

**What
is
glass?**

Glass in its simplest form is made from pure silica which can be found in sand, quartz and flint. Silica, sand and limestone still make about 90% of the world's glass.



**How
is glass
formed?**

Glass never becomes a solid because it has no crystalline (liquid-like) molecular structure. Within the three states of matter there is no place for glass. Glass combines the rigidity of crystals with the random molecular structure of liquids.



**When
was glass
discovered?**

Except for bronze, glass is the oldest man made product. The Egyptians held glass objects as valuable as gold. There is a story that Phoenician sailors discovered it on a beach. True glass was probably made in Mesopotamia.



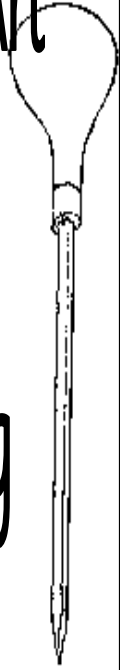
Renaissance

The main English contribution was of a truly clear glass during the English Renaissance. In the 17th century, the first widely available textbook on glassblowing, "L'Arte Vetraria (The Art of Glass)" was published in Italy. Window glass, glass bottles and glass drinking vessels became even more common and available to the average person. New glass technology, such as leaded glass and diamond engraving became widespread.

Modern

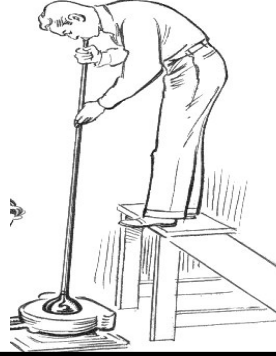
The studio glass movement is a term given to the development of small, artist-run studios for the production of art glass beginning in 1962. Interestingly, for most of its roughly 5,000-year history, glass has been made entirely by hand in the setting of a small workshop. It was not until the industrial revolution of the nineteenth century that glass production moved to factories, where its manufacture was much more economical.

The Ancient Art of Glassblowing



1

First the gatherer takes the required amount of molten glass on the end of his blowing iron. This hollow iron pipe has a mouthpiece on one end and a knob at the other.



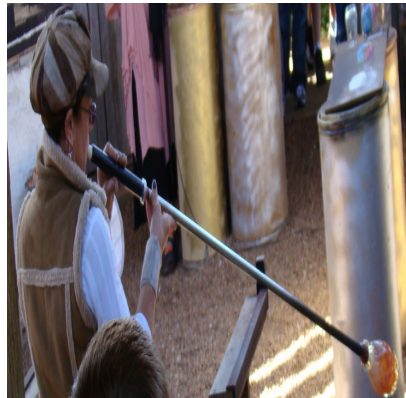
The gatherer shapes the hot glass by rolling it on a “marver” or machined iron plate.

2



A puff through the pipe forces the glass into a preliminary form.

3



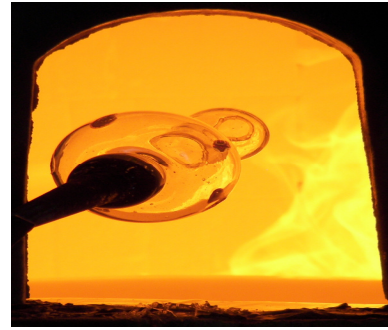
Then rotate and swing the blowpipe. Swinging lengthens it and rapid spinning flattens it. Size, shape and thickness depends upon the air blown into the glass, the angle of the blowpipe and the rate cooled.

4

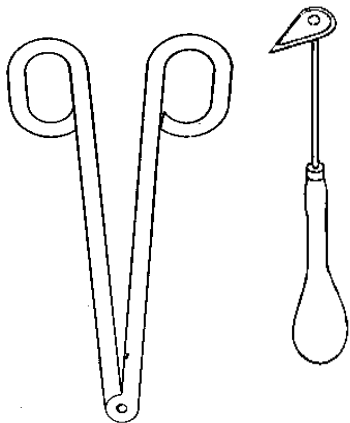


From time to time the glass must be returned to the “glory hole,” a reheating furnace, to keep it hot enough to be workable, about 1,800 degrees Fahrenheit.

5



The glass maker uses a variety of tools to shape and design his masterpiece.



6

These hand made items can cost up to thousands of dollars.



7