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**MARCUS FOUNDATION AWARDS COLLABORATIVE GRANTS FOR
ART EDUCATION IN TEXAS**

The Edward and Betty Marcus Foundation has awarded a grant to the University of North Texas (UNT) and the North Texas Institute for Educators on the Visual Arts (NTIEVA), and a grant to the Dallas Museum of Art (DMA) for a collaborative program involving the School of Visual Arts at UNT, NTIEVA, the DMA, and the Dallas Independent School District (DISD). The program will begin in June of 1995.

The Marcus Fellows Program

The Marcus Fellows Program, the UNT component, is designed to develop leadership among Texas art educators for comprehensive approaches to art with special emphasis on utilizing technology in instructional delivery, both in the classroom and during museum visits. Assessment of student responses to art as a significant part of the total public school curriculum will also be a major focus.

Five Marcus Fellows will be selected from applicants around Texas to enroll as graduate students in the School of Visual Arts at UNT. The Fellows will utilize the NTIEVA, the DMA, and the DISD as learning laboratories during their studies. Upon completion of the program the Fellows will provide a core of well-trained leaders who will work throughout the state of Texas to improve the quality of visual arts education in both school and museum settings.

DMA *Learning to Look* Program

A component of the Marcus Fellows Program is the development at the Dallas Museum of Art of *Learning to Look*, an interactive computer program that will be the primary focus of the DMA project. Utilizing the Marcus Fellows, this program will be developed as an integral component of the fifth-grade multi-visit program established by the DMA with DISD schools.

Marcus Fellows Application Guidelines

Five individuals each year for three years will be provided 15 month fellowships and will be designated Marcus Fellows.

Applicants should be experienced school, museum, or arts agency personnel who are currently employed in Texas.

Preference will be given to candidates who already have a master's degree; however, outstanding candidates with only a baccalaureate degree may also apply. Consideration will be given to individuals who can provide evidence of local support from a school district, museum, or arts agency, or a combination of these.

Candidates must meet entrance requirements for graduate study in the School of Visual Arts at UNT. Formal announcements with further details of the Marcus Fellows Program will be mailed throughout the state in the near future.



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BRIDGING THE CURRICULUM THROUGH ART: INTERDISCIPLINARY CONNECTIONS

Centered on works of art, Discipline-Based Art Education (DBAE) integrates content from four foundational art disciplines: art production, art history, art criticism and aesthetics. These four disciplines encourage students to create, investigate, appreciate, and question art in ways that require critical thinking skills. Through art production students learn skills necessary to create art. Through art history students gain knowledge about the contributions of art, artists, and cultures throughout time. Through art criticism students learn to respond to art by describing, analyzing, interpreting and making qualified judgments. Through aesthetics students investigate the "big" questions about the nature of art and learn that the questioning process is as important as finding definitive answers.

DBAE provides a model for extending interdisciplinary connections across the curriculum through art. With art as the central focus, the interconnected concepts of the curriculum become accessible and clear to students. Learning becomes cumulative and holistic when art is taught as a subject within the general curriculum. This interrelated curriculum strategy, introduced and implemented in schools across north Texas by art specialists and classroom teachers associated with the North Texas institute, exemplifies substantive, measurable learning experiences.

Texas-Mandated Educational Objectives

Beyond creating an educational environment that contributes to improved learning outcomes, DBAE also addresses the Texas Essential Elements (EE's), state mandated educational objectives that specify the essential elements of instruction for all subjects. The four EE's for art, grades K-12, correlate directly with the four disciplines of DBAE.

Corresponding to the art discipline of production, the Texas EE's for Art dictate that students experience "inventive and imaginative expression through art materials and tools." Coinciding with the discipline of art history, the EE's require that students acquire an "understanding of self and others through art, culture, and heritage."

Equivalent to the discipline of art criticism, the EE's direct that students develop an "awareness and sensitivity to natural and man-made objects." Parallel to the art discipline of aesthetics, the EE's necessitate teaching "aesthetic growth through visual discrimination and judgement."

Texas Essential Elements for other subjects, such as social studies, writing, reading, math, and science, also correlate with DBAE, substantiating art's importance to the general curriculum. Additionally, DBAE meets objectives for the Texas Assessment of Academic Skills (TAAS) through a variety of reciprocal goals.

Using grade 4 as a median classification, reading comprehension and written communication are readily addressed through the four foundational disciplines of art. For example, placing events in sequential order, cause and effect relationships, and vocabulary acquisition are each invoked by art production. Art history teaches TAAS objectives by utilizing sequencing and chronological order. Art criticism meets the objectives of main idea, point of view, description, analysis, and inference. The objectives of perceiving relationships and analyzing outcomes are key to the art discipline of aesthetics.

Theme of Interdisciplinary Connections

This issue of NTIEVA Newsletter focuses upon the critical relationship that comprehensive, quality art education has with curriculum content and learning outcomes. Included in this edition

are cross-curricular lessons developed and used by consortium member art specialists and teachers throughout the north Texas region. **We invite all our readers to share with us similar approaches and strategies for future publication.**

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INTERDISCIPLINARY CONNECTIONS: ART CRITICISM AND SCIENCE

Art criticism involves careful observation of works of art in consideration of the context in which the work was produced. Students practice art criticism when they look at works of art, describe what they see, analyze content, seek multiple interpretations, and make judgments based upon information obtained through focused investigation.

Looking at, discussing, and writing about works of art are equally valid ways of accessing information contained within art images. Critical thinking skills expand from lower to higher order as students apply the four basic steps of art criticism (describe, analyze, interpret, judge).

Art and science both offer opportunities for observation, classification, order and sequence, drawing inferences, and predicting outcomes. A work of art, such as David Bates' *Night Heron*, which draws its subject matter from a real environment, Grassy Lake in Arkansas, provides a focus for exploration of content and a natural integration of art and science concepts.

About the Art

Night Heron portrays a black-crested night heron, a nocturnal bird common to swampy southern lakes. Painted in monumental size, 96 x 78 inches, the bird is shown in profile, surrounded by the dense and visually complex undergrowth typical of its lake environment.

About the Artist

David Bates was born in Dallas in 1952. From 1977 to 1981, he primarily worked in clay and wood sculpture, but since 1980, Bates has concentrated on painting, chronicling the activities and places he knew and enjoyed most -- hunting and fishing trips, state fairs, flea markets, and honky-tonks.

Classroom Activities

Using questioning strategies, guide students through a discussion of *Night Heron* and its environment. Compare and contrast *Night Heron* to the painting of a night heron by John James Audubon. Compare *Night Heron* with images in science books of flora and fauna of swamp environments. If possible bring in actual plants (such as the dried seed pods in the lower left of the painting for comparison. For a related production activity, students could create a three-dimensional paper interpretation of a swamp environment, complete with birds, trees, plants, vines, and other features.

Suggested Questions

1. Identify and classify the plants and wildlife in *Night Heron*.
2. Do line, shape, and color contribute to the unity of design in the painting? How?
3. What evidence of cycles of life (such as a food chain) has Bates depicted in *Night Heron*?
4. How is Bates' painting different from a photograph of a similar scene?
5. How is Bates' depiction of this environment important to the meaning of the painting?
6. Has the artist conveyed his concern for his subject matter effectively? Give reasons for your answer.



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NTIEVA PLANS NATIONAL CENTER FOR ART MUSEUM/SCHOOL COLLABORATIONS

NTIEVA has received a \$62,500 grant from the **Getty Center for Education in the Arts** to establish as its specialty program a National Center for Art Museum/School Collaborations. The center will focus on collaborative programming between art museums, schools, and/or universities and will serve to clarify the role of art museums in a comprehensive approach to art education.

It will also serve as a clearinghouse for information about successful programs and practices by conducting and collecting research, maintaining a database of information, and creating electronic and/or print networks for information retrieval.

The center will also organize regional and national conferences to bring together art museum and school educators, and will develop a program of publications on the subject of art museum/school collaborations.

Leadership for the center will be provided by **D. Jack Davis** and **R. William McCarter**, Co-Directors of NTIEVA, and **Nancy Berry**, Assistant Professor of Art History and Art Education, **University of North Texas**, who will serve as Program Director.

UNT graduate students in art education and art history working on certification in art museum education will serve as research assistants and interns, making significant contributions to research, development, and dissemination of information through networks and publications.

On November 16-18, 1994, guided by facilitator Sharon Blume, members of the national advisory board for the Center met in Denton to review the goals, objectives, and research and development activities proposed for the first year. Their insights and recommendations will help guide the Centers activities during a formative period.



Members of the advisory board are Amelia Arenas, Museum of Modern Art, New York; Dana Baldwin, Portland (Maine) Museum of Art; Schroeder Cherry, Baltimore Museum of Art; Anne El-Omami, Cincinnati Art Museum; Susan Hazelroth, Ringling Museum of Art; Allison Perkins, Amon Carter Museum; Kathleen Walsh-Piper, National Gallery of Art; and Ray Williams, Ackland Art Museum, University of North Carolina.

The Center is viewed as a three-pronged resource to the fields of art and art museum education. It will store information about art museum/school collaborations in an easily accessible format so that museum, university, and school users can find examples to aid in their program design. In its networking function, the Center will offer opportunities for interaction between school, museum, and university educators and administrators.

As a research center, NCAMSC will be a site for visiting and resident researchers from art and art museum education fields, and serve as a vehicle for the publication of advances in theory and practice. The services offered by the National Center for Art Museum/School Collaborations will address growing national concerns among art museums, art museum educators, school administrators, teachers, and universities.

*For further information, contact **Nancy Berry** at NCAMSC, UNT PO Box 5098, Denton, TX 76203; 940-565-4558.*

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AN ART AND SCIENCE COLLABORATION

Bedford Heights Elementary (Hurst-Euless-Bedford ISD) art specialist Sonja Starnes and classroom teacher Barbara Renick collaborate annually on the following unit relating fiber art and the scientific method.

Unit Objectives

Students will be introduced to weaving and will be provided an opportunity to dye yarn for this assignment. This unit is planned to provide learning experiences in both the art and science classes.

Materials

- 5 spools white natural (cotton) fiber or yarn
- warp thread (strong, non-stretching yarn)
- paper plates (two per student)
- 10 packages Kool-Aid, unsweetened, two each of five different colors (flavors)
- 10 large glass or plastic clear containers (4-6 cup capacity)
- measuring cup
- water
- newspapers
- scissors
- tape

Art Class

Day One: Ask students to define weaving. Have students copy definitions of the following terms from the chalk board: weave, loom, warp, weft, woof, and selvedge. Discuss and explain as words are written. Examine and compare woven and knitted fabrics. Look for warp and weft threads. View and discuss various types of looms.

Day Two: Discuss how yarns are colored with natural or commercial dyes. Explain that the class will dye natural fiber yarn with Kool-Aid. Each table is given a spool of cotton yarn after the teacher demonstrates a method of measuring and tying the yarn. Each student will wrap five bundles of yarn since there will be five colors (flavors) of Kool-Aid to use for dyeing.

Day Three: Finish wrapping yarn, dye in science class.

Day Four: After yarn is dyed, dried, and returned to the art class, students begin weaving. The looms are made from two paper plates doubled for strength (the teacher can cut and warp the plates in advance if class time is short). After a demonstration on tying ends of yarn to each other and procedures for weaving, students begin spiral weavings on the paper plate looms with the Kool-Aid dyed yarn.

Days Five-Eight: Students continue weaving. After completing about half the weaving, students will carry the looms to their homeroom in order to use them in conjunction with their science fair project.

Science Class

Day One: The class discusses the Scientific Process and the six steps involved in producing a science fair project: (1) Question, (2) Hypothesis, (3) Materials, (4) Procedure, (5) Observation, and (6) Conclusion.

Day Two: As a learning correlation to the art room experience, the class science fair project will involve dyeing yarn. The class brainstorms possible questions to investigate. *We decided our question would be "Will hot water or cold water cause our yarn to dye darker?" We also hypothesized (predicted) the outcomes.*

Day Three: Students use the bundles of yarn they have tied in the art class. Half the bundles will be placed into the jars of Kool-Aid mixed with cold water. The other half will be dropped in the jars of Kool-Aid and hot water. All the jars will be stirred, then allowed to sit undisturbed in the classroom. After four hours the yarn in each jar will be rinsed and spread to dry on newspaper.

Day Four: The class is divided into six groups. Each group is assigned to write one of the six scientific method steps for the project. After each group presents its first draft, the class discusses and makes additions or helpful comments as needed. Final copies are written and mounted on the science project display board. After the science fair, the students continue to weave with the Kool-Aid dyed yarn and complete the weavings that have been started in the art room.

Article by: Sonja Starnes and Barbara Renick

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ON THE EUROPE BRIDGE

1876-77 Gustave Caillebotte, French, 1848-1894 Oil on Canvas, 41 1/2 x 51 1/8 inches Kimbell Art Museum, Fort Worth, Texas

About the Artist

Gustave Caillebotte was born August 19, 1848, in Paris. His father's family had been well established in the textile industry for some time and Martial Caillebotte, Gustave's father, had come to Paris in order to expand the family business. By 1850, the business was very prosperous, in part because it was supplying bedding to the French army, and the Caillebotte family moved to a large home with a garden.

Caillebotte was the oldest of three sons and still a teenager when he began to work on a law degree. It is believed that Caillebotte had not planned as a young man to become an artist. While a student from age 9 to 14, he excelled in literary subjects. He did so well studying the law that he received his degree in 1869 at the young age of 21.

Caillebotte was a close friend of other impressionist painters, and he helped to fund their first public exhibition in 1874. He exhibited his work with theirs in 1876. Caillebotte was not only the impressionists' friend, he was also their patron, purchasing many of their works. Since he was independently wealthy, he was able to acquire a large and important collection of impressionist works which he later bequeathed to France. These paintings are in the Musée d'Orsay in Paris today.

About the Art

Medium: Oil on canvas, 41 1/2 x 51 1/8 inches.

Style: Impressionism

Purpose: *On the Europe Bridge* shows a scene from the modern life of Paris. The bridge is a powerful example of the technological advances of the time and of their impact on the people of Paris and the world.

Content: Caillebotte shows the viewer modern city life with some of the dramatic changes that were affecting the lives of its people. The subject matter, urban Parisian life, is what made this painting such an innovative work for its time. Caillebotte did a very daring thing when he chose to depict contemporary life. Until this time, the accepted and traditional subject for painting had been primarily historical scenes.

Additional Information

The train station in the background of *On the Europe Bridge* is the Gare Saint-Lazare. The train station represents the industrial age that Paris and Europe were experiencing at the time. We do not actually see the trains but we see the smoke from the busy terminal where people arrived in the bustling city. The bridge on which the figures stand is above the railyard.

The Europe bridge is the point where six major avenues crossed leading out in all directions. The names of these avenues are the Rue de Berne, the Rue de St. Petersburg, the Rue de Constantinople, the Rue de Madrid, the Rue de Vienne (Vienna), the Rue de Londres (London),

and the Rue de Berlin. The configuration of the six crossing roads and their names represents the idea that the changes of the time entered the city of Paris and spread out to all parts of Europe.

About the time and Place

Great Britain led the industrial revolution because the British had iron and coal resources that helped them to develop an excellent transportation system to move goods from one place to another. Also, Britain had been a major international trading nation since the 1500s and 1600s because of the tobacco, sugar, tea, and slaves from their colonies. British merchants had gained much wealth from trading and had money to invest in industries such as textiles, mines, railroads, and shipbuilding.

In the United States, on May 10, 1869, at Promontory Point, Utah, the railroad that spanned the nation was completed when the Union Pacific and the Central Pacific railroads met. The nation celebrated as travel time from New York to San Francisco became just eight days. The trip had previously taken at least three months, and often two or three times that long. Railroads brought rapid economic growth for the country.

By the second half of the 1800s, other European nations challenged Britain's leadership in the Industrial Revolution. Belgium also had coal and iron resources and a tradition in textile manufacturing. France had a strong textile industry and produced important inventions. In the early 1800s, Joseph Marie Jacquard developed the first power loom to weave complex fabric patterns. The French government encouraged the textile industry by imposing high tariffs on cloth imports from other countries. The government also backed projects for the improvement of transportation, especially the building of railroads.

The Eiffel Tower was completed for the Paris exposition of 1889, and it became a symbol of the industrial and technological progress of the time.

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Special gratitude to the Education Department of the Kimbell Art Museum.

Article by: [Kay Wilson](#)

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GEODESIC STRUCTURES

Introduction to Geodesic Structures

In the late 1940s, R. Buckminster Fuller developed what he called a *synergetic-energetic* system of geometry. The most well-known result of his efforts is the architectural structure called the geodesic dome. A prime example of Fuller's work is the geodesic dome built in Montréal for the U.S. Pavillion at Expo 67.

Patented in 1947, the geodesic dome is a network of interconnected tetrahedrons (equilateral triangles arranged into four-planed figures) forming a hemispheric grid.

The triangle, the simplest form within the geodesic dome, is one of the most stable of geometric forms. The use of triangles (as tetrahedrons) distributes stress evenly to all elements of the geodesic dome, providing a high strength-to-weight ratio.

Because of its structural length, the geodesic dome can enclose space without interior support and be made of lightweight materials.

The Triangle in Other Forms of Modular Systems of Construction

The inherent strength of the triangle has been utilized in other forms of modular systems of construction besides geodesic architecture. Triangles can be combined to form trusses of great strength. A truss acts as a large beam but is much lighter in weight than a solid form.

Modular Construction and the Industrial Revolution

The use of modular systems of construction in architecture can be traced back through time. Advances in the fabrication of structural iron frameworks led to a burst of building during the Industrial Revolution that created three of the largest structures in the world: the Crystal Palace (1851, England), the Brooklyn Bridge (1883, United States) and the Eiffel Tower (1889, France).

Gustave Eiffel (1832-1923) is the French engineer and designer most associated with the early use of iron frameworks. Though best known for the Eiffel Tower, he also designed the internal support for the Statue of Liberty in New York, along with train stations, bridges and numerous other structures.

On the Europe Bridge, a painting by Gustave Caillebotte, shows an urban scene from life in Paris at this time.

In the monochromatic painting, three figures are shown on the Europe Bridge next to crossed iron girders, as smoke from the railyard below obscures the sky. The Europe bridge was the point in Paris where six major avenues crossed, leading out from Paris in all directions.

Caillebotte's painting is a powerful example of the technological advances of the Industrial Revolution and its impact on the people of Paris and the world. Caillebotte, too, was breaking new ground by depicting this subject in his painting. Until this time, the accepted and traditional subject for painting had been primarily historical scenes.

Suggestions for Comparison of Art Works

Examine and discuss with students images (through printed reproductions or slides) of Buckminster Fuller's geodesic dome from the U.S. Pavillion from Expo 67 in Montréal, *On the*

Europe Bridge, by Gustave Caillebotte, and other works of art or photographs that feature architectural structures based on modular construction.

Possibilities include photographs of the Eiffel Tower, the Brooklyn Bridge, the interior structure of the Statue of Liberty and iron bridge structures, and paintings such as *A Lady at the Paris Exposition* (1889), by Luis Jiménez Aranda.

Architectural Vocabulary

- *architecture*: art or science of building.
- *geodesic*: shortest line between two points that lies in a given surface.
- *geodesic dome*: an architectural structure based on triangles arranged into tetrahedrons, invented by R. Buckminster Fuller.
- *module*: one of a series of standardized units intended for use together.
- *polyhedron*: a geometric solid formed by plane faces.
- *prefabrication*: construction of standardized parts for later assembly.
- *strut*: a structural piece designed to resist pressure in the direction of its length.
- *tetrahedron*: a polyhedron with four plane faces.
- *truss*: a structural system based on triangles.

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**MCCARTER NAMED HIGHER EDUCATION ART EDUCATOR OF THE YEAR AT
TAEA**

Dr. R. William McCarter, Co-Director of NTIEVA and Regents Professor of Art at the UNT School of Visual Arts, was named Higher Education Art Educator of the Year for 1994 by the Texas Art Education Association (TAEA). McCarter was honored with the award November 5, 1994, at the TAEA's annual conference at the Sheraton Park Central in Dallas.

Dr. McCarter, better known to institute participants as "Uncle Bill," has been a faculty member at UNT since 1968. McCarter says of his award, "I appreciate this award because I believe it validates a wide appreciation for UNT and our work in the school districts."



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TAEA NAMES 1994 FRIENDS OF ART EDUCATION AWARDS

The Texas Art Education Association named both the Edward and Betty Marcus Foundation and Jan Muhlert, Director of the Amon Carter Museum as 1994 TAEA Friends of Art Education.

Executive Director M'Lou Bancroft accepted the award for the Edward and Betty Marcus Foundation, given to honor the Foundation's dedication to increasing public understanding and appreciation of the visual arts through direct support of visual arts institutions and education.

Jan Keene Muhlert, Director of the Amon Carter Museum, and Chair of NTIEVA's Advisory Committee, received the Friends Award for her exemplary support of first class educational programs and materials and her support of the education staff at the Carter Museum. An example of her extraordinary support for art education has been the initiation of inservices offered in the Museum for entire school faculties.



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PILOT POINT AT THE DMA

The faculty of Gee Junior High from Pilot Point, Texas, one of NTIEVA's consortium districts, visited the Dallas Museum of Art for an all-day inservice on August 17, 1994. Led by DMA Assistant to Teaching Resources Ken Kelsey and PPISD Art Specialist Sylvia Russell, the teachers participated in learning activities based on the DMA's images included in the NTIEVA's study print collection, *ArtLinks*.

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**NTIEVA CO-SPONSORS SANTA FE SEMINAR WITH PLAZA
RESOLANA**

NTIEVA is co-sponsoring *Tres Culturas*, a Santa Fe Summer Seminar, with Plaza Resolana Study and Conference Center, July 17-23, 1995, in Santa Fe, New Mexico.

Plaza Resolana is conveniently located in Santa Fe, three blocks from the many museums, galleries, restaurants, and shops in the historic downtown plaza.

Open to Institute participants, spouses, friends, and other interested individuals, this educational seminar will focus on the three rich and diverse dominant cultures of New Mexico: Pueblo Indian, Hispanic, and Anglo.

Seminar fees are \$400.00 per person and include six nights in Santa Fe in double occupancy rooms at Plaza Resolana, all meals, participant notebooks, museum admissions, and guest speakers. Transportation to and from Santa Fe is not included. To register or receive further information about *Tres Culturas*, write or call Plaza Resolana, 401 Old Taos Highway, Santa Fe, NM 87501, 800-821-5145.