

Stained Glass Windows



A window is an opening which allows light and air in. **Cast glass** was used by the Romans over 2000 years ago. **Stained glass** which is used to form designs or pictures has been developed over the past 1200 years.



Singers Hill Synagogue

Photograph by Piers Wolf

Many stained glass windows tell stories. The window above tells the story of Jonah and the Whale. The window below tells the story of the Nativity.



Photograph:
Alistair Carew-Cox

Birmingham Cathedral

The glass may be coloured:

- By adding colour to it before it becomes solid
- By painting on it
- By adding layers of different coloured glass on top of each other.

Why does the floor of this mosque in Shiraz, Iran look as if it has so many beautiful colours?



Stained glass windows capture and transform light in truly magical ways.

Classroom activities

To help teachers, background information on stained glass is provided together with discussion points and useful links to additional resources.

Two things to make are shown on

Page 6

Window decoration

Tea light holder

Note: Only an adult should light tea light



Some interesting facts

Windows were often funded by rich families who had coats of arms.

A coat of arms is the name for a colourful decoration based on a shield that noble families used to represent themselves.

See: **Design your own Coat of Arms**

english-heritage.org.uk “Members/Kids/Things to make and do.”



Photograph by Piers Wolf

Stained glass windows can give clue about dress e.g. how a young man's legs were protected when he went into battle in medieval times.



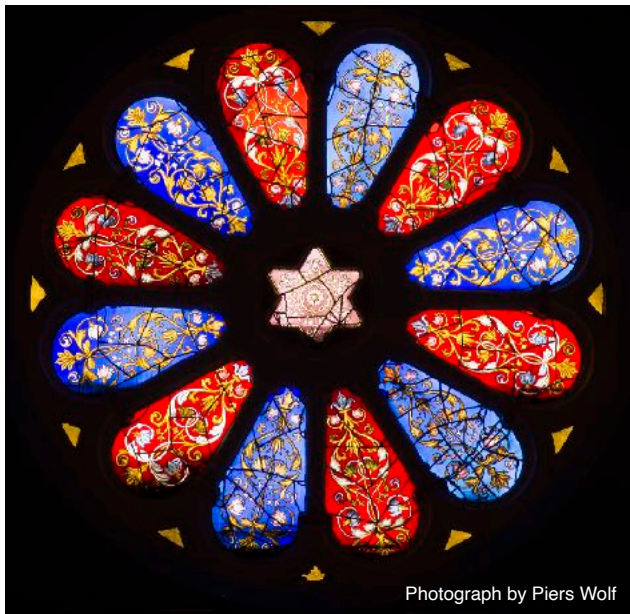
St Alphege's Solihull

This window shows pilgrims from all over Europe through the centuries going to Canterbury. It was designed in 1961 by Lawrence Lee. How can you tell that this window is modern glass?



Photograph by Piers Wolf

Painting on glass is a highly skilled craft. The artist is called a **glazier**. Glaziers often sign the window in the lower corner. This is known as a **glazier's mark**.



Photograph by Piers Wolf

Singers Hill Synagogue

Symbols and imagery are often included in the design of windows. The Star of David (*right*) may be found in synagogues and churches.


Stained Glass can create wonderful patterns. To the left is a **Rose Window**.

Why do you think it is called a 'Rose Window'?




The Stained Glass Museum at Ely Cathedral

The Stained Glass Museum in Ely Cathedral



THE STAINED
GLASS MUSEUM
IN ELY CATHEDRAL



A national collection of stained glass from across Britain and Europe, medieval to present day.

www.stainedglassmuseum.com

Additional resources for teachers may be found at:

The Stained Glass Museum at Ely Cathedral

<https://stainedglassmuseum.com/resources>

Schools Programme

<https://stainedglassmuseum.com/learning>

01353 660347

Capturing magic

- How stained glass is made.

This 8 min video is highly recommended:

<https://www.youtube.com/watch?v=rkoEqFHhELA>

This short film which shows the materials and methods used for making stained glass from medieval times to now is suitable for children in Y5 to adult.

With grateful thanks to Dr Jasmine Allen, Director and Curator, The Stained Glass Museum, Ely Cathedral

Making a stained glass window from start to finish.



Meet **David and Steven Cowan** from Birmingham.

David Cowan started as a stained glass apprentice at John Hardman studios in 1965, where he learnt all aspects of stained glass, specializing in glass painting.

Steven Cowan joined John Hardman Studios in 2001 and was able to learn the traditional skills of stained glass from his father.

Master Glass Artists Ltd. operates from a large shed in Steve's garden near Birmingham.

David and Steven set up their own stained glass business in April 2009, and since then have created numerous new windows for religious and residential buildings throughout the world.

Here is the story of how a window was designed and made.
Pictures supplied by Steve Cowan.



The Cartoon

This window, 'The **Madonna and Child**', was designed and created by them for a church in Alberta Canada. It was installed in 2020.

The figurative design is based on a window by G Bertini (1862).

The process of making a stained glass window has not changed for over 1000 years.

Stage 1: Design

A small coloured drawing (to scale) is approved by the customer.

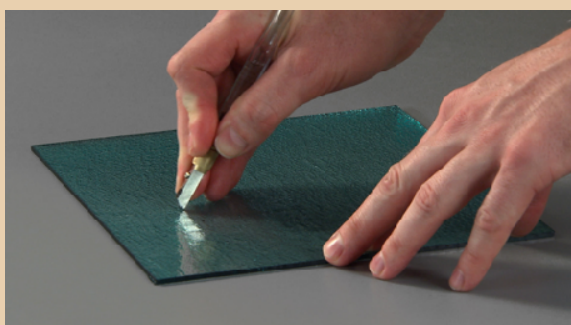
Stage 2: Cartoon

A full size working drawing of the window is created. This is called a cartoon. It shows all the details and colours of glass to be used.

Stage 3: Tracing paper is placed over the cartoon. The pattern of the leads that will go between the pieces of glass is marked out.

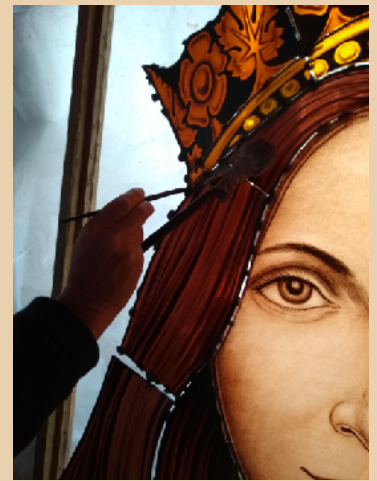


The finished window



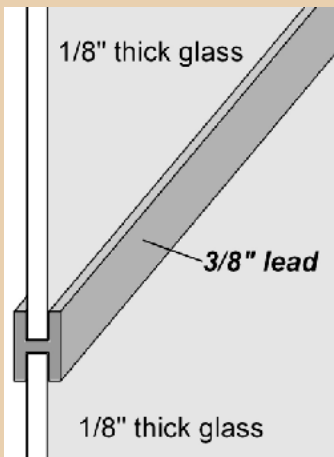
Stage 4: Using the original design, stained glass is selected. This is handmade in many colours and textures.

Stage 5: The glass is cut by hand with a steel wheel cutter. To make the right shape, the glass is placed over the cutline. Using the steel wheel cutter, the glass is scored and then gently tapped underneath.



Stage 6: The glass is placed over the cartoon . Using various brushes to create the detail, special glass paint, made from iron oxide, is applied.

The glass is then fired at a temperature of 660C in a large oven called a **kiln**. The paint is then permanent. It takes a long time because sometimes a piece of glass has to be fired 6 times to obtain the desired effect.



Stage 7: After painting, the glass is laid back over the cutline. Strips of lead are fitted around the glass. These have a slot so the edges of the glass can be inserted into the lead strips. Lead is a soft metal so it can be bent into different shapes. It is also resistant to weather and temperature.

Where two pieces of lead meet, molten solder is applied to bond the pieces of lead together. All joints must be soldered on both sides of the window.



Stage 8: Cementing

A liquid cement is applied with a brush all over both sides of the window to fill any gaps between the glass and the lead.

Once this dries, it makes the window stronger and weatherproof.



Two more windows created and installed by

Master Glass Artists Ltd.
www.masterglassartists.co.uk

The Fishers of Men window
Florida 2022

The First World War Memorial window
Southwell Minster, Nottinghamshire
Designed by Nick Mynheer 2016



Classroom Activity



Carolyn Shaw

This window was made by a Y5 pupil using strips of black card, glue and coloured acetate available from Brume Ltd. www.brume.co.uk

Overlapping pieces of tissue paper may be used instead.

For display purposes the window may be laminated. This captures and transforms light.

Children can enjoy exploring colour combinations such 'hot' and 'cool' and overlapping colours to get variation.

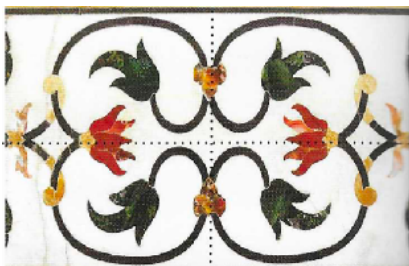
For additional resources and ideas, see: **Access Art - sharing Visual Arts Inspiration.**

www.accessart.org.uk

Make a candle holder

You will need: short jam jar, brushes, glass paints such as acrylic, tea light candle.

This jar was painted after looking at symmetrical arabesque Islamic patterns.



Tiling from the Taj Mahal with two lines of symmetry in Discovering Islamic Art by Mary Beardwood Medina Publishing



ONLY AN ADULT SHOULD LIGHT CANDLE