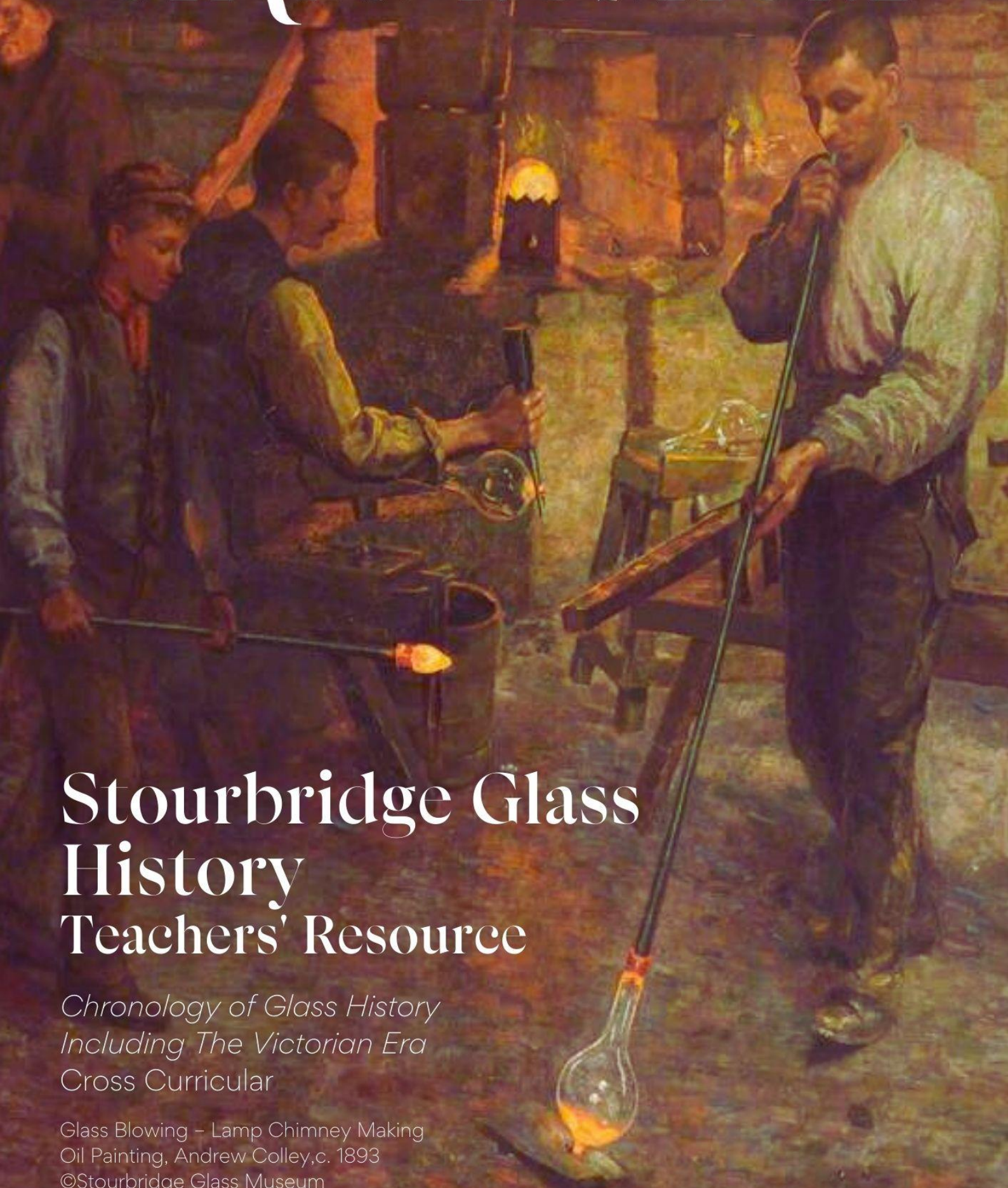


STOURBRIDGE GLASS MUSEUM

Stourbridge Glass History Teachers' Resource

*Chronology of Glass History
Including The Victorian Era
Cross Curricular*

Glass Blowing – Lamp Chimney Making
Oil Painting, Andrew Colley, c. 1893
©Stourbridge Glass Museum



History of Glassmaking

Introduction – The Origins of Glass

Over 3,000 years ago, an ancient story credits the Phoenicians (from modern-day Lebanon, Syria, and Israel) with the discovery of glass. According to the tale, they were cooking on the beach and used blocks of a mineral called **natron**, to prop up their pots. Natron is a type of natural salt found in dry lake beds, also known as sodium carbonate. The heat from the fire caused the sand and natron to melt together, creating a shiny, glass-like substance. This is how people believe glass was first discovered!



Figure 1, Roman Vases, 43 -410 AD

However, archaeological evidence suggests glassmaking began much earlier in Mesopotamia (modern-day Iran, Syria, and Turkey) around **3000–2000 BCE**. By the 1st century, the invention of glassblowing, had spread throughout the Roman Empire.

This new technique made glass production faster and more accessible. Roman glass was often decorated and had a green or

brown tint, caused by impurities in the sand used to make it.

When the Roman Empire fell in the 5th century, glassmaking declined. However, it was revitalised during the Middle Ages by Venetian artisans who developed techniques to produce coloured glass that resembled gemstones. These techniques influenced European glass styles, and in 1572, **Jacopo Verzelini** introduced Venetian glassmaking methods to Britain.

Evidence shows that glass was made in Britain even before Roman times. During the Middle Ages, glassmaking continued in areas like Sussex and Surrey, where forests provided wood to fuel the furnaces. The glass made during this time was often green or brown, coloured by traces of iron in the sand. By the late 16th century, glassmaking was expanding further, with glassmakers from Europe being invited to settle in Britain to share their skills and grow the industry.

English glass production progressed significantly in **1676** when **George Ravenscroft** enhanced and perfected the process of making lead glass. Although he didn't invent lead glass, his work helped perfect it, setting new standards for quality. These advancements laid the foundation for lead crystal production, which later became a key part of Stourbridge's local glassmaking history and its reputation for excellence.

In the 17th century, a shortage of wood led to a shift from wood to coal for glass furnaces, concentrating the industry in coal-producing regions like the West Midlands. By the late 18th century, steampower, credited to Stourbridge's James Dovey and John Benson of Dudley, made mass production possible, especially for cut glass. Deeply cut glass, such as **Regency** was made possible by the technical revolution of steampower to drive the cutting lathes. This significantly increased production.



Figure 2, Regency Cut Glass Jug, C. 1830

The Victorian Age

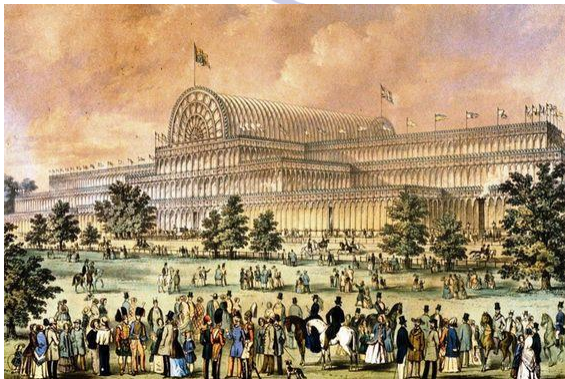


Figure 3, The Crystal Palace, 1851

In 1820s America, pressed glass was invented, allowing molten glass to be quickly shaped in metal moulds, making glass affordable to a wider audience. This method, later seen in Carnival glass, was one of many 19th-century innovations. Another improvement, the cylinder method, made large panes of flat glass for projects like London's Crystal Palace (1851), whose

glass walls and roof were manufactured by Chance Brothers in Birmingham.

Stourbridge's glassmakers, such as Thomas Webb and Richardson's, displayed their work at the Great Exhibition held in the Crystal Palace.

Victorian glassmakers produced richly coloured and highly decorated glass, with cameo glass revived by John Northwood of Wordsley. Artists like Émile Gallé and

Louis Comfort Tiffany led the art glass movement, creating unique designs admired worldwide.

The 20th Century

The 20th century introduced new types of glass. Pyrex (1915) by Corning Glass Works provided heat-resistant glass for cooking. Fiberglass (1932) brought strong, lightweight materials for various industries. The Pilkington Brothers revolutionised flat glass in 1959 with their float glass process, creating smooth, even sheets used for windows and mirrors.

Today, glassmaking continues to innovate. Smart glass can switch from clear to frosted for privacy, energy-efficient windows adjust to sunlight, and up to 30% of recycled glass is used to reduce waste. Solar glass now captures sunlight to generate electricity, showcasing glass as a vital, evolving material.

STOURBRIDGE GLASS MUSEUM

Local History - Stourbridge Glass

In the past, glass was made using wood to fuel the hot fires needed to melt the materials. However, by the 17th century, Parliament were worried about how much wood was being used by industries like metalwork, brewing, brick-making, and glassmaking. To protect the forests, a Royal Proclamation was issued in 1615 that banned the use of wood for glassmaking. This meant glassmakers had to find new fuels, like coal. At the same time, the King stopped the import of foreign glass, giving the British glassmaking industry a chance to grow.

In South West Staffordshire there were some of the richest deposits of coal in the country. Glassmakers began experimenting with covered pots within a furnace and coal was used as a source of fuel instead of wood. As a result, glassmaking tended to centre around areas where there were good coal deposits.

The glass industry in Stourbridge was established by skilled glassmakers from the Lorraine region in north-eastern France, who began arriving in England in the late

1500s. Many of these glassmakers were **Huguenots**, who were fleeing religious persecution in France. A **Huguenot** was a person from France who followed the Protestant faith within Christianity. In the 16th and 17th centuries, Huguenots were treated unfairly and often had to leave France to avoid being persecuted because of their religion. Many moved to other countries, like England, to find safety and start new lives. One of the most well-known glassmakers was **Paul Tyzack**, who settled in Stourbridge. We know he lived there because his name appears in the Parish Register from 1612:

'April 26, 1612, John Tyzacke the sonne of Paul Tyzacke and Bridgett his wife was bapt.'

Paul Tyzack discovered that not only was coal plentiful in the region, but there were also abundant deposits of fireclay, which was used to make melting pots and glass furnaces. There was also plenty of sand and natron (a type of soda made from burnt bracken on Pensnett Chase) to use in the glassmaking process. The specialty of the Lorraine glassmakers was window glass, made using the broad glass or cylinder method. Paul Tyzack's glasshouse was built on a piece of land called Coleman's, on the banks of the river Stour near the Stourbridge viaduct. Over the next 50 years, other glassmakers came to work in the district.



Figure 4, Wine bottle, sealed white hart in relief, 'E.R. Gifford

In the 17th century, Stourbridge glasshouses made **green glass bottles** and **phials**, which are small containers used for medicines. By the end of the century, two important changes took place.

First; Stourbridge began using George Ravenscroft's **lead glass** formula to make tableware such as glasses and bowls.

Second; a new method for making window glass, called the **crown glass** method, began to replace the older **broad glass** method.

By 1696, Stourbridge had 17 glass furnaces: 7 making window glass, 5 making bottles, and 5 producing tableware.

The **broad glass** method was an older way of making window glass. Glassmakers would blow a large bubble of molten glass, then swing it back and forth to stretch it into a long cylinder shape. The cylinder was cut open and flattened to make a sheet of glass for windows. This method often produced glass with bubbles and uneven surfaces.

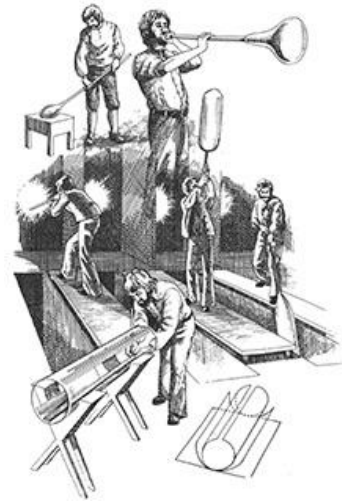


Figure 5, Broad Glass



Figure 6, Crown Glass

The **crown glass** method was a newer technique, developed in Rouen, Northern France around 1320. A glassmaker would blow a large bubble of glass, then spin it quickly so that it flattened into a large round disc, called a *crown*. Once the glass cooled, the disc was cut into smaller pieces for windows. This method made smoother, clearer glass than the broad glass method.

Stourbridge Glass

The name **Stourbridge Glass** comes from a special tax stamp used at the **Bonded Warehouse** in Stourbridge. In the past, all glass made in the area was transported through this warehouse. The tax stamp was a mark that showed the glass met certain quality standards before being sold around the world. Although most of the glassworks were located in nearby areas like **Lye, Brierley Hill, Amblecote, and Wordsley**, Stourbridge was an important market town where the banks used by the glass industry were situated. Their role in the glass trade gave the town's name to the glass made in the surrounding areas, and it became known as **Stourbridge Glass**.

Glass Tax



Figure 7, Peech Amen air twist glass, c.1740

Stourbridge glassmakers produced **air twist stem glassware** as a clever response to a tax on glass products. In the mid-18th century, glassmakers had to pay a tax based on the weight of their glass items. To avoid paying too much tax, they began designing lighter glassware.

Artisans created the **air twist stem**, which has a hollow twist in the stem. This innovative design reduced the overall weight of the glass while also making it look elegant and beautiful. As a result, manufacturers could produce stunning wine and cordial glasses without the extra tax burden, showcasing the skilled craftsmanship of the Stourbridge glassmakers.

The **glass tax** was first introduced in Great Britain in 1746 during the reign of **King George II**. It originally taxed the raw materials used in making glass but later expanded to include all glass products in **1811**. This tax remained in effect until it was abolished in **1845**. The creative solutions developed by glassmakers during this time reflect their ability to adapt to economic challenges while maintaining their artistry. This was one of the factors which enabled the glass industry to surge forward.

The 18th Century

In the 18th century, the glass industry in Stourbridge continued to produce a mix of window glass, bottles, and tableware. At this time, there were around ten glasshouses operating in the area. Although we don't know much about the specifics of the industry from this period, a few visitors left behind interesting accounts of what they saw.

In 1725, the famous writer Daniel Defoe visited Stourbridge during his ***Tour Through England and Wales***. He mentioned the '*fine stone pots*' used by glassmakers for melting their glass, and noted the '*great manufacture of glass of all*

sorts in the area. The fireclay '*stone pots*' were actually hand built in clay by skilled craftsmen.

Another visitor in 1776 wrote about how even children were involved in the art of glassmaking. He described how he asked for a glass to be made as elegantly as possible, and it was created very quickly right in front of him.

These eyewitness accounts give us a glimpse into the bustling glassmaking industry of Stourbridge during the 18th century, showing how skilled the glassmakers were - even children!

Roads and Canals



Figure 8, Horse drawn narrowboat along the nine locks canal

By the late 18th century, Stourbridge had become a major glassmaking district, increasing traffic and demand for better transport routes. The area's roads, often muddy and difficult in winter, couldn't support the heavy coal transports from

Pensnett Chase to local mills and forges. In response, Road Acts established two

Turnpike Trusts to improve the main routes. Turnpikes, or toll roads, required travellers to pay a fee at gates, funding road maintenance and making travel safer and quicker.

In 1775, Parliament authorised the construction of a canal, which transformed the transport of goods for local industries, including the glasshouses in Wordsley. The canal, often called '*the cut*,' was built in a V-shape to prevent wall collapse.

Workers, mostly Irish labourers,

packed down, or '*pudged*' the clay using pigs to strengthen the canal banks. The

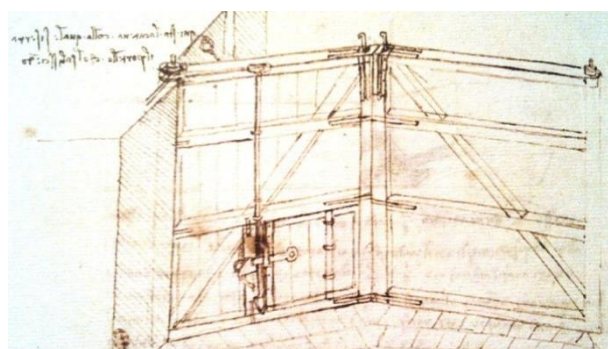


Figure 9, Leonardo da Vinci canal design sketch, 1497

canal locks, were designed by **James Brindley** and based on **Leonardo da Vinci's** plans, and allowed boats to navigate different levels.

The canal simplified the transportation of coal and raw materials for glassmaking. Narrowboats would dock beside factories, unloading supplies directly through windows and tunnels to feed furnaces. Finished glassware was carefully packed and transported back by canal, avoiding the rough, busy roads and ensuring safe delivery. This canal system was essential for the success of Stourbridge's glass industry and contributed to the Industrial Revolution.

The Victorian Age



Figure 10 Gourd shape cameo glass vase, Stevens & Williams, Brierley Hill, c.1885

The 19th century was a **golden age** for the Stourbridge glass industry, as factories began to specialise in producing both tableware and decorative glass that gained popularity across the UK and beyond. During this time, new styles of glass appeared rapidly, capturing the interest of many.

One of the most significant achievements of the Stourbridge glassmakers was **John Northwood's** remarkable copy of the ancient Roman **Portland Vase**, (On display at Corning Museum of Glass, New York state, US). This masterpiece sparked a craze for **cameo glass** that continued until the outbreak of the First World War. The production of beautiful chandeliers and exquisite tableware flourished, bringing even more trade to the area.

In the second half of the 19th century, a new technique called **copper wheel engraving** gained popularity alongside glass cutting. Skilled engravers from **Bohemia** (Czech Republic) settled in Stourbridge, sharing their talents and techniques, which further enriched the craftsmanship of the local glassmakers. This period marked a time of innovation and creativity, making Stourbridge a key player in the world of glassmaking.



Figure 11, Copper wheel engraving

The 20th Century

The two World Wars imposed great hardship on the trade with little decorative glass being produced. Many factories moved into manufacturing electric light bulbs, radios, radar equipment, tubing, valves and scientific apparatus.



Figure 12, Tutti Frutti, cup-cased vase, Iestyn Davis, c.1990s

As the last of the crystal glass factories were closing, Stuart Crystal in 2002 and Tudor Crystal in 2008. As the larger factories were closing **studio glass** makers began working in the area, most notably Blowzone (1993 - 2000) run by Iestyn Davis and Okra Glass (1978 – 2011) owned by Richard Golding.

Studio glass refers to art glass created in small, independent studios by individual artists or small teams, rather than in large industrial glass factories. This movement began in the mid-20th century and emphasized creative expression and experimentation with glass as a medium. Artists involved in the studio glass movement often focus on

handmade, one-of-a-kind glass pieces, or small ranges of glassware. such as sculptures, vessels, or decorative objects.

The 21st Century

Studio glassmakers are still creating in Stourbridge's Glassmaking Quarter. Allister Malcolm Glass is based at Stourbridge Glass Museum, glass artist Madeleine Hughes works for Allister. Elliot Walker and Bethany Wood are base at The Red House Cone in their hybrid glass studio and Gallery; Blowfish UK.

Famous Stourbridge Glassmakers



Figure 13, Thomas Webb

Thomas Webb (1804 – 1869)

Thomas Webb founded the **Thomas Webb Glassworks** and began his career in 1829 in partnership with the Richardsons at Wordsley. His son, **Thomas Wilkes Webb** (1836 – 1891), took over the company in 1863. He employed some of the finest craftsmen in Stourbridge, including **George Woodall**, **Frederick Kny**, and **William Fritsche**. Under his leadership, the factory gained international fame, and in **1878**, Thomas Webb won the **Grand Prix** at the **Paris Exhibition**. The Thomas Webb Glassworks closed in **1990**.

Benjamin Richardson (1802 – 1888)

The **Richardson Factory**, one of the leading glass firms in Stourbridge during the 19th century, was established in **1829** by **William Haden Richardson**, **Benjamin Richardson**, and **Thomas Webb**. It was located on the banks of the **Stourbridge Canal** in Wordsley, directly across from the **Red House Cone**. Benjamin Richardson is often referred to as '*the father of the Stourbridge glass trade*' due to his significant contributions to the industry.

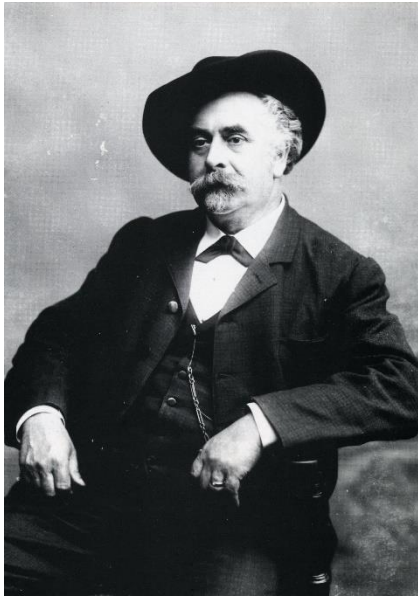


Figure 14, John Northwood

John Northwood (1836 – 1902)

John Northwood was a key figure in the Stourbridge Glass Trade during the 19th century. Born in Wordsley in **1836**, he completed an apprenticeship at the Richardson factory, where he learned to paint and gild glass. In **1860**, he established a glass decorating business with his brother Joseph on Barnett Street, Wordsley, where he developed the process of **acid etching** for glass decoration. His most notable achievement was reviving the art of **cameo glass**, which had been all but lost since Roman times. From **1881** until his death, he served as the art director of **Stevens and Williams**.

Stourbridge Glassmaking Giants

Stuart Crystal: Founded in 1883 and closed in 2002.

Royal Brierley: Established in 1776 and closed in 2000, originally known as **Stevens and Williams** until 1968.

Webb Corbett: Founded in 1850 and closed in 1999. In 1969 it became part of the **Royal Doulton** group.

Tudor Crystal: Established in the 1922 and closed in 2008.

Webb: In 1854 purchased Dennis Hall and closed in 1990.

Richardsons: Founded in 1820 and closed in the 1945

Lead Glass – Lead Crystal

- **Silica- Sand- Flint:** 50–60%
- **Lead Oxide:** 24–40%
- **Soda Carbonite:** 10–15%
- **Lime Carbonate:** 0–10%



Figure 15, Cut glass bowl, 14 panels and scalloped rim, Stourbridge, c. 1880 - 90

Each factory had its own recipe, but these are the approximate ratios. Lead glass is melted at temperatures around **1350 °C**, and the working temperature for glassmakers to gather it from the furnace is about **1080 °C**.

Adding lead to the glass gave it a unique brilliance. The finished glass was softer than other types of glass, allowing artisans to cut and create beautiful decorations taking

advantage of its **refractive index**. Deeply cut glass items would sparkle and create rainbows when light passed through them, making tableware and chandeliers glisten. Lead crystal is also easily recognised by its clear, ringing sound when struck, setting it apart from other types of glass.

The Glass Cone

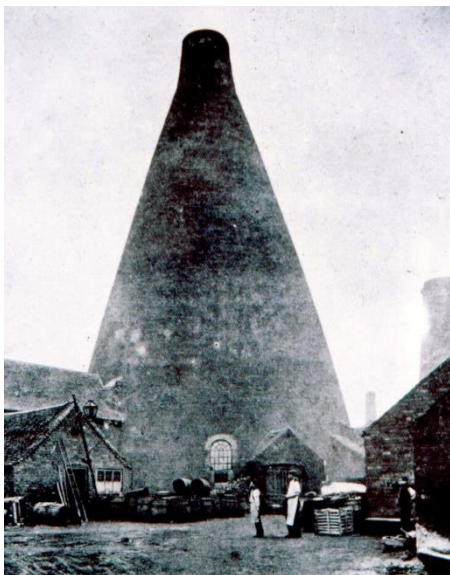


Figure 16, The Red House Cone

The glassmaking cone was created to enhance the heat produced by the furnace, functioning like a large chimney. It generated a strong draught, allowing the circular furnace in the cone's centre to reach the high temperatures needed to melt glass effectively. Some cones were impressive, reaching over **45 meters** in height.

The **Red House Cone** in Wordsley operated for more than **150 years**. The Red House Cone was built in between **1788** and **1794** and used until around **1936**. Surrounding the cones were several

other buildings that housed cutting shops, packing rooms, and acid etching workshops, all essential for the glassmaking process. As furnace designs improved,

the cone shape became less necessary. By around **1830**, glasshouses began to take the form of large sheds topped with a tall chimney connected to the main furnace, marking a new era in glass production.

The Whitehouse glassmaking cone in Stourbridge was believed to have been built in between **1779** and **1785** and stood as a significant landmark in the area for many years. It was reduced, or truncated in **1924**, and eventually, it was demolished in **1970**. During World War II, the cone served an important purpose as an air raid shelter, providing a safe haven for local residents during air attacks. The large circle at the front of Stourbridge Glass Museum describes the original footprint of the cone, which was the tallest in this area.



Figure 17, The White House Cone



Figure 18, The Dial Cone

The last remaining, and largest cone still in use as a glassmaking factory is at Dial glassworks in Audnam. This Cone was built in **1788** by John Pidcock & Company as part of the New Dial Glassworks. This cone was used to produce a variety of glass products, including window glass and later bottles. In **1936**, the cone was truncated and the remaining structure was covered with an iron-framed asbestos roof, today, part of the cone still exists.

Currently, the site is home to **Plowden & Thompson**, a glassmaking business known for producing scientific glass rod and tubing. This makes it the last traditional glassworks still in operation.

At the height of the Victorian era, there were approximately **thirty glassmaking cones** in the Stourbridge area.

Working Conditions

Life inside a 19th-century glass factory was demanding. Men typically worked around fifty hours per week, often in shifts of six hours, followed by six hours of rest, with workdays running from Monday to Thursday. Payment was based on **piece work**, meaning workers earned more if they produced more glass within their shift. In **1867**, a glassworker could expect to earn around **50 shillings per week**, considered a good wage for the time. This is equal to about £156 in today.

Children also worked in the glass industry, often alongside adults for similar hours. Boys, known as **tekker-ins**, began their apprenticeships as young as eight years old, they would carry hot glass items from the glassmakers' bench to the **annealing ovens**, or **lehrs**; a German word meaning **empty oven**. Their apprenticeship lasted seven years, during which time they faced many restrictions, such as being forbidden from marrying or engaging in certain social activities like gambling or visiting taverns. In **1899**, an apprentice engraver earned as little as **5 shillings (25p)** a week, with their pay increasing to **11 shillings (55p)** by the end of their training.

Working in glass factories involved many risks. Raw materials like **red lead oxide**, used in producing lead crystal, could lead to serious health problems such as lead poisoning, causing a condition known as '**dropped hand**' which restricted wrist movement. Injuries like burns and bruises were also common, especially in dangerous jobs such as pot-changing, where workers removed broken pots of molten glass from a burning furnace. One glassmaker from the mid-19th century described the exhausting task, highlighting the risks of burns, falls, and exposure to heat and fumes.

The glasshouse was comparatively safe apart from burns and bruises. In glassmaking, the shape of the cone helped to create a draft that carried away the smoke and hot gases upwards, preventing it from accumulating inside the workshop. This design was essential for maintaining a safer and more breathable environment for the workers. However, some smoke and fumes could still be present in the air, especially in older glassmaking facilities that lacked modern ventilation systems.

Working life could be very hard and often the boys were often fined for the smallest error. As they grew older they would have to pay **half a crown (approx.,12p)** if they were seen talking to a girl. Because workers were paid based on piece work, apprentices had to compensate the glassmakers for the time they took away from production to provide training.

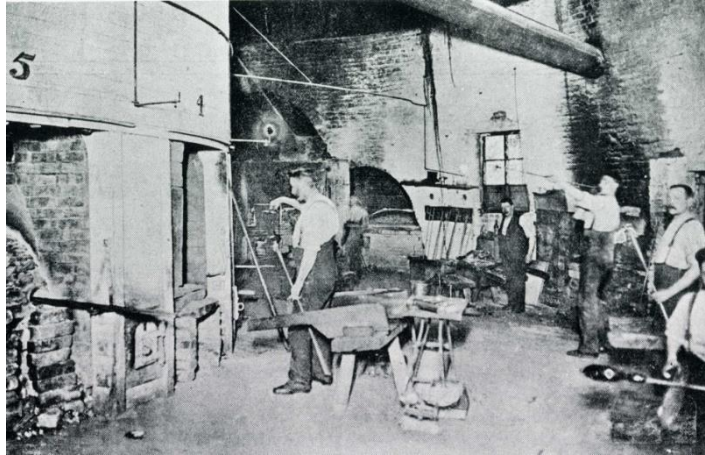


Figure 19, Glassmakers

Girls and young women also played important roles, often working in **the acid-dipping** rooms where they etched and frosted glass. This job involved handling hazardous chemicals, and despite the dangers, the only protective equipment they used were gloves and aprons. They would also perform the labour intensive work of applying the acid resistant wax to the glass before it was dipped in hydrofluoric acid.



Figure 20, Young women cutting glass

Glass cutting and engraving was another demanding task, with workers spending long hours hunched over cutting wheels. Constant cold dripping water (used to keep the glass cool as it was cut) and vibration from the cutting wheels made their hands stiff and sore. Young assistants were responsible for applying **putty powder**, which contained lead, to the cutting wheels. Failure to wash properly before eating could lead to lead poisoning.

Overall, life in the glass factories was tough, with challenging working conditions for both adults and children. Despite these hardships, the workers' skills and dedication were crucial to the success of the glassmaking industry.

Pre – museum visit activities

~ **Explore Lead Crystal:** Learn about the materials that go into making glass, like silica, lead, and soda. Create a small chart showing the different materials and their percentages from the text. What does each material do?

~ **Research the Geography:** Ask students to look at a map of the West Midlands and locate Stourbridge. Discuss the significance of the canals in transporting glass and materials. Have students plot a journey from a nearby location (like Birmingham) to Stourbridge, showing the route of the canals.

At the Museum

While visiting Stourbridge Glass Museum, students can engage in activities that help them better understand the craftsmanship and historical significance of glassmaking.

~ **Sketch the Glass Cone:**

Bring pencils and paper to sketch the iconic glassmaking cone structure outside the museum. Ask students to label the different parts of the cone and describe its function in glassmaking. How tall was the cone? Why was it so important for the furnace?

~ **Observe and Identify Glass Tools:**

In the museum, students can search for old glassmaking tools and make notes about what each one might have been used for. Discuss the importance of these tools and if or how they differ from modern glassmaking equipment.

~ **Glass Sound Experiment:** After learning about lead crystal, students can conduct a sound experiment by gently striking different glass objects (these items can be provided by the museum). How do they sound? Why does lead crystal ring differently than other types of glass?

~ **Spot the Patterns:**

While touring the glass collections, have students spot and draw symmetrical patterns used in engraved glassware or chandeliers. What shapes and motifs are repeated? How does symmetry make the glass designs stand out?

~ **Glass and Light Exploration:** Encourage students to observe how light passes through different glass objects. Take note of how deeply cut lead crystal reflects light and creates rainbows. Ask students to describe the colours and patterns they see in the reflections.

~ **Design Your Own Glass Object:** In the Museum's galleries, students can take inspiration from what they've seen to draw their own glass object designs. This could involve drawing a vase, bowl, or sculpture, and adding notes about how the patterns they've chosen reflect what they learned about Victorian glass.

Back at School

Mathematics

Activity: Glass Cone Measurements and Geometry

Focus: Geometry, Measurement, Data Handling

Objective: Students measure the dimensions of a hypothetical glass cone using given ratios, calculate volume, and compare heights of different glassmaking cones.

Activity Details: Provide a simplified outline of a glass cone.

Discuss how cones were used to create strong draughts for the furnace.

Students can measure the cone's height and base and calculate its volume using the formula for the volume of a cone.

Introduce ratios and proportions when scaling cone sizes and comparing them with modern chimney structures.

Extension: Calculate how many glass items could be packed into a canal boat or truck using simple multiplication and addition.

Science

Activity: Material Properties and Glass Chemistry

Focus: States of Matter, Changes of State, Materials, Chemistry

Objective: Learn about the properties of glass, why lead is added, and what changes occur when silica is heated.

Activity Details:

Students explore the ingredients of lead glass: silica, lead, soda, and lime.

Conduct a simple melting experiment (using chocolate or wax) to explain how heat changes solids into liquids and back into solids.

Link this to how the glassmakers melted and shaped glass at high temperatures.
Discuss lead's role in making glass more brilliant and softer for cutting.

Extension: Introduce the risks of working with lead and the importance of protective equipment.

History

Activity: Life of a Victorian Glassmaker

Focus: Historical Enquiry, Victorians, Industrial Revolution

Objective: Investigate the life of Victorian glassmakers, particularly children, and understand the historical significance of Stourbridge glass.

Activity Details:

Use role-play or diary writing to have students imagine a day in the life of a child apprentice in a 19th-century glass factory. Create an obstacle course for the 'tekker-in' to re-create the conditions in the factory and mimic the carrying of hot glass on the end of a wooden board or a long pole.

Discuss working conditions: long hours, hazardous materials, child labour laws.

Explore how the canal system supported local industries and how Leonardo da Vinci's lock design improved trade.

Extension: Compare past and present working conditions (child labour, health and safety), linking to history and PSHE.

Literacy

Activity: Descriptive Writing: A Day at the Glass Cone

Focus: Writing to Describe, Creative Writing

Objective: Develop descriptive writing skills by imagining the sights, sounds, and smells of a Victorian glass factory.

Activity Details:

Ask students to describe what they might see, hear, and feel inside a hot, busy glass factory. Listen to the sound interactive in the Museum lower gallery as well as the hot glass studio.

Use key vocabulary from the text: 'furnace,' 'gathering glass,' 'annealing,' 'cones,' etc.

Include sensory experiences like the ringing sound of lead crystal when struck, or the heat and fumes from the furnace.

Extension: Create a glossary of glassmaking terms or rewrite the piece as a news article on the factory closure in the 21st century.

Geography

Activity: Stourbridge Canal and Glass Trade Map

Focus: Map Skills, Human and Physical Geography

Objective: Understand the geographical importance of canals and transportation during the Industrial Revolution. Using a map, find how many major cities they could travel to along the canal network.

Activity Details:

Provide maps of the West Midlands and the UK.

Students plot the location of Stourbridge, nearby canals, and where raw materials (coal, silica) came from.

Discuss why canals were important for transporting heavy, fragile goods like glass.

Compare how goods are transported today (rail, lorry, air) versus the 19th century.

Extension: Explore the geography of Stourbridge and why its clay-rich soil made it ideal for canal construction.

Art and Design

Activity: Design Your Own Glassware

Focus: Design and Creativity, Art Movements

Objective: Design a glass object inspired by historical Stourbridge glassmaking techniques.

Activity Details:

Show examples of cameo glass, chandeliers, or engraved glassware from the Victorian era.

Students sketch their own designs for glass vases, cups, or chandeliers using symmetrical patterns and motifs.

Discuss how the brilliance and cutting properties of lead glass influenced artistic styles.

Extension: Create 3D models of cones or glass objects using clay or recyclable materials. Create a poster advertising your glassware like the Edward Webb example.

PSHE/Citizenship

Activity: Child Labour Then and Now

Focus: Social Justice, Well-being, Historical Comparisons

Objective: Understand the social impacts of child labour and compare historical and modern-day labour practices.

Activity Details:

Discuss the harsh working conditions for children in Victorian times.

Have students reflect on the importance of education and child labour laws today.

Explore why children were employed in glass factories and what rights they have now.

Extension: Link to the idea of community responsibility and fair trade products.

STOURBRIDGE
GLASS MUSEUM

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