

INSPIRED BY NATURE

DESIGN & PAINT AN 'ART NOUVEAU' GLASS VASE

ART AND SCIENCE

GRADES: 4 - 8

BASED ON



Tiffany Glass & Decorating Co. (United States, 1892-1900)

Vase, 1892-1897

Cameo glass

Gift of Alfred Traber Goshorn, 1897.135

Nature will bear the closest inspection. She invites us to lay our eye level with her smallest leaf, and take an insect view of its plain. - Henry David Thoreau

OBJECTIVES

- Students will discover how Louis Comfort Tiffany was inspired by nature as they analyze his cameo glass vase.
- Students will learn about the properties of glass and the art of glassmaking.
- Students will collect local flora and identify their plants with a group.
- Students will incorporate three or more plants into an "art nouveau" design.
- Students will transfer their sketched design onto a transparent glass vessel using glass paint and pens.

CONCEPT

In this lesson, students will learn about the art of Louis Comfort Tiffany as they study the Art Museum's cameo glass vase. They will participate in a discussion about glassmaking, the properties of glass and the inclusion of flora in designs by Tiffany Glass & Decorating Co. Students will gather local plants, identify them with a group and then sketch an "art nouveau" design for an existing transparent glass vessel. Finally, they will transfer their design using glass paint and then permanently set the colors by baking the glass in an oven.

MATERIALS

Image of Cameo Glass Vase
 Local Flora
 Pencil
 Paper
 Cellophane Tape

Brush
 Pebeo Vitrea 160 Paints
 Pebeo Vitrea 160 Markers
 Transparent Glass Vessels
 Toaster or Conventional Oven

VOCABULARY

Transparent
 Translucent
 Opaque
 Art Nouveau

Organic
 Favrilite Glass
 Molten
 Flora

PROCEDURE

1. Show students an image of the Art Museum’s cameo glass vase by Tiffany Glass & Decorating Co. The teacher will lead a discussion about glass. *How do you think this piece of art was made?* Glass artists start with a mixture of sand (silica), soda (sodium oxide) and lime (calcium oxide). Color is created by adding various metal oxides. Like a chemist, glass artists add gold, copper or selenium for RED, cupric oxide for BLUE, iron oxide for GREEN, manganese oxide for PURPLE and iron, manganese and cobalt for BLACK. The new mixture is heated in furnaces to make a syrupy liquid of molten glass which is blown and shaped by the glass artist. (See resources for glassblowing video) *What are some of the properties of glass?* Glass reflects, transmits and absorbs light. It also resists scratches and most corrosive chemicals and food acids. It absorbs and retains heat, resists extreme heat and cold variations and stores electricity efficiently, resisting electrical currents. Glass is strong and flexible, except for surface imperfections.
2. *Ask: How did the artist use the elements and principles of art in this vase? Describe the form of this vase? What shapes are carved into the vase? How did the artist use color? Is the vase translucent or transparent?*
3. Give students some background about this vase. Louis Comfort Tiffany produced extraordinary art glass which he termed *Favrille*, from the word *fabrile* meaning hand-wrought. In 1885, Tiffany established the Tiffany Glass Company in Corona, New York, and in 1892, renamed it Tiffany Glass & Decorating Co. The Art Nouveau style (French for “new art”) is very evident in Tiffany glassware, with an emphasis on natural forms of waves, leaves, feathers, growing plants and organic forms. Tiffany glassware often appears iridescent due to added metallic oxides added to the molten glass, but this vase is an example of a rare cameo-cut piece, which was arduously carved by hand. (The Collections of the Cincinnati Art Museum, pp.304)
4. Tell students that Tiffany believed that nature should be the primary source for inspired design. Have them collect local flora and then work with a group to identify the plants they collected.
5. Students will begin the art portion of the lesson by selecting a transparent glass vessel. (The teacher will provide vases or tall glasses from discount or thrift stores or recycled glass containers from school staff) Supervised high school students could recycle wine or other bottles into vases by using a glass cutter and heat.
6. Students will consider the form of their vessel as they draw a sketch that incorporates at least three local plants collected by the class. As students draw their sketch, they will also contemplate the design elements of line, color, shape as well as the principles of repetition, rhythm, and balance. Tell students to simplify the plant designs into basic shapes and lines. Remind them that the Art Nouveau style used by Tiffany glassmakers often featured flowing, curvilinear lines that mimicked budding or growing plants.

CLASS EXPERIENCE

7. Have students place the finished design inside their clear glass vase or tall glass. Following the form of the vessel, have them tack the design inside with a few small pieces of cellophane tape.
8. Now, students will paint the shapes of their design on the exterior of the transparent vessel using glass paint. (Provide a towel or soft piece of fabric to rest the vessel on as students work on one side.) Tell students that this is very special paint. It is more expensive than the paint they usually use in class, so apply it sparingly. Just a small amount will go a long way.
9. When the design is completed, allow the paint to dry 24 hours. To make the design permanent, it will need to be baked. Follow the directions on the package; place the glass in a cool oven, then heat to 300 degrees for 30 minutes. Turn off the oven and allow the glass to cool completely before removing from the cool oven.

ASSESSMENT

Students will be assessed based on their successful completion of the following: While examining the Museum's cameo glass vase, students will participate in a discussion about the properties of glass, glassblowing and the art of Louis Comfort Tiffany. Students will collect local flora and with a group, identify the plants they found. Students will use three or more of the plants in a sketched design for a vase. They will consider the design elements of line, color, shape as well as the principles of repetition, rhythm and balance in their "art nouveau" design. Finally, they will use craftsmanship as they paint the design using glass paint and markers.

NATIONAL STANDARDS

Visual Art

Understanding and applying media, techniques and processes

Knows how to use structures (e.g. sensory qualities, organizational principles, and expressive features) and functions of art

Make connections between visual arts and other disciplines.

Science

Life Science

Standard 6. Understands relationships among organisms and their physical environment

Physical Science

Standard 8. Understands the structure and properties of matter

CURRICULUM CONNECTIONS

Visual Art

Younger students can use trimmed plastic water bottles to create a translucent vase. First, have them make rubbings of actual plants (or use texture plates of plants) using crayons and white tissue paper. The tissue paper can be glued to the bottle using a thin mixture of glue and water. The entire bottle can be covered in a thin coating of white tissue paper and when dry, tinted using watercolor paints.

Technology

Students can research the art of Louis Comfort Tiffany. Have them make a PowerPoint presentation about the nature inspired glass he created and then present it to the class.

Language Arts

CLASS EXPERIENCE

Read and discuss the importance of nature to writers such as Ralph Waldo Emerson, Henry David Thoreau or Emily Dickinson. Have students write a poem about their own experiences in nature.

RESOURCES

Arbor Day Foundation- What Tree is That?

<http://www.arboday.org/trees/whatTree/>

Art Nouveau- The National Gallery of Art

<http://www.nga.gov/feature/nouveau/nouveau.shtm>

Cameo Glass

http://en.wikipedia.org/wiki/Cameo_glass

Celebrating Wildflowers- Us Forest Service

<http://www.fs.fed.us/wildflowers/kids/coloring/colorofflowers.shtml>

Encyclopedia on Plants and Flowers

<http://www.botany.com/>

Identify by Leaf

<http://www.oplin.org/tree/leaf/byleaf.html>

Glass

<http://en.wikipedia.org/wiki/Glass>

How to Identify Ohio Trees by Their leaves

http://www.ehow.com/how_5454628_identify-ohio-trees-leaves.html

Know Plants- Resources for Teaching Botany

<http://knowplants.org/default.aspx>

Louis Comfort Tiffany- Metropolitan Museum

http://www.metmuseum.org/toah/hd/tiff/hd_tiff.htm

Louis Comfort Tiffany- Morse Museum

http://www.morsemuseum.org/collection/louis_comfort_tiffany.html

Museum of Glass- View Live Glassblowing

<http://www.howstuffworks.com/framed.htm?parent=glassblowing.htm&url=http://www.museumofglass.org/>

National Agricultural Library

http://riley.nal.usda.gov/nal_display/index.php?info_center=8&tax_level=1&tax_subject=7&want_id=135&to_pic_i

Properties of Glass

http://en.wikipedia.org/wiki/Glass#Properties_and_Uses

The Science of Glass - Albany Institute of History and Art

<http://www.albanyinstitute.org/Education/archive/tiffany/tiffany.science.htm>

Cincinnati Art Museum. *The Collections of the Cincinnati Art Museum*. Cincinnati, Ohio: Cincinnati Art Museum, 2000.



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