

LESSON PLAN: Art Connects with Science

By Amy Wunsch, November 2008

Key Idea: Many contemporary artists are inspired by a variety of concepts and imagery related to different fields of science. Artists may use scientific themes and technology as a springboard for their own unique interpretations and aesthetic choices.

Objectives:

Introduce students to the idea that science can influence and relate to the visual arts. Discuss similarities and differences between the work of a visual artist and that of a scientist. Students will brainstorm areas of scientific interest and will record their top three choices on the review sheet provided.

The students will take an instructor-led tour of a variety of science-influenced artworks in the museum and on campus: electronics and technology, physics (wind, motion, waves), biology, astronomy (sunlight and shadows, cosmic imagery, space exploration)

Students will brainstorm personal scientific symbols and motifs, inspired by the three areas of scientific interest they previously recorded on the review sheet. The students will record their ideas on the back of the review sheet. Students will create a mobile utilizing a variety of art materials. A minimum of four items will be created to balance and complete the mobile.

Vocabulary:

mobile – a piece of sculpture having delicately balanced units constructed of rods and sheets of metal or other material suspended in midair by wire or twine so that the individual parts can move independently, as when stirred by a breeze.

lever – a rigid bar that pivots about one point and that is used to move an object at a second point by a force applied at a third.

equilibrium - a state of rest or balance due to the equal action of opposing forces.

kinetic - pertaining to or caused by motion; characterized by movement.

Materials needed:

Pliable aluminum wire, approx. 3 ft. per student

Wire cutters

Pliers

Monofilament (fishing line)

Variety of art materials: colored foam sheets, construction paper, google eyes, Styrofoam balls, toothpicks, pipe cleaners, craft sticks, modeling clay, etc.

A variety of illustrated scientific textbooks, magazines, writing instruments and paper for collage

Clear contact paper or clear duct tape for laminating effect



Assessment:

Write the following questions on the white board and record and discuss student responses as a class:

1. What challenged you the most technically while constructing your mobile?
2. What strategies did you use to allow the wire arms of your mobile to perfectly balance?
3. Did you choose to use one of your areas of scientific interest for the theme of your mobile, or did you use all three areas of interest to inspire you?
4. We used a scientific means of balance and equilibrium to construct our mobiles today – you could say we used science to create a scientific-themed artwork! What other scientific means could we have used to create a science-themed artwork? Think about some of the artwork we viewed today to help you get started...

Tour artwork images:



Carlee Fernandez (American, b. 1973)

White Pigeon with Saffron Finch, 2004

Altered taxidermy and branch

Collection Nerman Museum of Contemporary Art, 2004.19

Gift of Marti and Tony Oppenheimer



Leo Villareal (American, b. 1967)

Microcosm, 2007

White LEDs, custom software, electrical wiring and hardware

Collection Nerman Museum of Contemporary Art, 2007.71



Larry Thomas (American, b. 1950)
The Problem with Curiosity, 2005-06
Mixed media on canvas
Collection Nerman Museum of Contemporary Art, 2007.10



Grant Kenner (American, b.1919-d. 2001)

Flight of Imagination, 1983

Stainless steel

Collection Nerman Museum of Contemporary Art, 1983.04



Dale Eldred (American, b. 1933-d. 1993)

Galileo's Garden, 1984

Steel and paint

Collection Nerman Museum of Contemporary Art, 1984.01