

## Hot Shop Facts

### The Glass:

Glass is initially made from a mixture of raw materials called batch composed mostly of silica sand. The batch is melted in a furnace over several hours and becomes glass. We order the glass in clear, pre-made nuggets that resemble ice cubes. Our furnaces melt the **cullet** into molten glass (2200°F), which artists then gather on the end of either a **blowpipe** or a **punty**.

A metal tube used to blow glass. Blowpipes have a mouthpiece at one end and a metal ring at the other to help retain the molten glass.

Fragments of raw or broken glass (in our case, the clear nuggets).

A long, solid metal rod used to gather and apply molten glass to a work in progress.

### The Furnace & Glory Holes:

While artists are working with the molten glass at the furnace and at the **glory holes**, the temperature is set to 2150°F.

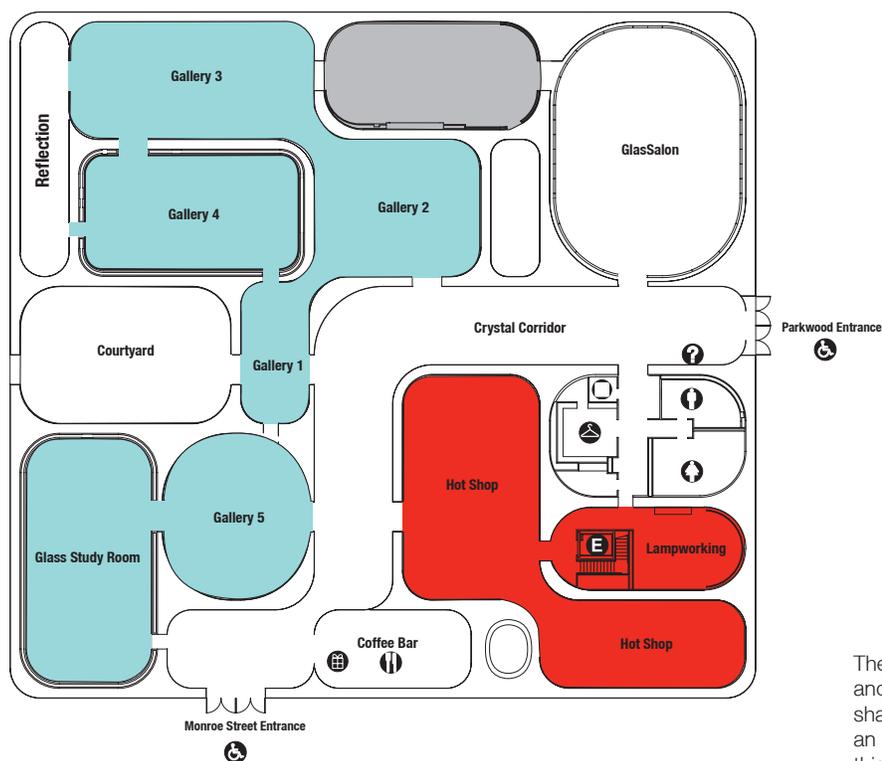
The openings adjacent to the furnace where glassblowers heat their glass while working.

### The Color:

Glass is colored with metal compounds that are introduced into the batch materials. Iron makes green, cobalt makes blue, copper makes turquoise, gold makes pink, and manganese makes purple. Clear glass is usually colored and decorated using **frit** or **color bars** that are industrially prepared.

Highly concentrated colored glass bars that are cut into smaller pieces and kept warm for glassblowers to use.

Colored glass fragments that can be rolled or melted into a working piece to add color or texture.



The Glass Pavilion features two state-of-the-art glassblowing studios that enable visitors to view the glass collection in context with the techniques used to create such works of art.



The frameworking studio allows artists and Art Hour participants to heat and shape glass at a small torch flame. This is an exceptional facility in which to practice this popular glassmaking technique.

## Highlights from the Collection:



**Gallery 5 | *Flask***  
Ancient Roman Empire, First Half of the First Century

Head-shaped vessels created from mold-blown glass were popular in the ancient Roman Empire and frequently represented mythological figures. This example could depict either a woman or the god Dionysos.



**Gallery 5 | *Mosque Lamp***  
Egypt, about 1349–55

During the Mamluk period in Egypt and Syria (1250–1517), hundreds of blown, enameled glass lamps such as this would have been suspended from the ceilings of mosques for illumination.



**Gallery 4 | *Medallion with a Portrait of King Louis XIV***

**Glasshouse of Bernard Perrot, about 1675–85**  
One of only eight known in the world, this silvered and gilded glass medallion is one of the largest and best-preserved masterpieces in French glass from before 1700.



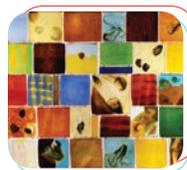
**Gallery 3 | *Punch Bowl, Stand & 23 Cups***  
Libbey Glass Company, 1903–04

Designed and made for the 1904 World's Fair in St. Louis to showcase the company's capabilities, the Libbey Glass Punch Bowl has a capacity of 15 gallons!



**Gallery 4 | *Jack-in-the-Pulpit Vase***  
Tiffany Studio, Designed by Louis Comfort Tiffany, about 1913

Inspired by the mineral-altered surfaces of ancient glass that had been buried for centuries, Tiffany patented a process for producing glass with a lustrous iridescence, which he called Favrite glass.



**Glass Study Room | *Vitrana***  
Dominick Labino, 1970

This colorful mural is composed of 33 glass panels supported by a steel framework. Labino was a pioneer of the American Studio Glass Movement and played a key role in the first studio glass workshops held at TMA in 1962.



**Gallery 2 | *Beauty as Drama, #141–52***  
Ginny Ruffner, 1990

Ruffner's content-rich works tease the eye and challenge the mind. This glass sculpture was formed using a small flame and, after cooling, decorated with colored pencils and paints.



**Monroe Street Lobby | *Campiello del Remer #2 Chandelier***

**Dale Chihuly, 1996; this configuration 2006**  
Assembled and configured especially for the Glass Pavilion, this chandelier form is the result of a collaboration between Chihuly and Ireland's famous Waterford® Crystal factory.