

SECTION

7

**SAFETY,
DECORATIVE
AND PROTECTIVE
PROCESSES**



Creative Project

Artefact Production

INTRODUCTION

In Section 1, you learned briefly about the safety precautionary measures to observe as an artist as well as some ways to care for and maintain Art and Design Studio tools, materials, and equipment. In this Section, you will learn about various ways of making your 2-D and 3-D artworks more attractive and long-lasting by treating them with protective materials to serve as finishes or decorations. These treatments are not just for appearance, they also give more meaning and importance to the artwork. Again, in this section, you will learn what to do to protect yourself from danger or injury when working on your artwork or in the Art and Design Studio.

By the end of this section, you should be able to:

- Use a visual medium to create an art and design project with an emphasis on protective and decorative processes.
- Apply suitable safety measures when creating art and design work, paying special attention to protective and decorative processes used to create an artwork.

Key Ideas

- Observing safety rules in the Art and Design Studio keeps artists safe and prevents accidents or injuries.
- Artists use special chemicals to treat the surfaces of artworks to keep them safe from damage, fading, and rusting to prolong their lifespan.
- Artists use their artworks to beautify the environment.

PROTECTIVE AND DECORATIVE PROCESS IN ART AND DESIGN PRACTICE

Protective Processes

In Art and Design studio practice, materials used in treating artworks are known as **protective coatings** and what artists do to keep artworks safe from damage is referred to as **protective processes** (Figure 7.1). Protective coatings help to keep the artwork from getting damaged, stop them from ageing, and prolong its lifespan. Here are some common types of protective processes:

1. **Varnish:** It is a clear protective coating applied on artworks to preserve them, enhance their looks, and prevent them from damage. Examples are gloss, satin, or matt finishes. It is applied to surfaces such as wood and paintings.
2. **Lacquer:** It is a shiny protective coating applied on objects, like wood or metal to make them attractive and durable.
3. **Polyurethane:** It is a strong and flexible artificial material used to create smooth surfaces on materials such as plastics, metals, and wood to protect them.
4. **Wax:** It is a natural or man-made material applied to an art surface to make it shiny and protect it from water and dirt. It is often used on wood, stone, and metal.
5. **Shellac:** This is a shiny coating made of natural resin, used as protection against insects in wooden artworks, and as finishes on metal and other materials.
6. **Oil and Water-Based Paints:** These are made up of oils or water-based materials that are used to protect surfaces from fading, water, and light effects.
7. **Resin:** It is a protective coating that hardens into a strong, shiny material when applied on artworks to make them look attractive and protect them to last longer.
8. **Sealant:** This is a special coating applied to ceramics, stone, and concrete art surfaces to preserve them from damage and losing their physical appearance and quality.



Applying Lacquer to a wood carving to give it a glossy finish



Applying oils or watercolours to protect surfaces from fading, moisture, and light.



Applying resin to artwork and photos hardens and enhances their appearance.

Figure 7.1: Protective processes.

Paper and Material Decorative and Protective Processes

Applying the appropriate finishing to artwork is a major part of the Art and Design Studio task. In doing this, paper and other materials are decorated or protected by adding colours, patterns, or coatings to make them look attractive or last longer. Some examples of decorative and protective processes (Figure 7.2) include:

1. **Matt Finish:** This finish is smooth and not shiny, but it gives a strong look and hides fingerprints from showing on art projects.
2. **Gloss Finish:** A gloss finish gives a shiny look to the artwork.
3. **Silk Finish:** A silk or satin finish is a combination of matt and gloss finish which provides a smooth texture and varied surface quality.



Figure 7.2: Coating, decorative, and protective processes

Coating decorative artworks with protective processes

Protective coatings are the final treatments given to the surfaces of artworks to make them attractive, prolong their lifespan, and prevent them from rusting, or fading. Some of the coating finishes include:

1. **UV Coating:** A gloss finish that prevents scratches and fading by using UV light (ultraviolet light) to dry and harden materials quickly to give a shiny and strong appearance to artworks and make them last longer.
2. **Lamination:** This is a water-resistant finish made of thin plastic coverings. They are available in gloss, matt, or soft-touch and can be applied on both sides of photographs, artworks made on paper, and other materials.

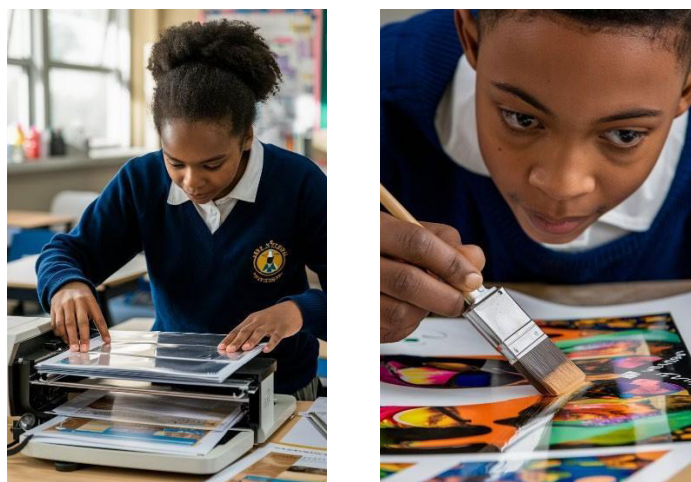


Figure 7.3: Coating and Protective Processes

Speciality Decorative and Protective Processes

Speciality finishes are different methods used to add creative shiny spots, textures, or colours to printed materials to make them more interesting and attractive (Figure 7.4).

Examples include:

1. **Foil Stamping:** It adds shiny metallic designs to materials like business or invitation cards, and packaging to give them an attractive outlook.
2. **Embossing/Debossing:** This technique involves creating artworks that are either raised or sunken on suitable materials such as clay, wood, or metal. This makes logos, text, and other design elements more attractive.
3. **Spot UV:** This technique uses a special coating that uses ultraviolet light to create shiny and dull areas on artwork surfaces.



Figure 7.4: Decorative Processes

Decorative Processes

Decorative processes involve the use of artworks to beautify the environment. The process makes use of shapes, colours, textures, and different materials to decorate indoor, and outdoor spaces and objects (Figure 7.5). The processes include:

1. **Painting:** This has to do with the application of colours and designs on surfaces such as canvas, wood, metal, and ceramics using brushes, rollers, or sprayers.
2. **Gilding:** This may take the form of applying thin layers of gold-like or metallic paint on surfaces such as frames, furniture, and building structures to protect and beautify them.
3. **Embellishment:** Additional decorations are used on surfaces such as beads, sequins, or crystals to make them more attractive.
4. **Engraving:** It is the art of carving designs on surfaces such as metal, glass, wood, or stone to create beautiful and lasting decorations.
5. **Texturing:** It involves using actual or simulated techniques to create interesting effects on artworks.
6. **Decoupage:** It is the art of glueing cut-out images or decorative paper onto a surface and coating it with a glossy finish to make it smooth and colourful.
7. **Mosaic:** It is a process of creating beautiful artwork by arranging small pieces of coloured shapes, glass, stone, and other suitable materials to create artwork.

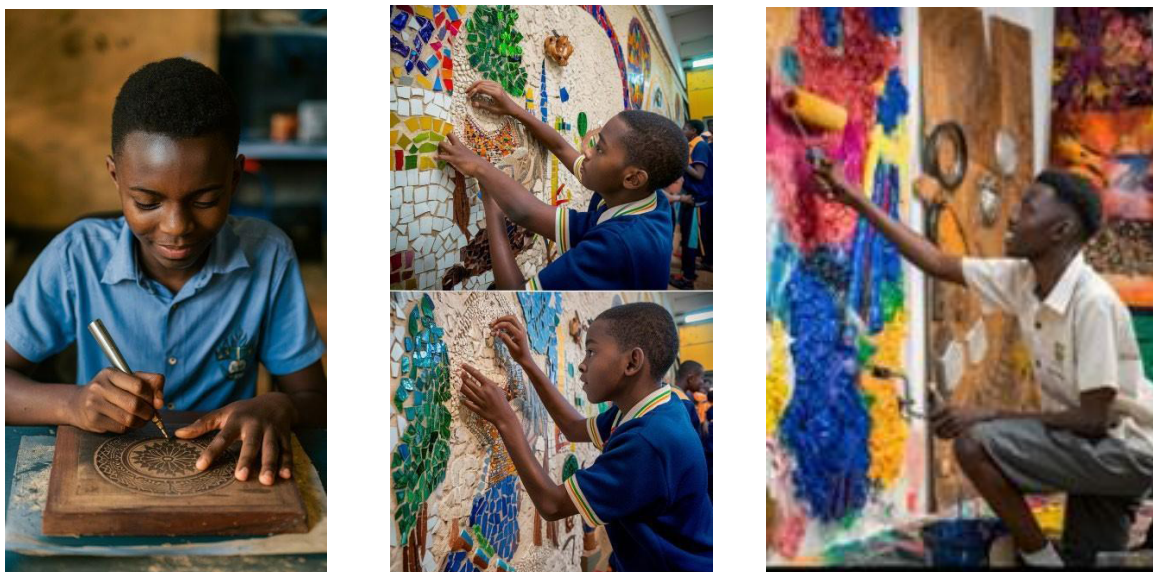


Figure 7.5: *Decorative and Protective processes*

Other protective and decorative art techniques and processes practised in the Art and Design Studio are also discussed in Table 7.1.

Table 7.1: *Art Techniques and Processes*

Technique	Process
Block Printing	Cut or carve a pattern onto an image carrier (block), apply ink to the image carrier, and transfer it onto a receiver (substrate) such as fabric.
Stencilling	Cut out the design on a suitable material (template) such as cardboard. Position the template on a suitable surface and apply colour on the cut-out design by appropriate colour application techniques such as using foam, brush, or spray.
Computer-Aided Design embroidery	Computerised embroidery is done using a digital embroidery machine to stitch designs, images, or text onto fabrics or other materials. The designs are created with embroidery software which is transferred to the digital embroidery machine to stitch them.
Digital Printing	Use the computer to design and print on canvas, fabric, glass, paper, marble, metal, or other materials to convey messages to the public.
Resist dyeing technique	Resist dyeing includes various techniques that are used to prevent portions of fabrics from dye absorption thereby creating colourful designs. Some of the resist dyeing techniques are waxing (e.g. batik), tying (e.g. tie-dye), folding, marbling, and sewing (tritik).
Quilting	Stitch layers of fabrics to create a decorative blanket. This can be done with the hand or a sewing machine.

Technique	Process
Appliqué/ reverse appliqué	This involves fixing cut-out fabric(s) onto another fabric using applicable techniques such as glueing and sewing. There are two types of appliqué. They are <i>onlay</i> and <i>in-lay</i> (reverse) appliqué.
Patchwork	This has to do with joining pieces of fabric together to create a larger fabric. The colour scheme and patterns on the pieces of fabric joined together help to create interesting patterns in the fabric.
Dyeing	Create a design on a fabric by using dyes as a colouring agent. Examples include tie-dye and batik.
Screen printing	Requires a screen (mesh), ink, and squeegee. Place the screen on a suitable material such as a T-shirt and force ink through the design areas using a squeegee.
Weaving	It involves interlacing yarn or other materials on a loom to create unique fabrics such as <i>Kente</i> or <i>Smock</i> .
Beadwork	Creating decorative jewellery, or accessories using colourful beads. It involves threading beads onto a string or attaching beads to other materials.
Embroidery	Stitch designs with needle and thread (handmade) or machine to produce decorative designs on fabrics.
Tie-dye	It is a process of applying colourants to fabrics by using resist techniques such as tying, knotting, folding, marbling, and sewing. With this process, the resisted areas will not be coloured. Untying the resisted areas after dyeing reveals colourful designs or patterns.
Direct Painting	Use paint to create artwork directly onto suitable surfaces such as canvas, paper, or on walls.

Activity 7.1

Provide a brief written report including pictures to show the difference between protective and decorative processes used in Art and Design Studio practices.

Activity 7.2

Create a 2-D or 3-D artwork of your choice using protective and decorative processes to solve a specific problem in your community.

SAFETY MEASURES AT THE ART AND DESIGN STUDIO

When creating your artwork or working in the Art and Design Studio, some dangers can cause injury to your health, that you need to know about. *Safety precautions* are the preventive measures artists observe to protect them from danger or injury.

Safety Precautions when Working with Dry Drawing Media

Working with dry drawing media, such as graphite, charcoal, pastels, or coloured pencils, is generally safe. However, there are some precautions artists should observe to ensure a healthy working environment and avoid dangers. Some safety measures to observe when working with dry drawing media are provided:

- **Ensure there is enough ventilation:** Make sure there is free movement of air when working with dry drawing media that can produce fine dust. Good airflow helps prevent the buildup of dust in the air, which can be irritating to your lungs.
- **Manage dust in the studio:** Use a damp (wet) cloth or a vacuum cleaner to clean up dust. Sweeping can stir dust into the air, which can be inhaled.
- **Ensure personal hygiene:** Wash your hands properly after working with dry drawing media to avoid transferring dusty particles to your body system.
- **Wear the appropriate personal protective equipment:** Consider wearing gloves, nose masks, aprons, and other personal protective equipment (PPEs) to keep your clothes clean and protect your skin when working with dry drawing media that produce dusty particles.
- **Avoid blowing off dusty particles:** When using dry drawing media, avoid blowing off dust with your mouth to prevent inhalation. Instead, gently shake off the dust from the artwork to let it fall to the floor.

Safety precautions when working with water-based paints

Here are some key safety measures to observe when working with water-based paints:

- **Ensure enough ventilation:** Allow free flow of air in the studio when working with water-based paint to reduce the chemical content and prevent inhalation.
- **Wear the appropriate personal protective equipment:** Wear protective clothing such as gloves, nose masks, goggles, and aprons to prevent skin contact and reduce the risk of irritation. Ensure an emergency eyewash is nearby to quickly rinse your eyes if they get exposed to chemicals to prevent serious injury.
- **Safe application of water-based paint:** Use the approved tools such as brushes, rollers, or sprayers according to the manufacturer's instructions when working with water-based paints to prevent body contact with chemicals.

- **Practice personal hygiene:** Thoroughly wash your hands after working with water-based paints before eating or drinking to avoid contaminating food.

Safety precautions when working in photographic darkrooms

Working in photographic darkrooms involves handling chemicals and working in low-light conditions. The following are some safety precautions to observe:

- **Ensure good airflow:** Darkrooms can have strong chemical fumes which requires they are well-ventilated. Use a fume extractor or ventilation system designed for darkrooms to minimise exposure to chemical fumes.
- **Use appropriate protective gear:** Wear gloves, safety glasses, laboratory coats, and nose marks to **protect** your body from direct contact with chemicals.
- **Handle chemicals properly:** Read the instructions on labels, and safety data sheets (SDS) for all chemicals used in the photographic darkrooms to avoid misuse of chemicals, which may lead to accidents.
- **Keep the work area safe:** In case of spills, clean them up immediately using appropriate materials such as mops to keep the floor clean and dry.
- **Observe personal hygiene:** Wash your hands after working with chemicals in the photographic darkroom before eating or drinking to avoid ingestion or contamination.
- **Electrical safety:** Ensure that all electrical equipment in the photographic darkroom is properly installed and regularly maintained to avoid electrical accidents such as fires. Do not handle electrical equipment with wet hands or while standing on a wet surface.
- **Emergency measures:** Ensure the availability of a first aid kit to stabilise accident cases before visiting the health centre. Use emergency exits, and fire extinguishers in cases of fire outbreaks.

Safety precautions when carving and machining wood

Carving and wood treatment involve the use of machines, tools, and techniques that can be dangerous if not handled properly. Some safety precautions to follow include:

- **Personal Protective Equipment (PPE):** Use PPEs such as safety goggles, boots, face shields, earplugs, gloves, nose masks, and aprons to be protected from wood chips, dust, cuts, and loud noise from machinery.
- **Handle tools with care:** Use tools according to their intended purpose and follow the manufacturer's instructions to avoid accidents. Always turn off and unplug machines when changing blades, bits, or making adjustments. Never leave machinery running when not in the studio.
- **Ensure workplace safety:** Keep the studio clean and well-organised to avoid crashing and falling over carving tools, machines, wood, and other items. Ensure adequate lighting is available in the studio for visibility to avoid accidents.

- **Use appropriate cutting and carving techniques:** When carving, always cut away from your body and hands to reduce the risk of injury if the tool slips. Take your time and do not rush when using carving tools and machines to avoid mistakes and accidents.
- **Emergency measures:** Ensure a first aid kit is available. Use emergency exits, and fire extinguishers in cases of fire outbreaks.
- **Control wood dust in the studio:** Use a vacuum device to clean all sawdust after woodwork instead of sweeping it to keep dust from spreading and prevent fires.



Figure 7.6: Personal Protective Equipment (PPE) should be used when inking plate engraving

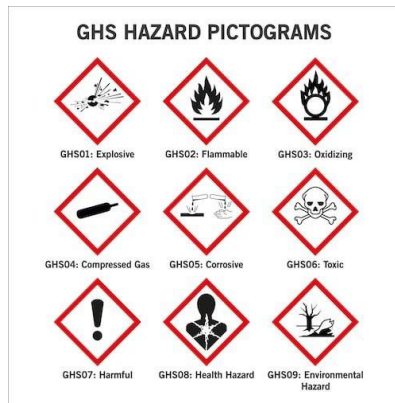


Figure 7.7: Globally Harmonised System (GHS) Hazard Pictogrammes



Figure 7.8: Inadequate storage of chemical products in a studio



Figure 7.9: Various elements of appropriate Personal Protective Equipment (PPE).



Figure 7.10: Disposable respiratory protective masks against inhaling toxic powder.

Activity 7.3

Produce a written report on the safety measures you observed when creating your art and design works with emphasis on protective and decorative processes.

Activity 7.4

Create a manual or digital inventory showing the importance of observing safety measures in Art and Design Studio tasks.



Review Questions

1. Produce a pictorial report showing the difference between protective and decorative processes found in TEN (10) 2-D or 3-D selected artworks.
2. Tabulate FIVE (5) importance of protective and decorative processes in Art and Design practice.
3. Create a design to be used to decorate a wall surface using any of the decorative processes in art and design.
4. Write your understanding of safety measures in Art and Design Studio tasks.
5. Write FIVE (5) importance of observing safety measures when performing art and design studio tasks.
6. Produce a manual or digital inventory of your artworks showing clearly the protective and decorative processes you used and why you used them.

Answers to Review Questions

The following are suggested answers to the Review Questions in section 7.

1. *A pictorial report showing the difference between protective and decorative processes found in 2-D or 3-D artworks:*

Picture	Protective process	Decorative Process
	<p>Varnish is applied to protect the painting artwork from dust, dirt, and UV light. It also enhances the colours and gives a glossy finish.</p>	<p>The decorative techniques such as colours and textures have enhanced the beauty and visual appeal of this artwork and added meaning or emotion to the painting.</p>
	<p>Polishing and oiling the metal art surfaces prevents exposure to air and rusting.</p>	<p>A shiny and attractive look is shown on the scrap metal art which makes it more valuable and desirable.</p>

2. Importance of **protective** and **decorative processes** in Art and Design:

Protective Processes		Decorative Processes
1.	Used to preserve artworks from damage	Used to enhance the beauty of artworks
2.	Prevents fading, and rust, and prolongs the lifespan	Adds patterns, colours, texture
3.		
4.		
5.		

3. Wall decorative art:



4. Answers are dependent on learners' understanding.

5. Importance of observing safety measures when performing Art and Design Studio tasks:

- **Prevents injuries:** Safety measures protect you from accidents like cuts, burns, or slips and falls when working in the studio.
- **Personal protection:** Wearing masks, gloves, and appropriate PPEs can prevent exposure to harmful chemicals like paint or glue that could affect your lungs or skin.

6. Answers are dependent on learners' creativity.

EXTENDED READING

1. Ouimet, T. (2000). *Safety Guide for Art Studios*. United Educators. Retrieved from <https://www.monmouth.edu/department-of-art-and-design/documents/2018/10/safety-guide-for-art-studios.pdf/>

ACKNOWLEDGEMENTS



Ghana Education
Service (GES)



List of Contributors

Name	Institution
Prof. Osuanyi Quaicoo Essel	UEW, Winneba
Emmanuel Aklasu	Takoradi Technical Institute
Cynthia Tettey	Ghanata SHS, Dodowa
Nyamawero Navei	Tumu SHTS, Upper West