 40 students can be accommodated at CAVC at one time.
3. Preferably two weeks in advance, contact **Renee van der Stelt at (410) 455-1440** or yanderst@umbc.edu to schedule the visit and discuss ideas for guided tours and related activities that are particularly suited to your group.
4. Directions given on the front page of this packet.

PLANNING YOUR CAVC VISIT

HOW TO PREPARE YOUR CLASS FOR A VISIT TO CAVC, UMBC

1. Discuss the visit with your class before you come. This packet and a pre-visit to CAVC, UMBC can help inform students about what they will be seeing and doing on their trip.

2. Reproductions (photographs, slides, catalogs) are often available for you to look at with your class ahead of time. Students love to see images they recognize at their visits!
3. Additional information about the artists and exhibition is always available upon request.
4. In-class visits (usually including slide presentation and discussion) are available upon request.
5. Mention that students will need to keep in mind: Stay with the group, raise hands to ask or answer questions, no touching the artwork or the walls, no running, no food or gum.

WHAT TO EXPECT WHEN YOU VISIT CAVC, UMBC

1. Call before leaving your school so that we can meet your group in the lobby of the CAVC, UMBC Fine Arts Building. One of us will greet you and direct your students where to place their backpacks and coats.
2. After a brief introduction in the lobby, your guide will bring students through the exhibition. Students will be asked to discuss, interact with, and raise questions about the artwork that they see. We strongly encourage teachers to engage in the discussion in order to strengthen the connection between classroom and museum learning.
3. If arranged in advance, the visit can conclude with a drawing or writing activity. (Paper and pencils provided upon request. We do not have art making facilities.)

MAKING THE MOST OF YOUR VISIT

1. Pre- and post-visit activities are the best way to get the most out of your CAVC visit.
2. Project and discussion ideas provided at the end of this packet will help you determine the best approach for the grade and subject of your class. (If this packet does not include information relevant to your class, please call us and we will help you make the connections.)
3. If you find this packet effective, and you wish to work with us in the future, we would be pleased to assist you in developing and executing extended projects in the classroom.

PARADISE NOW PICTURING THE GENETIC REVOLUTION

A COMPANION CURRICULUM ALIGNED WITH THE NATIONAL STANDARDS FOR THE ARTS AND THE MARYLAND ESSENTIAL LEARNER OUTCOMES FOR THE VISUAL ARTS

This curriculum will enable students to:

1. BECOME AESTHETICALLY RESPONSIVE
2. UNDERSTAND THE HISTORICAL, CULTURAL AND SOCIAL CONTEXTS OF THE ARTWORKS
3. BECOME CREATIVE, EXPRESSIVE AND PRODUCTIVE
4. MAKE INFORMED JUDGMENTS ABOUT ART
5. DEVELOP PRODUCTIVE HABITS OF MIND

PARADISE NOW

This compelling exhibition poses many questions that are productive starting points for discussion and creative responses. In addition to a summary of the Introduction to the exhibition, this packet contains five possible lessons with guided activities, points for discussion, and ideas for creative responses. Many of the guiding questions would also make suitable essay topics.

INDIVIDUAL LESSON PLANS

ART STRAIGHT FROM NATURE
DNA DOWN ON THE FARM
FUSION CONFUSION (2 lessons: K-6, 6-12)
PERFECTION/PERFECT FEARS
UNORTHODOX PORTRAITS

The following questions may be helpful as you visit the exhibition and discuss the works with your students.

WHO ARE WE?
WHAT DEFINES WHAT WE KNOW ABOUT OURSELVES?
WHAT WILL WE BECOME?

WHY ARE SOME OF THE ARTISTS SO CONCERNED ABOUT WHAT THEY SEE?

WHAT SIMILARITIES ARE THERE BETWEEN ARTISTS AND SCIENTISTS?

WHAT IMPACT WILL THE GENETIC REVOLUTION HAVE ON US?
SOCIALLY? SPIRITUALLY? PHYSICALLY?

IS IT GOOD OR BAD THAT HUMANS ARE UPSETTING THE “NATURAL ORDER
OF THINGS”?

DOES THE POTENTIAL GOOD OF MEDICAL RESEARCH OUTWEIGH THE
DANGERS WE CAN'T YET PREDICT?

IS IT ETHICAL FOR HUMANS TO CREATE HYBRID CREATURES?

WHAT ARE SOME OF THE BEST POSSIBLE OUTCOMES OF THE GENETIC
REVOLUTION?

WHAT SCARES YOU THE MOST?

PARADISE NOW RATIONALE/SUMMARY

INTRODUCTION

In June of 2000, the historic news was announced: the **sequencing** of the human genome had been accomplished. Dr. Francis Collins (director of the National Human Genome Research Institute) and Dr. Craig Venter (President & CSO of Celera Genomics Corporation) shook hands in the White House Rose Garden in a momentary truce. The intense competition between the group of not-for-profit institutions and a publicly traded corporation was momentarily overshadowed.

Genetics had already become big news. Previous curiosities, such as the cloning of Dolly the sheep, no longer seemed so unusual once advances in genetics began to appear so frequently in the media. And now all of us are watching how the discoveries in the field of **genomics** are beginning to rewrite the definition of life. The information revealed in the mapping of the human genome is already having significant and unimaginable implications in the fields of science, medicine, agriculture, business, and the law.

Because of these changes, our understanding of health, social organization, race, aesthetics, and spirituality is being challenged. With so much at stake, it's crucial to take a look at where we are and where we are going. With so many pressures to move forward – to cure disease, to extend life, to improve cells, plants and animals, to help agriculture, and to make ourselves and our world more “perfect” – we need to stop and reflect on WHAT KIND OF “PARADISE” ARE WE REACHING TOWARD NOW?

Who will be responsible for what these changes will bring?

What are the important issues and concerns that need to be discussed?

Whose voices need to be heard and listened to?

PARADISE NOW: PICTURING THE GENETIC REVOLUTION was created to encourage the public to take a more active role in the ongoing dialogue that will shape the future. This show of provocative artwork was conceived to help viewers engage in ideas and issues that have often been perceived as too complex or too vague. Thirty-nine artists were selected to reflect a broad range of backgrounds, perspectives, media, and concerns. Until recently, many have worked alone, not realizing how many other artists were exploring ideas about genomics. These artists' works are linked in their engagement with science, sense of authority, and a willingness to take on and communicate complex issues and ideas.

PARADISE NOW is the first exhibition to focus specifically on genetics as a subject for artists. Some of the works are strikingly iconic, using literal images of genetic material to question our most basic assumptions about life. Others deal with the controversial intersection of genetic research and commerce.

Most of the work was made outside the mainstream art world, and has been marginalized due to its seriousness, specificity, and subject matter. But the issues with which this art deals are central to the world at large. PARADISE NOW is timely and is meant to stimulate further discussion as science brings to us new perspectives and pathways to understand of human experience. Genetics gives artists the opportunity to question mortality as well as to speculate on the moral, spiritual, legal and aesthetic issues that go beyond life and death to embrace notions of immortality. Further, the images and interactive works in the exhibition allow scientists to communicate their important work more easily to a public that is often more comfortable with images than with words.

The artists in PARADISE NOW work with the language and images of science, sometimes stretching the traditions, conventions, and subject matter of art, to give viewers an opportunity to consider the impact of genetic research on their own lives. The works often make use of unconventional materials (including cancer cells, body fluids, live animals, cloned plants and DNA) and yet they often fall into conventional art categories; portraits, still lifes, and landscapes. About half of the artists explore how recent discoveries in genetics are redefining our ideas about **identity** and **individuality**. Some examine the extent to which genetic discoveries are forcing us to rethink definitions of **race**. Other artists speculate about the causes of increasingly aggressive intervention in the “natural” processes of life and death. Much of the work questions what genetic research reveals about us, individually and collectively.

WHY ARE WE SO COMPELLED TO CONTROL OUR BODIES, OUR LIVES, OUR FATE?

HOW MIGHT SCIENCE AND TECHNOLOGY CHANGE THE THINKING, BEHAVIORS AND VALUES THAT WE HAVE TAKEN FOR GRANTED FOR SO LONG?

Other artists in the exhibition examine how genetics is used to shape nature according to human demands. For centuries, our environment has been altered to meet our needs. Animals and plants have long been genetically manipulated to enhance size, efficiency and productivity. But the genetic revolution could easily cause the “balance of man and nature” to tip. Many of the artists question the motivations behind the increasingly aggressive genetic modification of the crops, animals, and plants we produce and eat.

[Are these objects included??]

In order to stimulate thinking about the relationship of art to science, more specifically, the implication of genetics in our everyday lives, the exhibition includes information that will aid visitors in interacting with the art. Included are objects and images from popular culture, such as film posters, bumper stickers, graphs, cartoons, and product packaging. These reveal how our hopes, fantasies and fears about genetics have already become a part of our conversation and culture. There are also scientific images, apparatus and objects that add information to the experience of the art. Finally, each artist was asked to

write a statement to help the viewer understand how and why genetics stimulated the artist's imagination.

Finally, PARADISE NOW shows the surprising similarities in the goals and working methods of artists and scientists. In both science and art, individuals follow their curiosity and develop systems of inquiry. Scientists and artists both attempt to find meaning in the rich and often chaotic barrage of facts, images and impressions that they observe and investigate. Aware that startling possibilities often arise from uncertainty, both are perhaps more accepting of accident than are most individuals. When artists and scientists reveal something previously unknown or unseen, or bring into being something that did not exist, they are, in essence, creating something new.

The work of a scientist might have a more direct and practical application, while an artist's goal, it might be argued, is more subjective and not as practical. But the similarity between a scientist, whose research could help to detect cancer before it becomes a threat, and an artist whose work provides insight into what it means to be alive is very real. Each is searching for truths that contribute to the quality and understanding of our lives; each seeks to make at least some of the mysteries of life more comprehensible and, perhaps, less overwhelming.

(a summary of the Introduction by Marvin Heiferman and Carole Kismaric)

PARADISE NOW
VOCABULARY

anthropo- prefix meaning “human being.” *e.g.*, anthropology = the study of human beings

anthropocentric – a worldview or attitude in which human beings are seen as the center of the universe

anthropomorphize = to give human characteristics to something that is not human

biotech = the application of the principles of engineering and technology to the life sciences; also, the **biotech industry** = an extremely large and lucrative industry to which many of these artists are reacting

gene = a hereditary unit that occupies a specific place on a chromosome and that controls a particular characteristic in an organism. From the Greek, *genos*: race, offspring.

genesis = the coming into being of something, the origin. See synonyms at beginning.

genetics = the branch of biology that deals with heredity, especially the mechanisms of hereditary transmission, how traits are passed on

genomics – the study of genes and the proteins whose work they initiate and control

hybrid – the offspring of genetically dissimilar parents or stock, especially the offspring produced by selective breeding. Also, something of mixed origin or composition.

onco – prefix meaning “cancer.” From Greek, *onkos*, tumor or mass.

oncomouse – a hybrid mouse modified to have a human immune system. For experimental purposes.

paradise – a place of ideal beauty or loveliness.

sequence (verb) – to determine the order of constituent parts

transgenic – carrying genes transferred from another species or breed

xenotransplantation – xeno (foreign) – to transplant components from one species into another.

ART STRAIGHT FROM NATURE

A Lesson on biomorphic beauty in PARADISE NOW

OBJECTIVE: Students will examine three works representing a biological “building block” in PARADISE NOW in order to create one of their own.

CORE LEARNING GOALS: To analyze aesthetic experiences to determine how images and ideas influence artistic decision making (FA1.2) To experiment with and apply knowledge of materials and techniques to create intended effects (G/TF3.3).

OPENING ACTIVITY: Explain to students that the Greek word for poet (poihtx) simply means maker; in Greek versions of the Old Testament, God, as maker of the universe, is called the Poet. That ancient worldview, then, revered the idea of “making.” What are some possible outcomes of this kind of thinking in the art world? In the world of science.

OBJECTIVE: Students will analyze artists’ representations of biological elements in art in order to create one of their own.

DISCUSSION/STARTING POINTS: In virtually every creation myth, the god figure brings order into being out of some kind of chaos. Humanity seems to have a need to find order and beauty in the chaos of the natural world. What might an artist do with scientific advancements that allow us to see the building blocks of life on a microscopic level? Would we expect these elements to be shapely and beautiful or not? Explain.

RELEVANT WORKS:

- Chadwick, Nebula
- Jones, Untitled (DNA Fragment ... Oncogenes)
- Kremers, Trophoblast

Have students closely examine these three works. Give them the worksheet and have them record answers, thoughts, reflections and feelings. Paraphrase the artists’ statements, which contain useful information on the ideas and materials that the artists chose.

Chadwick, Nebula. These large representations of cellular activity are beautiful in color and composition. Why “nebula”? Are they cell or cosmos? Imagine your own place in the continuum of the universe.

Jones, Untitled (DNA Fragment): The artist reflects Arp’s ideas of utopic or perfect order by making a shapely sculpture out of a lethal DNA fragment. This piece reflects the idea of beauty as an overwhelming and powerful tool – and perhaps dangerous.

Kremers, Trophoblast: This artist “grows” paintings from bacteria that are genetically engineered to produce enzymes of certain colors. He “collaborates” with the bacteria to

create certain shapes and colors. The plates are dried and sealed in synthetic resin. In the future, conservators could remove the resin, feed the bacteria, and continue the work. What does this do to the position and primacy (or importance) of the artist?

SUMMARY/ASSESSMENT:

In the classroom, review and discuss the biomorphic images created by these artists. What sorts of feelings did the works evoke in the students? What influences or similarities came to mind?

Have students create, using appropriate media, their own piece of bio-based art in any medium.

Assessment of the finished piece will be by a teacher-generated rubric incorporating both understanding of the works studied and personal expression of the student.

ART STRAIGHT FROM NATURE

Worksheet

Name:

	Chadwick, Nebula	Jones, Untitled (DNA Fragment ... Oncogenes)	Kremers, Trophoblast
Medium			
Description of piece			
Describe the interaction of medium and message			
What is your reaction to the piece?			
What do you think was the artist's intended effect?			

Using this worksheet and your journal, start to think about making your own piece of art from a small unit of nature. It could be a DNA strand, a cell, a diagram you know from science. Which processes in nature interest you the most? Turn one of them into a work of art.

DNA DOWN ON THE FARM

A Lesson on the “landscapes” in PARADISE NOW

OBJECTIVE: Students will examine two satirical landscapes in PARADISE NOW in order to create one of their own.

CORE LEARNING GOALS: To analyze aesthetic experiences to determine how images and ideas influence artistic decision making (FA1.2) To experiment with and apply knowledge of materials and techniques to create intended effects (G/TF3.3).

OPENING ACTIVITY: 1) Have students define “landscape.”

- 2) What are the usual associations with landscape painting? Bucolic? Traditional?
- 3) What do they expect from a landscape in PARADISE NOW?

OBJECTIVE: Students will analyze artists’ representations of genetically modified landscapes in order to create one of their own.

DISCUSSION/STARTING POINTS:

Life imitates art, or vice versa? The word landscape was borrowed as a painter’s term from Dutch during the 16th century, when the Dutch were becoming masters of this genre. The Dutch word *landschap* originally meant “tract of land,” but had acquired the artistic definition, which it brought over into English. Thirty-four years passed after the first recorded use of the word landscape in English before the word was used as a vista or view or natural scenery. This delay would suggest that people were first introduced to “landscapes” in paintings and then saw “landscapes” in real life.

How does this brief history lesson fit in with the landscapes in PARADISE NOW?

RELEVANT WORKS:

- Moore, Oz
- Rockman, The Farm

Have students closely examine both of the works. Give them the worksheet and have them record answers, thoughts, reflections and feelings. Paraphrase the artists’ statements, which contain useful information on the ideas and materials that the artists chose.

Moore, Oz: Moore’s flow-chart artist statement shows how he became interested in genetics. A “biology nerd eco freak” child who later contracted AIDS and died in 2002, he had been personally and artistically concerned with genetics and GMOs on a personal as well as artistic level.

Be sure that students notice the relative scale of the humans vs. the plants and other creatures, and the toppled structures and artifacts. For discussion, note the prescription

and dollar symbols in the industrial structures in the background, and the stick-figure human in the god-like aura of light.

Rockman, The Farm: This artist is concerned with how humans perceive and interact with plants and animals, and how culture seems to be influencing the direction of natural history. This painting of a soybean field can be read from left to right, showing the development of familiar farm animals and what they might become.

In “The Farm,” Rockman expresses concern about how the pressures of human consumption, aesthetics and domestication may affect farm animals, causing them too to lose their identities.

SUMMARY/ASSESSMENT:

In the classroom, review and discuss each of the dystopian landscapes envisioned by these artists. What sorts of feelings did the works evoke in the students? What influences did students notice in the paintings? Does a surrealist or magic realist model come to mind? If so, why?

Have students create, using appropriate media, their own genetically modified landscape. Students should be able to explain the direction in which their plants or creatures have been modified.

Assessment of the finished piece will be by a teacher-generated rubric incorporating both understanding of the works studied and personal expression of the student.

DNA DOWN ON THE FARM

Worksheet

Name: _____

	Oz (Moore)	The Farm (Rockman)
Description of landscape		
What has the artist done with scale and perspective?		
Describe the progression of images.		
What is your reaction to the painting?		
What do you think was the artist's intended effect?		

Using this worksheet and your journal, start to think about making your modified landscape? Will you include humans in it? Which creatures and in what condition? What kind of effect do you want your landscape to have on the viewer?

PERFECTION/PERFECT FEARS

A Lesson Using Portraiture in PARADISE NOW

OBJECTIVE: Students will examine three “imaginary” portraits in PARADISE NOW in order to identify elements of the beautiful and the horrific to create an idealized portrait of their own.

CORE LEARNING GOALS: To analyze aesthetic experiences to determine how images and ideas influence artistic decision making (FA1.2) To experiment with and apply knowledge of materials and techniques to create intended effects (G/TF3.3).

OPENING ACTIVITY: 1) Have students define “perfection.”
2) Have students define “flaw.”
3) Open up a discussion on the humanity and humility of flaws, both in ourselves and in the things we create.

OBJECTIVE: Students will analyze artists’ responses to the possibility and danger of “perfection” in order to create an idealized work of their own.

DISCUSSION/STARTING POINTS:

From Webster’s: “Perfect: 1. Lacking nothing essential to the whole; complete of its nature or kind. 2. Being without defect or blemish. 3. Excellent or delightful in all respects.”

“Flaw: 1. An imperfection, often concealed, that impairs soundness. 2. A defect or shortcoming in something...”

Ask students what it means to them to be human. Are flaws not only accepted, but expected in the human race and in what we make? Remind students that in certain cultures an artisan was expected to include a flaw in the work to show humility and the realization that, although he was a creator, he was not a god.

Advances in genetics have led to the isolation and possible removal of “negative” genes. How can artists use their imaginations to show the possible benefits as well as the dangers of genetic manipulation? How will these advances affect the ideas of individualism and identity?

RELEVANT WORKS:

- Cottingham, Fictitious Portrait Series
- Laverdiere, Transgenic Laureate and Laureate Plan
- Rubenstein, Untitled (Boy with Puppy Dog Eyes)

Have students closely examine each of the three above works. Give them the worksheet and have them record answers, thoughts, reflections and feelings. Paraphrase the artists’

statements, which contain useful information on the ideas and materials that the artists chose.

Cottingham, Fictitious Portrait Series: Drawing on the ideas of traditional portraiture, the artist uses digital painting and montage to create a series of imaginary portraits that show the beauty and the horror of our inventions. His work shows the development and instability of the idea of the “Self.” He challenges what the viewer sees as “portraiture.”

Laverdiere, Transgenic Laureate: Using the laurel, the ancient sign of knowledge, poetry and wisdom, the artist questions what will happen when genomics allows us to pick and choose our DNA. The gifts of genius and strengths could be obtained by reconfiguring our genetic building blocks. ‘GENIUS WILL BE DESIGNED TO ORDER AND GROWN ON TREES.’

Rubenstein, Untitled (Boy with Puppy Dog Eyes): This artist is concerned that technology has changed the nature of human existence. One of his major interests were the experiments with xenotransplantation (xeno = foreign, transplanting parts from one species into another) that have taken place. This photograph was changed to give the boy puppy dog eyes. Scientists figured out that adult people and animals take better care of little people and animals who have big eyes with big dark irises. The boy could be seen as the ideal object of caretaking.

SUMMARY/ASSESSMENT:

In the classroom, review and discuss the way in which “perfection” was portrayed by each of the three artists. What sorts of feelings did the works evoke in the students? Have students create, using appropriate media, their own portrait of perfection evoking both beauty and horror.

Assessment of the finished piece will be by a teacher-generated rubric incorporating both understanding of the works studied and personal expression of the student.

PERFECTION/PERFECT FEARS

Worksheet

Name:

	Fictitious Portrait Series (Cottingham)	Transgenic Laureate (Laverdiere)	Untitled (Boy with Puppy Dog Eyes) (Rubenstein)
Medium:			
Subject Matter:			
What has the artist done to manipulate the image? What is its effect?			
Your thoughts and reflections on the work:			
Finally, how does each piece make you feel? Hopeful? Pessimistic? Amused? Angry?			

Using this worksheet and your journal, begin to formulate ideas for a portrait in terrible perfection of your own. Will you use unusual, high-tech materials? Will you portray a different definition of identity? Will you show physical or intellectual perfection?

UNORTHODOX PORTRAITS

A Lesson Using Portraiture in PARADISE NOW

OBJECTIVE: Students will examine the non-traditional portraits in PARADISE NOW in order to redefine the requirements for “portraiture” and create their own science-based, non-traditional portrait.

CORE LEARNING GOALS: To analyze aesthetic experiences to determine how images and ideas influence artistic decision making (FA1.2) To experiment with and apply knowledge of materials and techniques to create intended effects (G/TF3.3).

OPENING ACTIVITY: 1) Have students define “portrait.”
2) What components do you think a portrait must contain in order for its subject to be recognizable?

OBJECTIVE: Students will analyze how advances in genetics and science have created new possibilities in portraiture in order to create a non-traditional portrait of their own.

DISCUSSION/STARTING POINTS:

From Webster's: “Portrait: A likeness of a person, especially one showing the face, that is created by a painter or photographer, for example. Also, a verbal picture or description, particularly of a person.”

With advances in the sciences, including genetics, what does it mean to “portray” someone? Is a representation of DNA a truer portrait than a picture of a face? How can artists use their imaginations to show the possible benefits as well as the dangers of genetic manipulation? How will these advances affect the ideas of individualism and identity?

RELEVANT WORKS:

- Ackroyd and Harvey, Mother and Child
- Ashbaugh, Bio-Gel (aka The Jolly Green Giant)
- Burson and Kramlich, The Human Race Machine
- Miller, Genomic License No. 5
- Miller, Steve, Genetic Portrait of Isabel Goldsmith
- Rule, One Horse-Meadow Star

Have students choose three of the above works for close examination. Give them the worksheet and have them record answers, thoughts, reflections and feelings. Paraphrase the artists' statements, which contain useful information on the ideas and materials that the artists chose.

Ackroyd and Harvey, Mother and Child: This traditional subject of portraiture (mother and child, generation to generation) is represented in a non-traditional medium: grass chlorophyll. Through experimentation, scientists were able to identify the gene that controls the grass's aging and even stop it altogether. What is the significance of this

subject matter portrayed in a medium that does eventually lose its ability to hold the image?

Ashbaugh, Bio-Gel (aka The Jolly Green Giant): The artist is very aware of the changes brought about in the world by advances in knowledge of genetics. He wonders whether art is leading reality around or vice versa. Unlike Darwinism, which learns from the past but is blind to the future, biotechnology threatens to take great strides in envisioning the future.

Burson and Kramlich, The Human Race Machine. When the artists discovered that THERE IS NO GENE FOR RACE, they began to work on projects to move beyond difference and arrive at sameness.

Miller, Genomic License No. 5. When the patenting of animals was approved by the Supreme Court in the 1980s, the artist concluded that individuals would soon need legal rights to their own personal genomes. He continues to make art that bridges the concerns of art, science and theology.

Miller, Steve, Genetic Portrait of Isabel Goldsmith. There is a long tradition of art collectors having their portraits painted by artists. This artist became interested in using new medical imaging techniques as means to create portraits. The subject's identity can be expressed through x-ray, MRI, sonogram, EKG and CAT scans. Here, he has chosen to depict his subject, Isabel Goldsmith, in a genetic portrait.

Rule, One Horse-Meadow Star: A thoroughbred horse presents a certain image of perfection to the world. Every thoroughbred's pedigree is traced back more than twenty generations, making it possible to paint a portrait of a horse with just the names of its ancestors. The darker red lines show the inbreeding in the horse's pedigree. The artist notes that inbreeding is much less controversial than the idea of directly manipulating genes.

SUMMARY/ASSESSMENT:

In the classroom, review and discuss the unusual media and representations used by the artists in PARADISE NOW to create portraits that defy expectations. Have students create their own unorthodox portraits, either using unusual materials or scientific/mathematical formulations to express identity.

Assessment of the finished piece will be by a teacher-generated rubric incorporating both understanding of the works studied and personal expression of the student.

UNORTHODOX PORTRAITS Worksheet

Name: _____

Works Chosen	Work #1	Work #2	Work #3
Medium:			
Subject Matter:			
What is the relationship between the medium and the message of each piece? Is it straightforward? Ironic?			
Your thoughts and reflections on the work:			
Finally, how does each piece make you feel? Hopeful? Pessimistic? Amused? Angry?			

Using this worksheet and your journal, begin to formulate ideas for an unorthodox portrait of your own. Will you use unusual, high-tech materials? Will you portray a different definition of identity? Will you do a self-portrait from your own family tree?

FUSION/CONFUSION K-6

A Lesson on the “Hybrids” in PARADISE NOW

OBJECTIVE: Students will examine four hybrid creations in PARADISE NOW in order to identify characteristics of the component parts and to create a hybrid creature of their own.

CORE LEARNING GOALS: To analyze aesthetic experiences to determine how images and ideas influence artistic decision making (FA1.2) To experiment with and apply knowledge of materials and techniques to create intended effects (G/TF3.3).

OPENING ACTIVITY: 1) Have students name as many hybrid creatures as they can. (Think gargoyle, mermaid, satyr, centaur, Pegasus, Minotaur.)
2) Discuss the respective characteristics of these creatures. Are they scary or cute? Why?

OBJECTIVE: Students will analyze artists’ responses to the possibility and danger of hybridization in order to create a hybrid creature of their own.

DISCUSSION/STARTING POINTS:

Why are there so many hybrid creatures in mythology and literature? Do we humans have a fascination with our own place in the “Grand Scheme of Things”? We might believe in a god or angels who have more power than we do. Then you have humans, who have logical thoughts and who use language. Lower down on the scale of things are animals, who have intelligence but who don’t express themselves in the same way we do.

What if we could mix up who we are with animals? Or other animals with animals? What kinds of creatures would we create? And would this be good or bad?

RELEVANT WORKS:

- Crockett, *Ecce Homo Rattus*
- Rubenstein, *Untitled (Boy with Puppy Dog Eyes)*
- Stein, *Smile Tomato & Green Pig & Smile on Vine*
- Sutton, *Hybrids*

Have students closely examine each of the four works. Give them the worksheet and have them record answers, thoughts, reflections and feelings. Paraphrase the artists’ statements, which contain useful information on the ideas and materials that the artists chose.

Crocket, *Ecce Homo Rattus*: This artist was interested when he learned that scientists had been able to breed mice that had a human immune system. (The immune system is what keeps humans from getting sick.) These mice could be used in experiments to see how well certain cancer drugs would work. This kind of mouse is called an oncomouse (onco for cancer, mouse for mouse).

The artist realized that this combination was a lot like mythology, like a satyr who is half man and half horse, or the minotaur, who is half man and half bull. But this isn't mythology: this is real life. It touched him and he decided to make a statue of a mouse standing in the usual pose of a philosopher or religious figure. Notice the way the marble looks like flesh. And ask yourself what the artist is really doing. Does he honor what science is capable of doing or is he criticizing it?

Rubenstein, Untitled (Boy with Puppy Dog Eyes): This artist is concerned that technology has changed the nature of human existence. Scientists can change us in many different ways. This artist has noticed that these changes could affect us psychologically and biologically.

One of his major interests were the experiments with xenotransplantation (xeno = foreign, transplanting parts from one species into another) that have taken place. This photograph was changed to give the boy puppy dog eyes. Scientists figured out that grown up people and animals take good care of little people and animals who have big eyes with big dark irises. This picture is an exaggerated example of that. Scientists might be able to do this sort of thing in real life. Do you think that would that be good or bad? Why?

Stein, Smile Tomato & Green Pig & Smile on Vine: This artist likes to experiment with the line between nature and culture, or what people can do. She put animal-shaped molds over top of young vegetables as they were growing to change their shape and give them human expressions. Some of the vegetables she experimented with were too strong to give in to the molds, but most of them did. These vegetables were only changed physically, not genetically.

They are smiling, happy vegetables now. Do you think this image is scary? The artist thinks that her molds are similar to pressures we face with our families and friends. Do these pressures ever change you? The artist was thinking about how outside things can change us people, too.

Sutton, Hybrids: This artist has worked a lot with computers. She realized that writing computer language was like breaking down big ideas into little pieces and making sense out of them, and then rebuilding them into a new whole. These computer-generated images work in the same way. She took parts of various animals and combined them into these strange new "hybrid" creatures.

If we keep combining genes and parts from different creatures, we might be able to get a perfect creature. Or we might get a monster like Frankenstein. What do you think about this?

SUMMARY/ASSESSMENT:

In the classroom, review and discuss the different creatures shown by each of the artists. What sorts of feelings did the works evoke in the students? Were the creatures cute or scary? Why? Does the combination of human and animal make it more or less scary?

Have students create, using appropriate media, their own imaginative hybrid creature. They should make a “cute” creature or a “scary” creature. Students should give reasons explaining their choices of “component creatures” in their hybrid

Assessment of the finished piece will be by a teacher-generated rubric incorporating both understanding of the works studied and personal expression of the student.

FUSION/CONFUSION Worksheet

Name: _____

	Ecce Homo Rattus (Crockett)	Untitled (Boy with Puppy Dog Eyes) (Rubenstein)	Smile Tomato & Green Pig & Smile (Stein)	Hybrids (Sutton)
What is it made of?				
Which creatures went into making these new creatures?				
Scary or cute?				
Why do you think it is scary or cute?				
What was the artist trying to get us to feel?				

Using this worksheet and your journal, start to think about making your own “mixed-up” creature. Will it be a scary creature or a cute creature? What “normal” creatures will you use to mix up with others? What kind of life would this creature have (on the land, the sea, the air, some of each)? What kind of feeling do you want this creature to give?

Be able to explain why you chose each of the beginning creatures for your “hybrid” creature.

FUSION/CONFUSION 6-12

A Lesson on the “Hybrids” in PARADISE NOW

OBJECTIVE: Students will examine four hybrid creations in PARADISE NOW in order to identify characteristics of the component parts and to create a hybrid creature of their own.

CORE LEARNING GOALS: To analyze aesthetic experiences to determine how images and ideas influence artistic decision making (FA1.2) To experiment with and apply knowledge of materials and techniques to create intended effects (G/TF3.3).

OPENING ACTIVITY: 1) Have students name as many hybrid creatures as they can. (Think gargoyle, mermaid, satyr, centaur, Pegasus, Minotaur.)
2) Discuss the respective characteristics of these creatures. Are they threatening or endearing? Scary or cute? Why?

OBJECTIVE: Students will analyze artists’ responses to the possibility and danger of hybridization in order to create a hybrid creature of their own.

DISCUSSION/STARTING POINTS:

One of the great stories of a hybrid creature in confrontation with a human is that of Oedipus and the Sphinx. The Sphinx, a winged creature with the head of a woman and the body of a lion, kills anyone who does not have the answer to her riddle. “What walks on four legs in the morning, two in the afternoon and three in the evening?” What more concise expression of the natural, human order of things than that: the baby crawls, grows up to stand on two legs, then walks with a cane in old age and infirmity. Oedipus defeats the sphinx, but is then defeated himself when he learns that he has profoundly subverted the “natural order of things,” having killed his father and produced children with his own mother.

Why are there so many hybrid creatures in mythology and literature? We humans seem to have a fascination with our own place in “natural order of things,” “the Great Chain of Being” as Kant called it. We might believe in a god or angels who have more power than we do, immortal, incorporeal. In between we have humans, gifted with rational thought and the ability to use language, yet still in a corporeal and mortal state. Lower down in the chain are animals who live by instinct in their bodies, who have intelligence but who don’t express themselves in the same way we do.

What if we could mix up who we are with animals? Or other animals with animals? What kinds of creatures would we create? Genetically speaking, this kind of hybridization is already taking place. Does the potential for good outweigh the bad?

RELEVANT WORKS:

- Crockett, *Ecce Homo Rattus*

- Rubenstein, Untitled (Boy with Puppy Dog Eyes)
- Stein, Smile Tomato & Green Pig & Smile on Vine
- Sutton, Hybrids

Have students closely examine each of the four works. Give them the worksheet and have them record answers, thoughts, reflections and feelings. Paraphrase the artists' statements, which contain useful information on the ideas and materials that the artists chose.

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Assessment of the finished piece will be by a teacher-generated rubric incorporating both understanding of the works studied and personal expression of the student.

FUSION/CONFUSION Worksheet

Name: _____

	Ecce Homo Rattus (Crockett)	Untitled (Boy with Puppy Dog Eyes) (Rubenstein)	Smile Tomato & Green Pig & Smile (Stein)	Hybrids (Sutton)
Medium:				
Component creatures:				
Characteristics: Threatening or endearing.				
Why?				
Artist's intended effect.				

Using this worksheet and your journal, start to think about making your own “mixed-up” creature. Will it be a scary creature or a cute creature? What “normal” creatures will you use to mix up with others? What kind of life would this creature have (on the land, the sea, the air, some of each)? What kind of effect do you want this creature to have on the viewer?

Be able to give the rationale for your choices of the beginning creatures for your “hybrid” creature.