

A detailed glass sculpture of a butterfly, likely a monarch, is the central focus. The wings are intricately detailed with orange, black, and green patterns, mimicking the natural appearance of a monarch butterfly. The sculpture is set against a vibrant blue background. The text is overlaid on the top left and bottom of the image.

# Amalric Walter Teachers' Resource

*Explore the characteristics of Art  
Nouveau Glass  
Cross Curricular*

STOURBRIDGE  
**GLASS MUSEUM**

Flat dish with butterfly, Walter Nancy & Bergé  
©Stourbridge Glass Museum

# Amalric Walter

## Art Nouveau Glass Artist

### Introduction



*Amalric Walter*

Amalric Walter was a French glass artist known for his glass work in the **Art Nouveau** style. He specialised in the technique of Pate de Verre, which involves creating glass objects by packing a mould with fine glass particles and heating it until the glass fuses together. Walter's animal sculptures are highly detailed and capture the essence of each creature he depicts. Walter began his artistic career working for the famous glass artist Émile Gallé, who influenced him greatly.

### Key Stages of Amalric Walter's Life

Amalric Walter was born in 1870 in the French city of Nancy.

He started working for Daum, a French glass manufacturer, at the age of 14.

He spent many years perfecting the technique of **Pâte de Verre**, which was popular in the Art Nouveau movement.

In the early 1900s, Walter started creating his own designs and became known for his intricate glass animals.

He won several awards for his work, including a gold medal at the 1925 Paris Exposition Internationale des Arts Décoratifs et Industriels Modernes.

Walter continued to work in glass until his death in 1959.

## Art Nouveau

Art Nouveau style is inspired by the natural world characterised by sculptural, organic shapes, arches, curving lines. Common motifs include stylised versions of leaves, flowers, vines, insects, animals, and other natural elements.

*'Our roots are in the depths of the woods, on the edge of the springs, on the mosses.'*

~ Émile Gallé.

## Materials & Techniques

**Pâté de Verre** is a French term which means '**glass paste**'. Ground glass, from the size of sugar grains down to the finest powder, which could be coloured by pigments, are filled into a mould and fired in a kiln to around **800°C**, until the individual grains fuse into a single mass that takes the form of the mould. The mould can only be used once as it is destroyed when the cooled glass is released from the mould. It was first applied by ancient Greeks and the art revived in the 19th century by Art nouveau and Art Deco artists who developed the technique by layering more colours and created fully three dimensional forms.



Figure 1, Mould filling technique



The original form would have been sculpted in wax, then a mould was built around it, once hardened, the wax inside is steamed out, leaving the cavity to be filled with glass grains. In Walter's case, the opening of the moulds were kept as large as possible, so that he could work in great detail on the inside surface of the mould.



Figure 2, Chameleon Dish, A Walter Nancy, Berge.

It would have taken hours to fill each mould with the glass paste, which was usually made with natural oils and gums. These were used sparingly as they burnt off in the kiln firing process without leaving any residue. Colours would be applied either by paint brush, or spooned in and patted down with wooden tools. Each layer had to dry before the next one could be applied. The first layer of detail is most notable in the chameleon.

Towards the outer edges of some of the dish and plate forms the glass and pigments flow, creating a painterly quality similar to watercolours. Glass animals created by Walter using Pâte de Verre are incredibly detailed and intricate, with different colours and textures achieved by layering the glass paste. Walter was particularly skilled at creating life-like glass animals using this technique, with a particular focus on capturing the movement and texture of the animals. The technique was popularised during the Art Nouveau period, and Amalric Walter was one of its most famous practitioners. His Pate de Verre glass animals are highly prized by collectors today.

## Coloured Glass

When Amalric Walter made his beautiful glass animals, he used special powders called metal oxides to add different colours to the glass. These powders mix with the glass and change its colour when heated. Here are some of the colours created by different metal oxides:

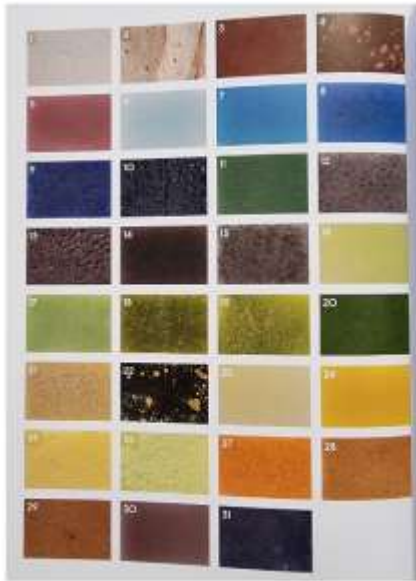


Figure 3 A table illustrating colours derived from oxides

**9 & 10. Cobalt Oxide** – Makes **blue** glass.

**12. Manganese** – Creates **violet** (purple) glass.

**Gold Chloride** – Turns the glass **red**.

**25. Antimony Oxide** – Gives the glass a **white** colour.

**Silver Nitrate and Sulphur** – Mix together to make **yellow** or **amber** glass.

**Uranium** – Makes a **fluorescent yellow** or **green** glass that can glow under certain lights.

**20. Chromic Oxide** – Produces a bright **emerald green**.

**23. Vanadium Pentoxide** – Also makes the glass **green**.

**6 & 7. Copper Oxide** – Creates a **blue-green** or **aqua** colour.

**3 & 4. Iron Oxide** – Can make the glass **greenish, brownish,** or **bluish**.

**Nickel** – Gives the glass a **brown** or **purple** shade.

By mixing these oxides in different ways, Walter could create all kinds of amazing colours and bring his glass animals to life.

### Pre – museum visit activities

~ Watch the BBC's Wild Isles programme, a major new BBC natural history service, presented by Sir David Attenborough, revealing a rarely seen wild side of the UK: <https://www.bbc.co.uk/programmes/p0f0t5dp> .

~ Look at the artwork of other Art Nouveau artists.

Alphonse Mucha

Glass Artists ~ Émile Gallé

Gustav Klimt

Louis Comfort Tiffany

Jean Daum

## Animals & Nature

### At the Museum

Bring drawing and colouring pencils, paper or your sketchbook for sketching and annotating. Find the Amalric Walter Glass collection on the upper floor of the Museum.

~ Name as many animals as you can in the Amalric Walter collection. Can you mimic the way these animals move? Can you name the natural habitats for these animals? What time of day would you expect to see them?

~ Write a short story about one of Amalric Walter's animal sculptures, imagining it coming to life. Imagine the animal journeying back to its natural habitat, decide what happens on the way back.

~ Write a descriptive paragraph about one of the Pâte de Verre animals using sensory language to describe the colours and textures.

~ Observe and sketch your favourite glass animal from the Amalric Walter animal collection. How would you describe the colours, shape, texture and decoration used to create the glass creatures? Why is this your favourite?

~ Discuss the technique of Pâte de Verre. What is Pâte de Verre? How is Pâte de Verre different from other glass-making techniques? Why do you think Amalric Walter chose to make sculptures of creatures using Pâte de Verre?

~ Go for a walk along the nearby canal and draw your favourite animal back in nature. Take photographs of your creature pictures in the environment. Think about and make suggestions of what we can do to keep the environment clean for animals to live safely.

### Back at School

#### Literacy

#### ~ Researching and Writing about Animals

Activity: Write a descriptive paragraph about the animal you sketched during your museum visit.

**Task:** Research your chosen animal. Where does it live? What does it eat? How does it reproduce? Create a fact file or a short story imagining the animal's life in its natural habitat.

**Learning Outcome:** Developing research skills, expanding knowledge of animal biology, and improving descriptive writing.

## **Art and Design**

### **~ Drawing and Creating Inspired by Nature**

**Activity:** Create a colourful artwork based on your animal sketch from the museum.

**Task:** Use coloured pencils, paints, or pastels to add detail to your sketch and bring your animal to life with bold, bright colours.

**Learning Outcome:** Exploring colour mixing and artistic expression, inspired by the colours used in Amalric Walter's glass sculptures.

**Activity:** Design a collaborative collage of animals in nature.

**Task:** Work together as a class to combine all the individual animal drawings into a large collage that shows a shared landscape, including different habitats and environments.

**Learning Outcome:** Encouraging teamwork and creativity, while learning about ecosystems and where animals live.

**Activity:** Make a 3D model of your chosen animal using clay or air-dry clay.

**Task:** Sculpt your animal and, once the model is dry, use paints to blend colours like watercolours, mimicking the smooth colour transitions found in Amalric Walter's glasswork.

**Learning Outcome:** Practicing fine motor skills and colour blending techniques while creating a 3D representation of the animal.

**Activity:** Create a diorama of the animal's environment.

**Task:** Build a miniature model of your animal's habitat, using materials like paper, clay, or natural elements to show the landscape, plants, and other animals it lives alongside.

**Learning Outcome:** Deepening understanding of habitats and environmental factors that affect animal life.

### **Environmental Awareness: Protecting Animals and Nature**

**Activity:** Research and discuss ways to protect animals and their environments.

**Task:** Explore different ways we can help protect animals, such as recycling, reducing plastic waste, conserving energy, and keeping natural habitats clean. Create posters or presentations to share these ideas with others.

**Learning Outcome:** Raising environmental awareness and fostering responsible behaviour towards nature, encouraging children to think about sustainability and animal conservation.

## **Science**

### **~ Exploring Density and Glass – Science (Materials)**

**Activity:** Investigate the density of different materials, linking to the idea of glass being a solid but with a unique molecular structure.

**Experiment:** Provide children with a variety of objects (glass, plastic, metal, wood, etc.) and have them compare how heavy or light these objects feel. You can link this to how lead glass is heavier due to its density.

**Learning Outcome:** Understanding density and how different materials can have the same size but different weights.

**Extension:** Use a scale to measure the mass of the objects and compare this to their size, linking to Walter's use of different types of glass in his art.



## Mathematics

### ~ Measuring Temperatures in Glassmaking – Maths (Numbers and Data Handling)

**Activity:** Understand temperature scales and compare temperatures used in glassmaking.

**Experiment:** Introduce children to the concept of temperature by comparing the melting points in glassmaking (e.g., Pâte de Verre is fired at around 800°C) with familiar objects (e.g., water boils at 100°C). Create a chart or graph comparing different glassmaking temperatures to everyday temperatures (like body temperature, room temperature, etc.).

**Learning Outcome:** Interpreting data and comparing numbers, understanding how high temperatures are required to make glass.

**Extension:** Use real thermometers to measure different temperatures around the classroom, such as water, air, and other safe items.

### ~ Calculating Volume and Capacity – Maths (Measurements)

**Activity:** Calculate the volume of objects, linking to how Walter's glass sculptures had to be made within certain mould sizes.

**Experiment:** Provide children with different containers and fill them with water or sand to measure the volume and capacity. Relate this to how Walter's glass had to fit precisely within moulds during the pâte de verre process.

**Learning Outcome:** Understanding the concept of volume, estimating and measuring the capacity of containers.

**Extension:** Compare the volumes of different animal sculptures, or discuss the size and volume of objects in nature, such as animals Walter depicted.

**Image Resources**



E  
M

*Figure 4, Two Entwined Lizards*

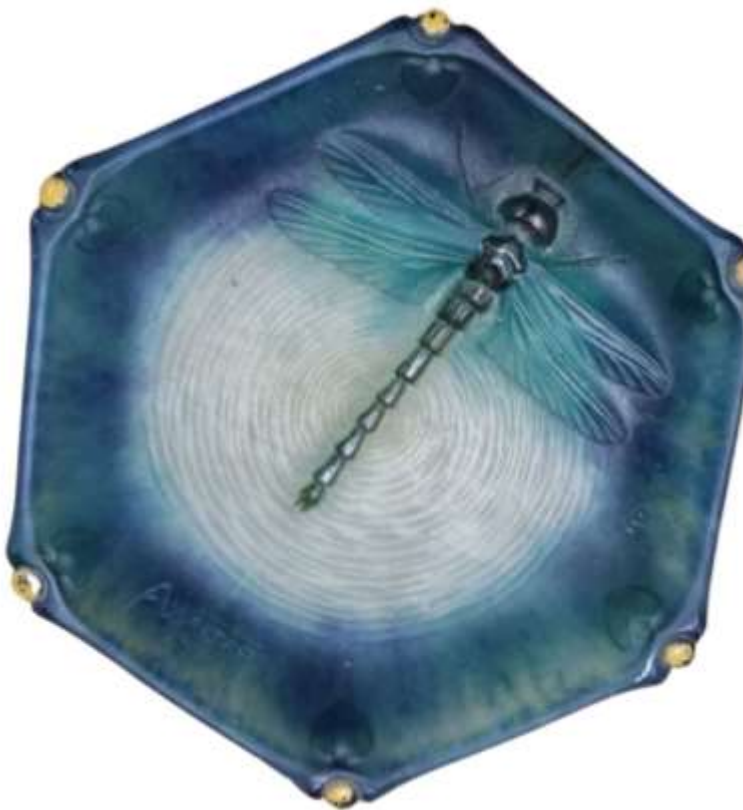


I

Figure 4, Flat dish with butterfly



*Figure 5, Bee dish*



*Figure 6, Hexagonal dish with dragonfly*

GE  
EUM





Figure 7, Mouse



Figure 8, Frog on lily pad