

## Dear Educator,

Thank you for booking a tour with the Museum of Glass. We look forward to your visit!

We're sending you this curriculum to help enhance the visit for you and your students. These activities have been carefully prepared to go with the exhibit you will visit. You can use them as pre-visit materials or post-visit, but we strongly encourage that you spend some time with the packet before your visit. We've found that students understand and learn so much more if they're prepared before they come.

Along with this packet, we have extensive curriculum and interactive activities on our website about glassblowing and working with hot glass as an art form. Please visit [www.museumofglass.org](http://www.museumofglass.org) and click "**Learn**" on our home page. From there, visit the **Virtual Hot Shop**, where your students will get a chance to experience glassblowing by creating a *macchia*. Participants walk through the process step-by-step until they get a finished work of art! Along the way they can also choose to learn more about glass. You and your students can even watch the Hot Shop Live, by clicking "**Watch**" on our home page and selecting the "**Live Web Streaming of the Hot Shop**" link.

We sincerely hope you enjoy these materials and your visit to the Museum of Glass.

## ***Glass of the Avant-Garde***

June 11, 2003 - January 4, 2004

### **Lesson One:** Time-Line

Essential Academic Learning Requirements:

- Art: 1.1, 1.3, 1.4, 2.2, 3.1, 4.1, and 4.4
- Communications: 1 and 3
- Social Studies (History): 1.1, 1.2, 2.2, 2.3, and 3.3
- Science: 4.1,4.2, and 5.3

### **Lesson Two:** Designer for a Day

Essential Academic Learning Requirements:

- Art: 1.1, 1.2, and 2.1-2.3
- Communications: 1, 2.1, 2.2, 3.1, and 4.5
- Writing: 1.1, 1.2, 2, and 3

### **Lesson Three:** To Teach is to Learn

Essential Academic Learning Requirements:

- Art: 1.1, 1.3, 2.1, 2.2, 4.1, and 4.3
- Communications: 1, 2, and 3
- Writing: 1.1, 1.2, and 2.1-2.3

### **Lesson Four:** All Over the Map

Essential Academic Learning Requirements:

- Arts: 4.2 and 4.4
- Geography: 1
- Reading: 1.5, 2.1, 2.2, 3.1, and 3.2

### **Recommended Reading**

Pierce County Library

### **Teacher Resource Material**

### **Image Credits for the Glass of the Avant-Garde**

## Time-Line

### **Teaching Process:** School Educator

- Introduces the glass of the Avant-Garde
- Understand and apply art concepts and vocabulary to communicate ideas, solve problems, and express ideas
- Use writing and speaking skills to organize, express, and examine the relationship between science, history, society, and the arts

***Materials:*** paper, rulers, markers, colored pencils, or anything to make a time-line including access to a computer and printer

### **Learning Process:** Students

The Avant-Garde period of art was a tumultuous time politically and economically, and was greatly influenced by world events. To gain a broader sense of what living and working during this time was like for an artist one must comprehend global events. Viewing a time period from all angles allows for a more holistic interpretation of how and what life was like.

- View the glass of the Avant-Garde
- Form groups
- Students research, and discuss major events to be included in their time-lines
- The time-lines, which cover the beginning and the end (roughly) of the Avant-Garde period of art (approximately 1900-1936), can include events from the following major categories:
  - -Historical dates and events
  - -Scientific discoveries
  - -Natural disasters
  - -Artistic movements, important artists or art
- Display chronologically; type-written, or by hand; include graphics, designs, or artwork to emphasize events

### **Reflect:**

- As a class, brainstorm ideas of what events can and should be included in a multi-subject time-line.

### **Outcome:**

- Students begin to understand historical time, chronology, and how historical conditions, technological developments, resources, and causation affect society and culture.
- Students use language to interact effectively, responsibly, and cooperatively as a member of a group.

## Designer for a Day

**Teaching Process:** School Educator

- Introduces the glass of the Avant-Garde
- Students will develop concept, design, and style appropriate to the audience and purpose while applying writing conventions
- Students will create, present, and evaluate artwork using creativity and imagination

**Materials:** plain white paper, markers, plastic transparencies, any medium that is both permanent and water-soluble to be used on the transparencies, computer, and printer

**Learning Process:** Students

The process of creating an Avant-Garde glass piece was a multiple step procedure. Originally, the artist would design a glass item, such as a vase, by determining the shape, color, or height. Then, the design would be taken to the glass blower, or glass blowing studio where it was made. After completion, the piece would be taken to the original artist or to a completely different artist to have a design, image, or scene etched, carved or enameled on the surface. Often, pieces traveled all around Germany and other parts before a single item could be called finished.

- View the glass art of the Avant-Garde.
- Students can pretend they are Avant-Garde glass designers and create a design for a piece (vase, goblet, bowl, jar, etc.) including shape and color. Draw this onto a plain piece of white paper with a marker (for a bold, heavy line).
- Tape the transparency sheet on top of your design.
- The vessel can then be given a scene or pattern, in the style of Avant-Garde glass designers. Draw or color the design onto the plastic transparency. You can design other ornamentation for this vessel shape/design by removing one transparency and putting a clean one on top.
- Students can then choose from one of the following:
  - Make a business card for themselves as a glass designer or for their business
  - Make a newspaper or magazine advertisement describing their talents to the public, and their availability for patrons to commission their work
  - Create a commercial to be acted out for the class (with the help of other students)

**Outcome:**

- Students develop skills in seeking solutions and problem solving while using art in daily life.
- Students incorporate arts knowledge and skills in the workplace, while using methods of communication to effectively communicate to a range of audiences for different purposes.

## To Teach is to Learn

### **Teaching Process:** School Educator

- Introduces the glass of the Avant-Garde
- Students use arts skills and knowledge in other subject areas
- Students analyze and evaluate the effectiveness of their written work

***Materials:*** access to the Internet, books from school, city or county libraries, computer for word processing ability, and printer (information about individual artists can be found by searching on [www.google.com](http://www.google.com))

***Recommended Reading:*** see options on recommended reading list

### **Learning Process:** Students

Knowing who and what was being produced in the art world was an important component to becoming a successful artist during the Avant-Garde period. Many artists were trained classically, and some were trained in modern art schools of the time, but one aspect remains constant then and now: every artist had some basic, working knowledge of art and artists, past and present. Today, it still holds true that knowledge is important for success.

- View the glass of the Avant-Garde
- Form groups and select an Avant-Garde glass artists, such as:
  - Peter Behrens
  - Josef Hoffman
  - Adolf Beckert
  - Wilhelm von Eiff
  - Otto Prutscher
  - Dagobert Peche
  - Carl Witzmann
  - Nora Ortlieb
- Students pretend they are teachers and will instruct their fellow peers in a lesson about a particular artist using pictures, actions, and props to support their presentation.
- After the lesson, a 5-10 question quiz will be given prepared by each teaching group.

### **Reflect:**

- What were the major influences on the artist?
- Has the artist influenced others?
- When and where did the artist live?
- Why is it called Avant-Garde?
- Did the artist receive formal training? How do you think that affected the artist's work?

**Outcome:**

- By putting the responsibility of teaching on the students, they discover what is important about art and the artist, and will also learn about an important historical period in art.
- Communication skills are developed for use in everyday life and career settings.
- Students will understand how effective they were in regards to delivery, language, style, action, sound, and images by how well their peers did on the prepared quiz.

**All Over the Map****Teaching Process:** School Educator

- Introduces the glass of the Avant-Garde
- Students make connections within and across the arts to other disciplines, life, cultures and work
- Students use different skills and strategies to learn and understand what is read

***Materials:*** Maps of Central Europe in 1900, 1920, 1940 and 2000, a library or the Internet for research, list of schools, production companies and retailers of Avant Garde glass.

**Learning Process:** Students

During the Avant Garde period – from the turn of the century until right before World War II - designers and glass producers were located all over Central Europe, but primarily in what is now known as Germany, Czech Republic and Austria. During those 40 years, the geography of this area changed dramatically, and has continued to change with political changes. This activity will help participants learn about border changes that came with political upheaval, and how that affected the art coming out of those areas at that time. Using the list provided, students will locate schools, production companies and retailers of the time. The city name is the current name and the old names (if different) will be in parentheses.

- Split up into groups of about four students.
- Locate each School, production company or retailer on each of the four maps.
- Choose one of these to research further.
- Find one traditional work (before the turn of the century), one from the Avant Garde period and one more recent work from that area.

**Reflect:**

- Are there any themes that are apparent in all three works?
- Why might these themes have been used in that area? Do they relate to the local culture?
- Find three more works from the Avant Garde period associated with the company you chose.

- Are there recurring themes or styles in these works?
- Does the style reflect a certain artistic movement (Cubism, Expressionism, Constructivism, etc.)?

**Outcome:**

- Students will learn to analyze art by picking out themes and styles.
- Students will learn about the tumultuous political situation in Central Europe in the first 40 years of the century and how that affected art.
- Students will learn how local culture affects style.

### List of Avant-Garde Glass Production Companies, Schools and Retailers

Werkstätten Richard Süßmuth	Piensk (Penzig)	Poland
Kristallglasfabrik Benedikt von Poschinger	Lindberg Oberzwieselau (Oberzwieselau)	Germany
Lötz Witwe	Klásteršý Mlýn (Klostermühle)	Czech Republic
Wiener Kunstgewerbeschule (Vienna School of Decorative Arts)	Vienna	Austria
Meyr's Neffe	Adolfov (Adolf)	Czech Republic
Wiener Werkstätte	Vienna	Austria
Joh Oertel & Company	Nový Bor (Haida)	Czech Republic
Ludwig Moser & Söhne	Karlovy Vary (Karlsbad)	Czech Republic
Fachschule Steinschönau	Kamenický Senov (Steinshönaue)	Czech Republic
Fachschule Haida	Nový Bor (Haida)	Czech Republic
Glasindustrie Zwiesel	Zwiesel	Germany
Kunstgewerbeschule Stuttgart	Stuttgart	Germany
Gral-Glas Werkstätten	Göppingen	Germany
Württembergische Metallwarenfabrik	Geislingen	Germany
Vereinigte Lausitzer Glaswerke AG	Weisswasser	Germany

**Recommended Reading**  
Pierce County Library System

**Science:**

*Popular Science: Year by Year.* Scholastic Reference, 2001. J509.04

Watson, Peter. *The Modern Mind.* HarperCollins, 2001. 909.82 WATSON

**History:**

Adams, Simon. *The DK Visual Timeline of the 20<sup>th</sup> Century.* DK Publishing, 1996. J 909.802 ADAMS

**Art:**

Brettel, Richard R. *Modern Art 1851-1929.* Oxford University Press, 1999. 760.0903 BRETTEL

Scruton, Roger. *An Intelligent Person's Guide to Modern Culture.* St. Augustine's Press, 2000. 306 SCUTRON

*Art: A World History.* DK Publishing, 1996. J909.802 ADAMS

*Glass of the Avant-Garde, The Torsten Brohan Collection from the National Museum of Decorative Arts, Madrid, Spain* is available for purchase at the Museum of Glass Store

## **Teacher Resource Material**

### **The Geography of Middle Europe**

The glass presented here comes from an area often designated as Central Europe. Beginning with the Rhine at the west, this territory includes Germany, Austria, the Czech Republic, Slovakia, and Poland, but these are modern distinctions. Once these lands were parts of the Holy Roman and Great Moravian Empires. Regional borders have shifted back and forth frequently, determined more by politics than natural geographical boundaries.

The short period of time covered by this exhibition – from 1900 to 1940 – reveals the complex nature of this terrain. At the beginning of the twentieth century, much of this land was part of the Austro-Hungarian Empire under the Hapsburg emperor, Franz Joseph. Also rising to the fore was the recently unified Germany, a conglomeration of states joined together with Prussia and ruled over by Kaiser Wilhelm I. Things changed dramatically at the end of World War I with the defeat of both powers. Hungary was separated from Austria; Poland was reconfigured; and small states such as Czechoslovakia and Yugoslavia were carved out of the Austro-Hungarian Empire in accord with the League of Nations' policy of self-determination. Hitler reversed the process in the late 1930s when he annexed Austria to Germany, and conquered Poland, Czechoslovakia, and Hungary.

At the conclusion of World War II, borders shifted yet again. Czechoslovakia, Poland, and Hungary fell behind the Iron Curtain, while Germany was divided into Eastern and Western sections. Following recent political upheavals and the breakup of the USSR, there have been still further changes such as the separation of the Czech and Slovak Republics, and the reunification of Germany.

### **Josef Hoffmann (1870-1956)**

Josef Hoffmann, one of the most brilliant and influential designers of the early twentieth-century, was a founding member of the Austrian Secession in 1897. He established the Wiener Werkstätte (Vienna Workshops) in 1903, over which he presided as artistic leader for thirty years. His major architectural commissions included the sumptuously modern Palais Stocklet in Brussels (1905-11), with carefully coordinated architecture and interior decorations, and the Purkersdorf Sanitorium (1904) with its more starkly functional designs. Many young designers came under the influence of his teachings at the Vienna School of Decorative Arts from 1899-1941.

Hoffmann was a prodigious and versatile glass designer, as can be seen by the many pieces designed by him that are exhibited here, ranging from curvaceous art nouveau forms from around 1900, to strong ornamental pieces in the Secessionist style from the 1910s, to more functional, industrially-produced items in the 1930s.

## **The German Werkbund 1914 Cologne Exhibition**

The German Werkbund, established in Munich in 1907, was one of the most important modern design organizations in Europe. It was formed to unite artists and manufacturers towards the goal of improving the quality and commercial viability of industrial products. Founding members included Richard Riemerschmid, Peter Behrens, and Josef Hoffmann. Similar organizations soon followed in Austria, Hungary, and later Czechoslovakia.

The German Werkbund organized important design exhibitions, the most famous of which was held in Cologne in 1914. A number of daringly modern buildings were designed for the grounds of the exhibition, including a model factory by Walter Gropius and a glass brick pavilion by Bruno Taut. The Austrian pavilion was designed by Josef Hoffmann in a restrained, neoclassical style. Inside were exhibited many of the same glass objects that are now on view in these galleries, including pieces designed by Hoffmann, Hans Bolek, Otto Prutscher, and Michael Powolny.

## **The Wiener Werkstätte**

The Wiener Werkstätte (Vienna Workshops) was the central source of modernist design in Vienna during the first three decades of the twentieth century. Founded in 1903 by Secessionist members Josef Hoffmann and Koloman Moser, it was an association of workshops for metalwork, furniture, jewelry, clothing, fashion accessories, leather articles, bookbinding, and later, glass decoration. The workshops were allied under the goal of Gesamtkunstwerk, or total work of art, where all details of architecture and interior furnishings were to be fully integrated as one. The Wiener Werkstätte was forced to fold in 1932, acknowledging that its expensive, avant-garde styles failed to appeal to a wide enough audience.

Glass produced by the Wiener Werkstätte was generally manufactured in Bohemian glasshouses. The Meyr's Neffe factory made the delicate faceted glass designed by Otto Prutscher around 1907. Johann Oertel & Co. supplied unornamented pieces for decoration in the Wiener Werkstätte's glass shop after 1916. By the 1920s, Bohemian glasshouses and technical schools were designing their own glass, influenced heavily by the Wiener Werkstätte style in Vienna.

## **Dagobert Peche (1887-1923)**

Peche joined the Wiener Werkstätte (Vienna Workshops) in 1915 and became its design director in 1919. His lively, eclectic designs had immediate appeal and helped steer the Wiener Werkstätte away from the formal, architectonic ornament of the early Secession style into a more lushly decorative era in the 1920s.

Peche's prolific designs for the Wiener Werkstätte ranged widely from glass to graphics, metalwork, jewelry, textiles, fashion accessories, and interior decoration. For glass, he

created a highly original repertoire of painted enamel decorations, favoring fanciful figural compositions, spikey leaves, and odd juxtapositions. Peche's decorations were often painted onto contrastingly sober glass forms designed by Josef Hoffmann.

### **Wilhelm von Eiff (1890-1943)**

One of the great twentieth-century masters of cut and engraved glass, Wilhelm von Eiff was a key figure in bridging traditional techniques with modern design sensibilities. He was director of the glass and gem cutting workshop at the Stuttgart School of Decorative Arts from 1921-1943, where he trained a whole generation of German glass engravers, including his most famous pupil Nora Ortlieb.

Characteristic of von Eiff's work was the use of "Hochschnitt" (high cut) and "Tiefschnitt" (deep cut) engraving, sometimes combined in the same piece of glass. Lyrical, narrative motifs were done in deep cut engraving. Some of the high cut pieces were carved to such an extent as to render them highly sculptural forms. Although his work is deeply personal and labor intensive, thus seemingly anti-industrial, Von Eiff did not disdain modern means. He was the first to use electrical tools of a kind developed by dentists to achieve his brilliant effects.

### **The Bauhaus**

Founded to train artists for work in modern industry, the Bauhaus became a new model for design schools in the twentieth-century. It was established in Weimar in 1919 under the direction of architect Walter Gropius, and made moves to Dessau in 1925, to Berlin in 1932, eventually closing under Nazi pressures in 1933. In the following years, Bauhaus teachers and students, such as Gropius, Mies van der Rohe, Marcel Breuer, Moholy Nagy, and Max Bill, went on to make their mark in design education, architecture, and industrial production throughout Europe and the U.S.

The Bauhaus curriculum evolved gradually from a foundation in handicrafts and personal expression to a more emphatic orientation towards unadorned functionalist designs and the expanded use of new materials and machine techniques. Mature Bauhaus tenets can be seen in the work of glass designers Gerhard Marcks and Wilhelm Wagenfeld. Marcks, a Bauhaus professor with a background in sculpture and ceramics, designed a coffee maker of heat-resistant glass suitable for mass production in 1925. Wagenfeld subsequently redesigned that model and expanded the line into a compelling set of utilitarian household glass.

### **Wilhelm Wagenfeld (1900-1990)**

Wilhelm Wagenfeld, a leading German industrial designer, created modern glass forms in the 1930s that are still a part of the kitchen counter and dining table today. Wagenfeld trained at the Bauhaus School and in 1928 became head of the metal workshop at the Bauhochschule in Weimar.

Following some freelance work for the Jenaer Glassworks, Wagenfeld was commissioned to redesign a complete collection of household glass for that firm. His utilitarian designs for glass coffee makers, teapots, and serving dishes married clear, unadorned forms with newly durable, heat-resistant glass formulas. Some of these designs are still in production today.

In 1935 he was appointed artistic director of the Vereinigte Lausitzer glassworks in Weiswasser, where his most striking design was for a cubist-style set of stacking food containers.

## **Glass Techniques**

### **Blown glass**

Blown glass is formed by blowing air through a long metal tube into a mass of molten glass. The bubble of glass that forms at the end of the blowpipe can be reheated and blown repeatedly to modify its size and shape. Blown glass is known to date back to the first century B.C. in Syria.

### **Mold-blown glass**

Mold blown glass is made by blowing a mass of molten glass into a mold. The walls of a mold-blown piece are of uniform thickness, with inside and outside of matching contours.

### **Press-molded glass**

Press-molded glass is made by placing a mass of molten glass into a metal mold, and then pressing it with a metal “plunger.” The interior of the mold forms the outside contour of the glass object, and the “plunger” sets the inside shape.

Press molding glass was developed as an industrial process in the first half of the nineteenth century.

### **Overlaid glass**

Overlaid, or cased, glass has two or more layers of different colored glass fused together. After the outer layer is blown, the bubble is removed from the blowpipe, opened up to a cup-like form, and set in a metal mold. A second gather of glass is blown into it, and then the combined piece is reheated to fuse the two layers together. Multiple layers can be added, and one or more of the layers can be cut through to reveal another colored layer beneath.

### **Flashed glass**

Flashing is achieved by dipping an object into molten glass so that a thin layer adheres to its surface. If a contrasting color is used, it can be cut through to form a pattern as in cased glass.

### **Engraved glass**

Glass surfaces can be engraved with a diamond point, a sharp metal implement, or a small rotating wheel. A hard, brilliant glass formula is best used for engraving. Wheel engraving

became a specialty of Bohemian glasshouses after it was introduced in about 1600.

In German and Bohemian glass “Tiefschnitt,” or deep carving, produces a design cut into the surface of the glass, as in intaglio engraving. For “Hochschnitt,” or high engraving, much of the glass surface is cut away to produce cameo-like relief decoration.

### **Cut glass**

Glass can be cut with facets, grooves, or depressions by using a large rotating wheel of iron, stone, or other hard material. A steady stream of water with an abrasive is used in combination with the wheel. By varying the material, size and shape of the wheel, different effects can be achieved. Bohemia has been a major center of cut glass since the late sixteenth century.

### **Enameled decoration**

Enamel colors are made from metallic oxides that are mixed with powdered glass and suspended in an oily medium. After they are painted onto the surface of glass, the enamels are permanently fixed to the glass by heating in a kiln.

A traditional Eastern European form of enameled ornament, called “Schwarzlot,” introduced in the late seventeenth century, features black enamel on clear glass.

An alternative method of painting glass surfaces is with cold colors, which are not fused with heat and thus much less durable.

### **Staining**

Glass can be colored through staining, usually red or yellow, by brushing pigments onto the surface of annealed glass, producing a very thin layer of color.

### **Iridized glass**

Iridized, or iridescent, glass has rainbow-like reflections on its surface. The effect is acquired by spraying the surface of glass with metallic oxides and heating in a controlled atmosphere. The Bohemian firm of Lütz Witwe specialized in iridized glass.

### **Acid etching**

Acid etching, or acid engraving, involves treating the surface of glass with hydrofluoric acid to create either a frosted mat finish or an even rougher relief effect. The glass is first covered with acid-resistant wax or varnish; then a design is scratched through with a sharp tool. The exposed areas are corroded by the acid when it is applied to the surface of the glass. Sand blasting glass is an alternative method of making a frosted or rough surface.

### **Bronzite**

Bronzite glass, a specialty of the J. & L. Lobmeyr firm, features a combination of black metallic enameled decoration and with contrasting acid-etched mat surfaces.

**The Torsten Bröhan Collection from the Museo Nacional de Artes Decorativas, Madrid**

The Torsten Bröhan Collection of avant-garde glass is housed at the Museo Nacional de Artes Decorativas in Madrid. Assembled by collector and scholar Torsten Bröhan, it brings together more than two hundred pieces of Austrian, Czech, and German glass made from about 1900 to 1940. The collection now stands as one of the most complete and illuminating assemblages of early modernist glass from Central Europe. In 1999 it was acquired by the Museo Nacional des Artes Decorativas in Madrid, along with other important modernist works in various media.

The Museo Nacional de Artes Decorativas in Madrid was founded as The Museo Industrial in 1871, modeled on London's South Kensington Museum (now the Victoria and Albert Museum). It was intended to be a laboratory for the reform of the applied arts, uniting artists, artisans, and manufacturers. The museum's collections were to serve as resources and teaching tools so that modern artists might find inspiration in the styles and techniques of the past. In 1932, the museum moved to its current location, a small palace built by the Duchess of Santoña in 1909.

With more than forty thousand objects, the Museo Nacional des Artes Decorativas has a wide scope, encompassing the decorative arts of many cultures and many centuries, but with a primary strength in the decorative arts of Spain. Now, after the acquisition of the Torsten Bröhan Collection, the museum has become a leading study center for twentieth-century design.

## Image Credits for the Art of the Avant-Garde



Goblet, c. 1907  
Otto Prutscher  
Mold-blown clear glass, cut, stained  
21.4 x 8.4 x 8.4 cm



Vase, 1914  
Josef Hoffman  
Blown opalescent glass, overlaid clear and colored glass, acid etched  
17 x 9 x 9 cm



Vase, 1932  
Nora Ortlieb  
Blown clear glass, engraved  
14.5 x 12.5 x 12.5



Covered Jar, c. 1920  
Adolf Beckert  
Blown clear glass, enameled, stained, gilt  
21 x 12.7 x 12.7



Covered Jar, c. 1916/17  
Dagobert Peche  
Blown colored glass, overlaid colored and clear glass, enameled  
15.4 x 10.5 x 10.5