

# new jersey 350

innovation • diversity • liberty

## Message in a Bottle: Wistarburgh Glass

Target Age: Elementary School  
Time Period: 18<sup>th</sup> and 19<sup>th</sup> centuries  
Featured County: Salem  
NJ 350<sup>th</sup> Theme: Innovation



Courtesy of Wheaton Arts, Museum of American Glass, Millville, NJ

### Common Core State Standards for English Language Arts:

R.CCR.1- Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.

R.CCR.2- Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.

SL.CCR.1- Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively.

### New Jersey Core Curriculum Content Standards:

Social Studies: 6.1.12.B.1.a, 6.1.12.C.1.a, 6.1.12.C.3.b

### **FOCUS QUESTION:**

South Jersey has sand, wood, and water transportation, making it the ideal location for glassmaking. How did these natural resources shape the economics and labor of the region?

### **BACKGROUND:**

English colonists started glass production at Jamestown in 1608, their first settlement in North America. The effort failed, then was re-attempted in 1621, but failed again even after six Italian glass blowers were “imported” to handle the work. North American settlers did not give up easily, however, and attempts at glass making were attempted again in Boston, New Amsterdam, and Philadelphia—but all ended relatively quickly. Part of the problem with these earlier ventures was a lack of resources. Glassmaking requires an important raw material, sand—something southern New Jersey has in abundance. Not surprisingly this portion of the state became a center of glassmaking by the early eighteenth century after a German immigrant named Caspar Wistar founded the United Glass Company near Alloway, NJ in 1739.

Wistar was almost penniless when he came to North America. But within three years he was buying, dividing, and selling real estate to other German newcomers. Soon after, he invested in an iron furnace, followed by a forge in Berks County, and later established a lucrative brass button manufactory in Philadelphia. In 1726 he married Catherine Jansen, who came from a wealthy Quaker family, and entered into Philadelphia’s high society. He also became one of the city’s leading merchants, with a house and general store on Market Street near the homes of Mayor Charles Willing and Benjamin Franklin.

Wistar's glassworks, however, was his most ambitious venture, and the factory soon served customers far beyond the Mid-Atlantic region. In addition to sand, the site contained clay for crucibles, abundant wood for fuel and potash, and access to the Delaware River and Philadelphia by water—essential for the movement of Wistar's goods to various markets. The factory produced bottles, window glass, goblets and other items which were increasingly in demand in colonial America. It also made glass for scientific experiments. Writing to a friend, Benjamin Franklin cited Wistar's factory as a model for other glassworks in the colonies. Franklin himself used Wistar's glass "electrifying" tubes to conduct his famous research on electricity.

Over thirty glasshouses opened between the American Revolution and the Civil War, and glass production continued to be one of the region's most important industries into the twentieth century. These companies earned a reputation for innovation and artistry in creating beautiful and highly technical pieces ranging from paperweights to tableware.

**ACTIVITY:**

In 1904, American poet Carl Sandburg wrote "Millville" about South Jersey glassblowing. Millville, one of the leading glass manufacturing centers in the United States since 1806, was 25 miles away from where the Wistar's United Glass Company was located in Alloway. Sandburg sought to capture both the art of glassblowing, with its range of decorative and functional products designed to reflect and refract light through brilliant, bright colors, as well as the manual labor that underlay their production.

If students are unfamiliar with glassmaking and what it looks like, you might opt to include this short video from the Wheaton Arts and Cultural Center, which houses the Museum of American Glass:

<https://www.youtube.com/watch?v=C1DkHJwa8A&index=6&list=PLjWDIxc7aEz0bCBTwyAKeyMa7zHAiqzKo>)

Then read the following excerpt out loud:

"Millville," by Carl Sandurg

*Down in southern New Jersey, they make glass. By day and by night, the fires burn on in Millville and bid the sand let in the light. Millville by night would have delighted Whistler, who loved gloom and mist and wild shadows. Great rafts of wood and big, brick hulks, dotted with a myriad of lights, glowing and twinkling every shade of red. Big, black flumes shooting out smoke and sparks; bottles, bottles, bottles, of every tint and hue, from a brilliant crimson to the dull green that marks the death of sand and the birth of glass.*

Follow-up with a discussion around the following questions:

1. What words does Sandburg use to create his images? What sights and sounds does he emphasize? Do these affect your understanding of glassblowing?
2. Where does Sandburg use repetition? Why does he use it?
3. How is glassmaking described as both work and art?
4. Can you "see" Sandburg's images in the Wheaton Art video about glassmaking?

If time permits, distribute Sandburg's full essay, which appears at the end of this lesson. In the longer piece, Sandburg not only describes images of glassblowing, but also the workers—the gaffers and

blowers. His essay focuses on the carrying-in boys, whose job it was to carry the products, in various stages, to different parts of the factory. Carrying-in boys ranged from 9 to 18 years old.

1. How does Sandburg describe the glassblowing factory, and in particular the child workers? What impact does this have on students' understanding of the glassblowing working conditions?
2. Ask students to compare their lives to the lives of the carrying-in boys and the girls who worked in early glass factories. What protections do twenty-first century children have that the child labor of the glass industry did not?

#### **FOLLOW-UP:**

"End-of-Day" glass projects were those that workers were allowed to create after their labor quota was finished for the day. Many of these projects were paperweights, intended either as gifts or to sell as extra income. The first U.S. paperweight is believed to have been made in Millville at Whithall, Tatum & Co. in 1863. The designs and themes of paperweights varied from sayings, buildings, ships, religious and political images, organizations, holidays, birds, ships, and animals.

Provide your students with art supplies- paper, markers, colored pencils, crayons.

1. Introduce the idea of paperweights. Ask your students if they have any at home. If you have any, use them as visual examples.
2. Go to the two links below (the Museum of American Glass and 20<sup>th</sup>-Century Jersey Glass) and show your students examples of paperweights. The *For More Information* section of this activity includes links to even more images.
3. Have students design their own paperweights, trying to both reflect the styles of old paperweights as well as students' personal interests.

Museum of American Glass:

<http://www.wheatonarts.org/museumamericanglass/collection/paperweight/>

20<sup>th</sup>-Century Jersey Glass: <http://whimsey.sjerseyglass.com/paperweights>

#### **WANT TO LEARN MORE?**

##### ***Places to Visit***

Museum of American Glass at Wheaton, with over 6,500 objects on display:

<http://www.wheatonarts.org/museumamericanglass/aboutmuseum>

Wheaton Arts and Cultural Center, featuring daily glass blowing and artist demonstrations, exhibitions, programs, workshops, performances and weekend festivals:

<http://www.wheatonarts.org/>

##### ***More Classroom Activities***

Educational resources and activities available at Wheaton Arts and Cultural Center:

<http://www.wheatonarts.org/topnav/education>

##### ***For More Information***

Rosalind Beiler, *Immigrant and Entrepreneur: The Atlantic World of Caspar Wistar, 1650-1750* (Harrisburg: Penn State Press, 2011).

*The Wistarburgh Glassworks, New Jersey, 1739-1776* (Alloway, NJ: Wistarburgh Township, 1976).

Arlene Palmer, *Glass Production in Eighteenth-Century America: The Wistarburgh Enterprise* (Charlottesville: University of Virginia Press, 1977).

The Legacy of Glass in Salem County: an overview of the Salem County glass industry, with articles about the six Salem County factories, with over four centuries of history:

<http://www.salemcountyglass.org/>

Wistarburgh: informational site about the first successful glass factory in America with links to images of South Jersey glass: <http://www.wistarburg.org/index.htm> and <http://oldsouthjerseyglass.com/>

**CREDIT INFORMATION:**

Pg. 1: Courtesy of Wheaton Arts, Museum of American Glass, Millville, NJ

## Millville by Carl Sandburg (full text)

Down in southern New Jersey, they make glass. By day and by night, the fires burn on in Millville and bid the sand let in the light. Millville by night would have delighted Whistler, who loved gloom and mist and wild shadows. Great rafts of wood and big, brick hulks, dotted with a myriad of lights, glowing and twinkling every shade of red. Big, black flumes shooting out smoke and sparks; bottles, bottles, bottles, of every tint and hue, from a brilliant crimson to the dull green that marks the death of sand and the birth of glass.

From each fire, the white-heat radiates on the “blowers,” the “gaffers,” and the “carryin-boys.” The latter are from nine to eighteen years of age, averaging about fourteen, and they outnumber the adult workers. A man with nothing, hailing from nowhere, can get an easy job at fair pay, if he has boys who are able to carry bottles - many men in Millville need no suggestion from Roosevelt - boys can carry bottles and girls can work in the cotton-mills near by.

The glass-blower union is one of the most perfect organizations in the country. The daily wage runs from five dollars to twenty dollars, and from four to eight hours is a day’s work. But the “carryin’-in” boys work nine and ten hours and get two dollars and a half and three dollars a week. Passing back and forth in the pale, weird light, these creatures are imps in both the modern and old time sense of the word. They are grimy, wiry, scrawny, stunted specimens, and in cuss-words and salacious talk, they know all that grown men know. In the use of the ever surviving, if not ever fitting, superlative, “damndest,” they are past masters all.

Their education has consisted mainly of the thoughts, emotions and experiences that resulted from contact with “blowers” and “gaffers,” besides views of a big, barn-like space lit up by white-hot sand. This has been their universe at those times of day when they were most alive, most wide-awake, most sensitive to impressions. The manufacturers have endowed a night-school, but (the teacher told me) the boys cannot keep their heads up and their eyes open during the sessions, therefore their brains don’t make much headway – God help them!

Yes, I think, God help them, for their eyes remind me of shriveled pansies, and I can’t resurrect pansies, I can only see that the pansies have good soil to grow in, pure water, fresh air, sunshine, stars, and dew; and for companions they should have roses, carnations, asters, violets, sweet-peas, - and pansies that likewise are not shriveled, Brother Shawigotch will lead us in prayer!

Excerpted from *In Reckless Ecstasy* (Asgard Press: Gatesburg, Illinois, 1904).

*It Happened Here: New Jersey* is a program of the New Jersey Historical Commission made possible by a grant from the New Jersey Council for the Humanities, a state partner of the National Endowment for the Humanities. Any views, findings, conclusions, or recommendations expressed in the program do not necessarily represent those of the National Endowment for the Humanities or the New Jersey Council for the Humanities. To access more teaching resources created for this program visit [www.officialnj350.com](http://www.officialnj350.com).